

**APPENDIX J-2**

**2017 ANALYTICAL DATA REPORTS AND DATA VALIDATION REVIEW MEMOS**

**June 2017**

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L915737  
Samples Received: 06/14/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
SCS-2-061217 L915737-01	<b>5</b>	
GEI-1-061317 L915737-02	<b>7</b>	
<b>Qc: Quality Control Summary</b>	<b>9</b>	<b>6</b> Qc
Wet Chemistry by Method 2320 B-2011	<b>9</b>	
Wet Chemistry by Method 9056A	<b>10</b>	
Wet Chemistry by Method 9060A	<b>12</b>	
Metals (ICPMS) by Method 6020A	<b>13</b>	<b>7</b> Gl
Volatile Organic Compounds (GC) by Method NWTPHGX	<b>14</b>	<b>8</b> Al
Volatile Organic Compounds (GC) by Method RSK175	<b>15</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>17</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>21</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>22</b>	
<b>Sc: Chain of Custody</b>	<b>23</b>	

# SAMPLE SUMMARY



## SCS-2-061217 L915737-01 GW

Collected by Shannon McKernan  
Collected date/time 06/12/17 16:35  
Received date/time 06/14/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG989953	5	06/16/17 12:21	06/16/17 12:21	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/22/17 01:54	06/22/17 01:54	JHH

1  
Cp

2  
Tc

3  
Ss

## GEI-1-061317 L915737-02 GW

Collected by Shannon McKernan  
Collected date/time 06/13/17 10:35  
Received date/time 06/14/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG990917	1	06/21/17 17:10	06/21/17 17:10	MCG
Wet Chemistry by Method 9056A	WG989143	1	06/14/17 21:27	06/14/17 21:27	KCF
Wet Chemistry by Method 9060A	WG989915	1	06/16/17 16:02	06/16/17 16:02	SJM
Metals (ICPMS) by Method 6020A	WG990560	1	06/19/17 19:03	06/21/17 14:07	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG989413	1	06/15/17 13:37	06/15/17 13:37	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG989637	20	06/15/17 14:51	06/15/17 14:51	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/22/17 02:17	06/22/17 02:17	JHH

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



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

Brian Ford  
Technical Service Representative

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



## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	901		158	500	5	06/16/2017 12:21	<a href="#">WG989953</a>
(S) a,a,a-Trifluorotoluene(FID)	98.6			77.0-122		06/16/2017 12:21	<a href="#">WG989953</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	7.95	<u>J JO</u>	1.05	25.0	1	06/22/2017 01:54	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Benzene	58.9		0.0896	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
n-Butylbenzene	1.97		0.143	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
sec-Butylbenzene	1.78		0.134	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Carbon disulfide	0.147	<u>J JO</u>	0.101	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Di-isopropyl ether	1.07		0.0924	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Ethylbenzene	141		0.158	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
n-Hexane	4.86	<u>J</u>	0.305	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 01:54	<a href="#">WG989777</a>
Isopropylbenzene	16.3		0.126	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
p-Isopropyltoluene	0.298	<u>J</u>	0.138	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/12/17 16:35

L915737

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>	1 Cp
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	2 Tc
Naphthalene	54.3		0.174	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>	
n-Propylbenzene	34.2		0.162	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	3 Ss
Styrene	U		0.117	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	4 Cn
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	5 Sr
Toluene	4.49		0.412	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	6 Qc
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	7 Gl
Trichloroethene	U		0.153	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>	8 Al
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,2,4-Trimethylbenzene	41.7		0.123	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,2,3-Trimethylbenzene	51.2		0.0739	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
1,3,5-Trimethylbenzene	2.83		0.124	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	9 Sc
Vinyl acetate	U		0.645	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>	
Vinyl chloride	U		0.118	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>	
Xylenes, Total	70.4		0.316	1.50	1	06/22/2017 01:54	<a href="#">WG989777</a>	
(S) Toluene-d8	96.2			80.0-120		06/22/2017 01:54	<a href="#">WG989777</a>	
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 01:54	<a href="#">WG989777</a>	
(S) 4-Bromofluorobenzene	99.4			80.0-120		06/22/2017 01:54	<a href="#">WG989777</a>	



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	304000		2710	20000	1	06/21/2017 17:10	<a href="#">WG990917</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	14600		51.9	1000	1	06/14/2017 21:27	<a href="#">WG989143</a>
Nitrate	79.2	J	22.7	100	1	06/14/2017 21:27	<a href="#">WG989143</a>
Sulfate	25300		77.4	5000	1	06/14/2017 21:27	<a href="#">WG989143</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	6730		102	1000	1	06/16/2017 16:02	<a href="#">WG989915</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	9050		15.0	100	1	06/21/2017 14:07	<a href="#">WG990560</a>
Manganese	1500		0.250	5.00	1	06/21/2017 14:07	<a href="#">WG990560</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	10600		5.74	13.6	20	06/15/2017 14:51	<a href="#">WG989637</a>
Ethane	U		0.296	1.29	1	06/15/2017 13:37	<a href="#">WG989413</a>
Ethene	U		0.422	1.27	1	06/15/2017 13:37	<a href="#">WG989413</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	JO	1.05	25.0	1	06/22/2017 02:17	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 02:17	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromomethane	U	JO	0.157	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 02:17	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 02:17	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 02:17	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 02:17	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 02:17	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 02:17	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 02:17	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 02:17	WG989777
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 02:17	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 02:17	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 02:17	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 02:17	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 02:17	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 02:17	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 02:17	WG989777
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/22/2017 02:17	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 02:17	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 02:17	WG989777
Ethylbenzene	0.244	U	0.158	0.500	1	06/22/2017 02:17	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 02:17	WG989777
2-Hexanone	U		0.757	5.00	1	06/22/2017 02:17	WG989777
n-Hexane	U		0.305	5.00	1	06/22/2017 02:17	WG989777
Iodomethane	U		0.377	10.0	1	06/22/2017 02:17	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 02:17	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 02:17	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 02:17	WG989777
Methylene Chloride	U		1.07	2.50	1	06/22/2017 02:17	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 02:17	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 02:17	WG989777
Naphthalene	1.02	U	0.174	2.50	1	06/22/2017 02:17	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 02:17	WG989777
Styrene	U		0.117	0.500	1	06/22/2017 02:17	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 02:17	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 02:17	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 02:17	WG989777
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 02:17	WG989777
Toluene	U		0.412	0.500	1	06/22/2017 02:17	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 02:17	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 02:17	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 02:17	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 02:17	WG989777
Trichloroethene	U		0.153	0.500	1	06/22/2017 02:17	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 02:17	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 02:17	WG989777
1,2,4-Trimethylbenzene	0.200	U	0.123	0.500	1	06/22/2017 02:17	WG989777
1,2,3-Trimethylbenzene	0.200	U	0.0739	0.500	1	06/22/2017 02:17	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 02:17	WG989777
Vinyl acetate	U		0.645	5.00	1	06/22/2017 02:17	WG989777
Vinyl chloride	U		0.118	0.500	1	06/22/2017 02:17	WG989777
Xylenes, Total	U		0.316	1.50	1	06/22/2017 02:17	WG989777
(S) Toluene-d8	98.9			80.0-120		06/22/2017 02:17	WG989777
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 02:17	WG989777
(S) 4-Bromofluorobenzene	97.6			80.0-120		06/22/2017 02:17	WG989777

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3227879-1 06/21/17 14:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	U		2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L915760-01 Original Sample (OS) • Duplicate (DUP)

(OS) L915760-01 06/21/17 14:42 • (DUP) R3227879-2 06/21/17 14:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	97600	99000	1	1.00		20

L915760-04 Original Sample (OS) • Duplicate (DUP)

(OS) L915760-04 06/21/17 17:43 • (DUP) R3227879-7 06/21/17 17:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	307000	308000	1	0.000		20

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

(LCS) R3227879-3 06/21/17 15:35 • (LCSD) R3227879-6 06/21/17 17:16

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	107000	109000	107	109	85.0-115			1.00	20



Method Blank (MB)

(MB) R3225798-1 06/14/17 15:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	137	↓	51.9	1000
Nitrate	U		22.7	100
Sulfate	87.1	↓	77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L914573-03 Original Sample (OS) • Duplicate (DUP)

(OS) L914573-03 06/14/17 17:22 • (DUP) R3225798-4 06/14/17 17:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	842	766	5	9		15
Sulfate	142000	140000	5	1		15

L915760-01 Original Sample (OS) • Duplicate (DUP)

(OS) L915760-01 06/14/17 21:56 • (DUP) R3225798-6 06/14/17 22:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	10900	10700	1	2		15
Nitrate	439	444	1	1		15
Sulfate	5350	5320	1	1		15

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

(LCS) R3225798-2 06/14/17 16:10 • (LCSD) R3225798-3 06/14/17 16:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39200	39400	98	98	80-120			0	15
Nitrate	8000	8060	8080	101	101	80-120			0	15
Sulfate	40000	39600	39700	99	99	80-120			0	15

L915713-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L915713-01 06/14/17 18:49 • (MS) R3225798-5 06/14/17 19:03

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate	5000	ND	4660	92	1	80-120	
Sulfate	50000	9190	59400	100	1	80-120	



L915760-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L915760-03 06/14/17 22:39 • (MS) R3225798-7 06/14/17 22:54 • (MSD) R3225798-8 06/14/17 23:08

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	1960	52500	52700	101	102	1	80-120			1	15
Nitrate	5000	551	5670	5550	102	100	1	80-120			2	15
Sulfate	50000	1580	52100	52100	101	101	1	80-120			0	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3226627-1 06/16/17 12:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L915586-04 Original Sample (OS) • Duplicate (DUP)

(OS) L915586-04 06/16/17 14:46 • (DUP) R3226627-3 06/16/17 15:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	1420	1490	1	5		20

L916081-03 Original Sample (OS) • Duplicate (DUP)

(OS) L916081-03 06/16/17 21:50 • (DUP) R3226627-7 06/16/17 22:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	1020	992	1	3	J	20

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

(LCS) R3226627-2 06/16/17 14:12 • (LCSD) R3226627-4 06/16/17 16:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	71200	71600	95	96	85-115			1	20

L915799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L915799-01 06/16/17 17:27 • (MS) R3226627-5 06/16/17 17:45 • (MSD) R3226627-6 06/16/17 18:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	6600	50500	49600	88	86	1	80-120			2	20



Method Blank (MB)

(MB) R3227505-1 06/21/17 13:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	U		15.0	100
Manganese	0.371	J	0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3227505-2 06/21/17 13:39 • (LCSD) R3227505-3 06/21/17 13:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	4780	4760	96	95	80-120			0	20
Manganese	50.0	45.8	45.4	92	91	80-120			1	20

5 Sr

6 Qc

L916657-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916657-02 06/21/17 13:46 • (MS) R3227505-5 06/21/17 13:53 • (MSD) R3227505-6 06/21/17 13:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	17.9	4710	4650	94	93	1	75-125			1	20
Manganese	50.0	144	190	189	92	89	1	75-125			1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3226859-3 06/16/17 11:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3226859-1 06/16/17 10:16 • (LCSD) R3226859-2 06/16/17 10:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	5730	5810	104	106	72.0-134			1.42	20
(S) a,a,a-Trifluorotoluene(FID)				105	105	77.0-122				

5 Sr

6 Qc

7 Gl

L915737-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L915737-01 06/16/17 12:21 • (MS) R3226859-4 06/16/17 12:42 • (MSD) R3226859-5 06/16/17 13:03

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	901	31400	31500	111	111	5	23.0-159			0.550	20
(S) a,a,a-Trifluorotoluene(FID)					103	102		77.0-122				

8 Al

9 Sc



Method Blank (MB)

(MB) R3225974-1 06/15/17 12:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

L915690-03 Original Sample (OS) • Duplicate (DUP)

(OS) L915690-03 06/15/17 13:22 • (DUP) R3225974-2 06/15/17 13:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

5 Sr

6 Qc

L915951-01 Original Sample (OS) • Duplicate (DUP)

(OS) L915951-01 06/15/17 13:41 • (DUP) R3225974-3 06/15/17 14:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

7 Gl

8 Al

9 Sc

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

(LCS) R3225974-4 06/15/17 14:12 • (LCSD) R3225974-5 06/15/17 14:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethane	129	138	130	107	101	70.0-130			5.62	20
Ethene	127	132	124	104	98.0	70.0-130			6.02	20





Method Blank (MB)

(MB) R3226033-1 06/15/17 14:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L915669-03 Original Sample (OS) • Duplicate (DUP)

(OS) L915669-03 06/15/17 15:05 • (DUP) R3226033-2 06/15/17 15:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	10500	8910	10	16.5		20

L915951-07 Original Sample (OS) • Duplicate (DUP)

(OS) L915951-07 06/15/17 15:20 • (DUP) R3226033-3 06/15/17 15:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	10500	8940	20	16.4		20

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

(LCS) R3226033-4 06/15/17 15:30 • (LCSD) R3226033-5 06/15/17 15:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	69.5	71.2	103	105	70.0-130			2.47	20



Method Blank (MB)

(MB) R3227153-3 06/17/17 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3227153-3 06/17/17 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
n-Hexane	U		0.305	5.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
Methyl tert-butyl ether	U		0.102	0.500
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Naphthalene	U		0.174	2.50
1,1,2,2-Tetrachloroethane	U		0.130	0.500
n-Propylbenzene	U		0.162	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
Toluene	U		0.412	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
Trichloroethene	U		0.153	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
Vinyl chloride	U		0.118	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	101			76.0-123
(S) 4-Bromofluorobenzene	99.8			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3227153-1 06/17/17 08:45 • (LCSD) R3227153-2 06/17/17 09:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	25.0	25.8	25.9	103	104	76.0-122			0.370	20
Acetone	125	142	140	113	112	10.0-160			0.890	23
Acrylonitrile	125	121	129	97.1	103	60.0-142			5.78	20
Benzene	25.0	25.0	25.1	99.9	101	69.0-123			0.620	20
trans-1,4-Dichloro-2-butene	25.0	19.0	19.9	75.8	79.5	55.0-134			4.72	20
Bromobenzene	25.0	24.0	24.5	96.0	98.1	79.0-120			2.17	20
Bromodichloromethane	25.0	25.5	25.0	102	99.9	76.0-120			2.25	20
Bromoform	25.0	26.3	26.8	105	107	67.0-132			1.99	20
2-Hexanone	125	144	144	115	115	58.0-147			0.210	20
Bromomethane	25.0	19.2	18.0	76.8	72.0	18.0-160			6.48	20
Iodomethane	125	103	117	82.1	93.4	57.0-140			12.8	20
n-Butylbenzene	25.0	23.6	24.5	94.3	97.9	72.0-126			3.74	20
sec-Butylbenzene	25.0	23.3	24.5	93.3	98.0	74.0-121			4.92	20
tert-Butylbenzene	25.0	23.3	24.5	93.4	98.2	75.0-122			5.02	20
Carbon disulfide	25.0	29.7	30.3	119	121	55.0-127			1.94	20
Carbon tetrachloride	25.0	26.4	26.9	105	108	63.0-122			2.00	20
Chlorobenzene	25.0	25.4	26.2	102	105	79.0-121			2.85	20
Chlorodibromomethane	25.0	27.2	27.2	109	109	75.0-125			0.0900	20
Chloroethane	25.0	22.2	22.2	88.9	88.7	47.0-152			0.230	20
Chloroform	25.0	24.1	24.0	96.4	96.1	72.0-121			0.370	20
Chloromethane	25.0	21.5	22.2	85.9	88.8	48.0-139			3.41	20
2-Chlorotoluene	25.0	24.2	24.8	96.9	99.3	74.0-122			2.46	20
4-Chlorotoluene	25.0	24.6	25.5	98.6	102	79.0-120			3.57	20
1,2-Dibromo-3-Chloropropane	25.0	22.4	23.6	89.6	94.5	64.0-127			5.33	20
1,2-Dibromoethane	25.0	25.7	26.7	103	107	77.0-123			3.65	20
1,2-Dichlorobenzene	25.0	25.6	26.0	102	104	80.0-120			1.68	20
Dibromomethane	25.0	25.5	25.8	102	103	78.0-120			1.10	20
1,3-Dichlorobenzene	25.0	24.8	25.3	99.3	101	72.0-123			1.98	20
1,4-Dichlorobenzene	25.0	24.9	24.9	99.4	99.4	77.0-120			0.0300	20
Dichlorodifluoromethane	25.0	25.7	25.3	103	101	49.0-155			1.31	20
1,1-Dichloroethane	25.0	24.9	25.0	99.6	100	70.0-126			0.570	20
1,2-Dichloroethane	25.0	25.6	25.6	102	103	67.0-126			0.270	20
1,1-Dichloroethene	25.0	29.1	29.2	116	117	64.0-129			0.400	20
Vinyl acetate	125	80.5	88.2	64.4	70.6	46.0-160			9.15	20
cis-1,2-Dichloroethene	25.0	24.6	25.5	98.6	102	73.0-120			3.44	20
trans-1,2-Dichloroethene	25.0	25.1	25.6	100	103	71.0-121			2.25	20
1,2-Dichloropropane	25.0	25.0	25.3	100	101	75.0-125			1.08	20
1,1-Dichloropropene	25.0	25.7	26.1	103	104	71.0-129			1.41	20
1,3-Dichloropropane	25.0	25.6	25.9	103	103	80.0-121			0.810	20
cis-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.4	79.0-123			0.570	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3227153-1 06/17/17 08:45 • (LCSD) R3227153-2 06/17/17 09:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.8	74.0-127			0.880	20
2,2-Dichloropropane	25.0	22.3	22.6	89.0	90.2	60.0-125			1.36	20
Di-isopropyl ether	25.0	25.2	25.2	101	101	59.0-133			0.0700	20
Ethylbenzene	25.0	25.7	26.4	103	105	77.0-120			2.59	20
Hexachloro-1,3-butadiene	25.0	23.5	24.0	94.0	95.8	64.0-131			1.93	20
n-Hexane	25.0	23.5	23.4	94.1	93.7	56.0-124			0.390	20
Isopropylbenzene	25.0	24.4	25.2	97.4	101	75.0-120			3.27	20
p-Isopropyltoluene	25.0	23.6	24.6	94.6	98.4	74.0-126			3.95	20
2-Butanone (MEK)	125	122	122	97.9	97.4	37.0-158			0.480	20
Methylene Chloride	25.0	24.7	24.7	98.8	98.8	66.0-121			0.0300	20
4-Methyl-2-pentanone (MIBK)	125	127	129	102	103	59.0-143			1.85	20
Methyl tert-butyl ether	25.0	25.3	25.0	101	99.9	64.0-123			1.17	20
Naphthalene	25.0	22.4	23.5	89.6	94.0	62.0-128			4.87	20
n-Propylbenzene	25.0	24.1	24.6	96.5	98.4	79.0-120			1.93	20
Styrene	25.0	25.4	25.7	101	103	78.0-124			1.15	20
1,1,1,2-Tetrachloroethane	25.0	25.9	25.8	104	103	75.0-122			0.650	20
1,1,2,2-Tetrachloroethane	25.0	22.1	22.9	88.4	91.6	71.0-122			3.56	20
Tetrachloroethene	25.0	26.2	26.6	105	106	70.0-127			1.53	20
Toluene	25.0	25.8	25.8	103	103	77.0-120			0.0800	20
1,1,2-Trichlorotrifluoroethane	25.0	28.8	29.2	115	117	61.0-136			1.54	20
1,2,3-Trichlorobenzene	25.0	22.5	22.6	90.2	90.5	61.0-133			0.370	20
1,1,1-Trichloroethane	25.0	26.8	27.0	107	108	68.0-122			0.740	20
1,2,4-Trichlorobenzene	25.0	25.1	26.4	100	106	69.0-129			5.32	20
1,1,2-Trichloroethane	25.0	25.7	26.1	103	104	78.0-120			1.56	20
Trichloroethene	25.0	26.5	27.4	106	110	78.0-120			3.37	20
Trichlorofluoromethane	25.0	26.3	26.2	105	105	56.0-137			0.420	20
1,2,3-Trichloropropane	25.0	22.8	24.5	91.2	97.9	72.0-124			7.10	20
1,2,3-Trimethylbenzene	25.0	25.2	25.8	101	103	75.0-120			2.40	20
1,2,4-Trimethylbenzene	25.0	24.6	24.9	98.5	99.6	75.0-120			1.20	20
1,3,5-Trimethylbenzene	25.0	24.1	24.4	96.6	97.5	75.0-120			0.900	20
Vinyl chloride	25.0	24.6	25.2	98.5	101	64.0-133			2.48	20
Xylenes, Total	75.0	75.8	75.8	101	101	77.0-120			0.000	20
(S) Toluene-d8				106	106	80.0-120				
(S) Dibromofluoromethane				98.8	99.2	76.0-123				
(S) 4-Bromofluorobenzene				101	103	80.0-120				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
JO	JO: Calibration verification outside of acceptance limits. Result is estimated.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

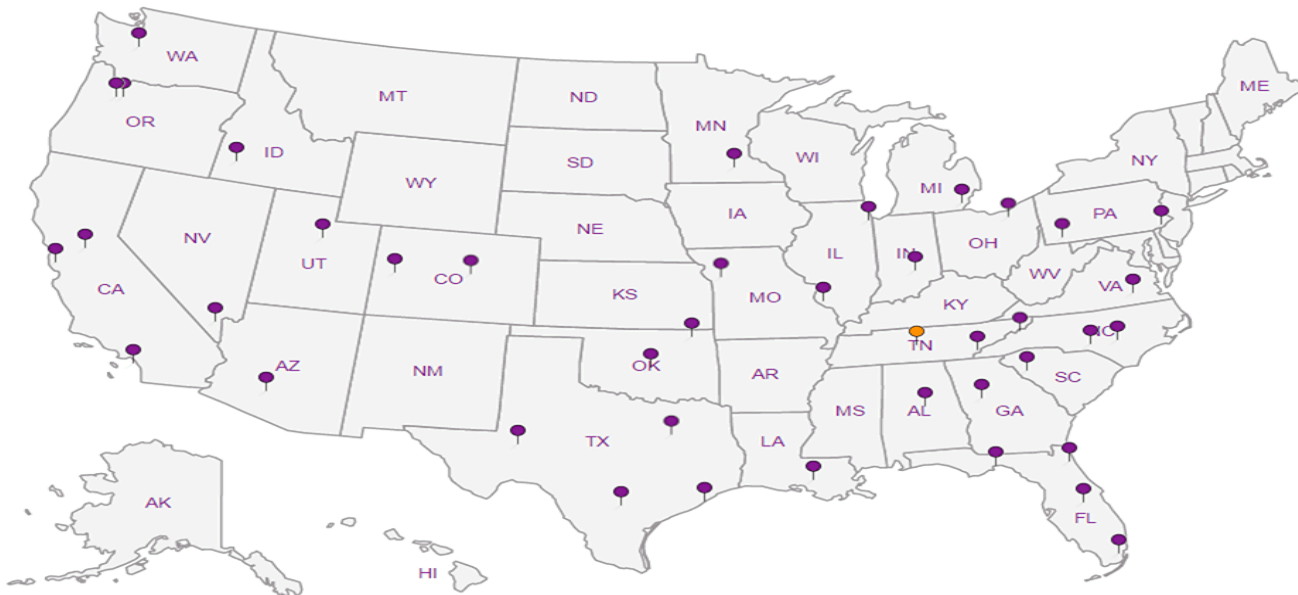
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State: **SEATTLE, WA**  
Collected:

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

Immediately Packed on Ice N  Y

No. of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	*Alk, Cl, NO3, SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl	Remarks	Sample # (lab only)
SOS-2-061217	GRAB	GW	20.8	6/12/17	1635	6	X	X	X	X	X	X		-2
GFI-1-061317	GRAB	GW	32	6/13/17	1035	89	X	X	X	X	X	X		2
F-MW-131-061317	GRAB	GW	68	6/13/17		89	X	X	X	X	X	X		3
		GW												
		GW												
		GW												
		GW												
		GW												
		GW												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7372 1955 0605**

**Sample Receipt Checklist**  
COC Seal Present/Intact:  NP  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes  No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: **2.1m** °C Bottles Received: **15**

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: **06-14-2017** Time: **0845**

Hold:

Condition:  
NCF **10K**



YOUR LAB OF CHOICE

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



L# **6915737**

**H114**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: **S-31-176**

Shipped Via: **FedEX Ground**



## MEMORANDUM

**TO:** Project File **DATE:** July 24, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 12 and 13, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L915737

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Two (2) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 12 and 13, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L915737. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L915737 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.1 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

The sample was analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

The sample was analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

The sample was analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

The sample was analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

## **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for acetone, bromomethane, carbon disulfide, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene were identified by the laboratory for sample SCS-2-061217 associated with analytical batch WG989777 (analyzed on June 22, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **Sample SCS-2-061217 results for acetone, bromomethane, carbon disulfide, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene are estimated and qualified (UJ or J). Sample GEI-1-061317 results for acetone, bromomethane, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene are estimated and qualified (UJ).**

## **Method Blank Results**

### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

### *USEPA Method 6020:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blank at or above the RDL with the following discussion:

- Low level manganese was detected in the method blank (WG990560) less than the RDL but greater than the method detection limit (MDL). No action was necessary as associated manganese results are significantly greater than low level manganese detection in the blank.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- Low levels of chloride and sulfate were detected in the method blank between the RDL and MDL. No action was necessary as associated chloride and sulfate sample results are significantly greater than the detections in the blank.

### **Trip Blank Results**

*USEPA Method 8260C and NWTPH-Gx:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* A laboratory duplicate sample was performed on a non-client sample within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* A laboratory duplicate sample was performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on non-client samples within the analytical batch. The primary/duplicate RPD for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

#### *USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

#### *NWTPH-Gx Method:*

The surrogate recovery results for the sample, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

#### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water.

#### *NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

#### *Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

#### *USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

#### *General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

## **Matrix Spike/Matrix Spike Duplicates**

### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### *NWTPH-Gx Method:*

MS/MSD analysis was performed on sample SCS-2-061217. MS/MSD % Rs and RPD for gasoline were within the laboratory control criteria for water.

### *Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information.

### *USEPA Method 6020:*

MS/MSD analysis was performed on non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

### *General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis was performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analysis was performed on non-client sample within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

## **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

## **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

## **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Collected date/time: 06/12/17 16:35

L915737

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	901		158	500	5	06/16/2017 12:21	<a href="#">WG989953</a>
(S) o,a,a-Trifluorotoluene(FID)	98.6			77.0-122		06/16/2017 12:21	<a href="#">WG989953</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	7.95	J JO	1.05	25.0	1	06/22/2017 01:54	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Benzene	58.9		0.0896	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Bromomethane	U	VJ JO	0.157	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
n-Butylbenzene	1.97		0.143	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
sec-Butylbenzene	1.78		0.134	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Carbon disulfide	0.147	J JO	0.101	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Di-isopropyl ether	1.07		0.0924	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Ethylbenzene	141		0.158	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
n-Hexane	4.86	J J	0.305	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 01:54	<a href="#">WG989777</a>
Isopropylbenzene	16.3		0.126	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
p-Isopropyltoluene	0.298	J J	0.138	0.500	1	06/22/2017 01:54	<a href="#">WG989777</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 01:54	<a href="#">WG989777</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 01:54	<a href="#">WG989777</a>

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

*Jc 7/24/17*



SCS-2-061217

## SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/12/17 16:35

L915737

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 01:54	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 01:54	WG989777
Naphthalene	54.3		0.174	2.50	1	06/22/2017 01:54	WG989777
n-Propylbenzene	34.2		0.162	0.500	1	06/22/2017 01:54	WG989777
Styrene	U		0.117	0.500	1	06/22/2017 01:54	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 01:54	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 01:54	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 01:54	WG989777
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 01:54	WG989777
Toluene	4.49		0.412	0.500	1	06/22/2017 01:54	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 01:54	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 01:54	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 01:54	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 01:54	WG989777
Trichloroethene	U		0.153	0.500	1	06/22/2017 01:54	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 01:54	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 01:54	WG989777
1,2,4-Trimethylbenzene	41.7		0.123	0.500	1	06/22/2017 01:54	WG989777
1,2,3-Trimethylbenzene	51.2		0.0739	0.500	1	06/22/2017 01:54	WG989777
1,3,5-Trimethylbenzene	2.83		0.124	0.500	1	06/22/2017 01:54	WG989777
Vinyl acetate	U		0.645	5.00	1	06/22/2017 01:54	WG989777
Vinyl chloride	U		0.118	0.500	1	06/22/2017 01:54	WG989777
Xylenes, Total	70.4		0.316	1.50	1	06/22/2017 01:54	WG989777
(S) Toluene-d8	96.2			80.0-120		06/22/2017 01:54	WG989777
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 01:54	WG989777
(S) 4-Bromofluorobenzene	99.4			80.0-120		06/22/2017 01:54	WG989777

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

JC 7/24/17



Collected date/time: 06/13/17 10:35

L915737

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	304000		2710	20000	1	06/21/2017 17:10	<a href="#">WG990917</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	14600		51.9	1000	1	06/14/2017 21:27	<a href="#">WG989143</a>
Nitrate	79.2	J J	22.7	100	1	06/14/2017 21:27	<a href="#">WG989143</a>
Sulfate	25300		77.4	5000	1	06/14/2017 21:27	<a href="#">WG989143</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	6730		102	1000	1	06/16/2017 16:02	<a href="#">WG989915</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	9050		15.0	100	1	06/21/2017 14:07	<a href="#">WG990560</a>
Manganese	1500		0.250	5.00	1	06/21/2017 14:07	<a href="#">WG990560</a>

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	10600		5.74	13.6	20	06/15/2017 14:51	<a href="#">WG989637</a>
Ethane	U		0.296	1.29	1	06/15/2017 13:37	<a href="#">WG989413</a>
Ethene	U		0.422	1.27	1	06/15/2017 13:37	<a href="#">WG989413</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U	UJ JO	1.05	25.0	1	06/22/2017 02:17	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 02:17	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Bromomethane	U	UJ JO	0.157	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 02:17	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U	UJ JO	0.325	2.50	1	06/22/2017 02:17	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 02:17	<a href="#">WG989777</a>



Collected date/time: 06/13/17 10:35

L915737

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 02:17	WG989777	Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 02:17	WG989777	Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 02:17	WG989777	Ss
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 02:17	WG989777	Cn
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 02:17	WG989777	Si
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 02:17	WG989777	Qc
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 02:17	WG989777	Gl
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 02:17	WG989777	Al
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 02:17	WG989777	Sc
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 02:17	WG989777	
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 02:17	WG989777	
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 02:17	WG989777	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 02:17	WG989777	
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 02:17	WG989777	
trans-1,4-Dichloro-2-butene	U	UJ JO	0.257	5.00	1	06/22/2017 02:17	WG989777	
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 02:17	WG989777	
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 02:17	WG989777	
Ethylbenzene	0.244	J J	0.158	0.500	1	06/22/2017 02:17	WG989777	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 02:17	WG989777	
2-Hexanone	U		0.757	5.00	1	06/22/2017 02:17	WG989777	
n-Hexane	U		0.305	5.00	1	06/22/2017 02:17	WG989777	
Iodomethane	U		0.377	10.0	1	06/22/2017 02:17	WG989777	
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 02:17	WG989777	
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 02:17	WG989777	
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 02:17	WG989777	
Methylene Chloride	U		1.07	2.50	1	06/22/2017 02:17	WG989777	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 02:17	WG989777	
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 02:17	WG989777	
Naphthalene	1.02	J J	0.174	2.50	1	06/22/2017 02:17	WG989777	
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 02:17	WG989777	
Styrene	U		0.117	0.500	1	06/22/2017 02:17	WG989777	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 02:17	WG989777	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 02:17	WG989777	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 02:17	WG989777	
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 02:17	WG989777	
Toluene	U		0.412	0.500	1	06/22/2017 02:17	WG989777	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 02:17	WG989777	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 02:17	WG989777	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 02:17	WG989777	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 02:17	WG989777	
Trichloroethene	U		0.153	0.500	1	06/22/2017 02:17	WG989777	
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 02:17	WG989777	
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 02:17	WG989777	
1,2,4-Trimethylbenzene	0.200	J J	0.123	0.500	1	06/22/2017 02:17	WG989777	
1,2,3-Trimethylbenzene	0.200	J J	0.0739	0.500	1	06/22/2017 02:17	WG989777	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 02:17	WG989777	
Vinyl acetate	U		0.645	5.00	1	06/22/2017 02:17	WG989777	
Vinyl chloride	U		0.118	0.500	1	06/22/2017 02:17	WG989777	
Xylenes, Total	U		0.316	1.50	1	06/22/2017 02:17	WG989777	
(S) Toluene-d8	98.9			80.0-120		06/22/2017 02:17	WG989777	
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 02:17	WG989777	
(S) 4-Bromofluorobenzene	97.6			80.0-120		06/22/2017 02:17	WG989777	

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L916025  
Samples Received: 06/15/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b>3</b> Ss
MW105-061417 L916025-01	<b>5</b>	
BB-8-061417 L916025-02	<b>7</b>	<b>4</b> Cn
SCL-MW101-061417 L916025-03	<b>9</b>	<b>5</b> Sr
MW122-061417 L916025-04	<b>11</b>	
MW111-061417 L916025-05	<b>13</b>	<b>6</b> Qc
MW103-061417 L916025-06	<b>15</b>	
<b>Qc: Quality Control Summary</b>	<b>17</b>	<b>7</b> Gl
Wet Chemistry by Method 2320 B-2011	<b>17</b>	
Wet Chemistry by Method 9056A	<b>18</b>	<b>8</b> Al
Wet Chemistry by Method 9060A	<b>20</b>	
Metals (ICPMS) by Method 6020A	<b>22</b>	<b>9</b> Sc
Volatile Organic Compounds (GC) by Method RSK175	<b>23</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>24</b>	
<b>Gl: Glossary of Terms</b>	<b>28</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>29</b>	
<b>Sc: Chain of Custody</b>	<b>30</b>	

# SAMPLE SUMMARY



## MW105-061417 L916025-01 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 10:30  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 18:44	06/19/17 18:44	JAH

1  
Cp

2  
Tc

3  
Ss

## BB-8-061417 L916025-02 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 10:50  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG990920	1	06/22/17 01:33	06/22/17 01:33	MCG
Wet Chemistry by Method 9056A	WG989400	1	06/15/17 13:52	06/15/17 13:52	DR
Wet Chemistry by Method 9060A	WG989915	1	06/16/17 19:17	06/16/17 19:17	SJM
Metals (ICPMS) by Method 6020A	WG990560	1	06/19/17 19:03	06/21/17 14:19	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG989710	1	06/16/17 10:40	06/16/17 10:40	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 19:06	06/19/17 19:06	JAH

4  
Cn

5  
Sr

6  
Qc

7  
Gl

## SCL-MW101-061417 L916025-03 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 13:00  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 19:29	06/19/17 19:29	JAH

8  
Al

9  
Sc

## MW122-061417 L916025-04 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 13:00  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 19:52	06/19/17 19:52	JAH

## MW111-061417 L916025-05 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 15:00  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG990920	1	06/22/17 01:40	06/22/17 01:40	MCG
Wet Chemistry by Method 9056A	WG989400	1	06/15/17 14:22	06/15/17 14:22	DR
Wet Chemistry by Method 9060A	WG990593	1	06/19/17 11:47	06/19/17 11:47	SJM
Metals (ICPMS) by Method 6020A	WG990560	1	06/19/17 19:03	06/21/17 14:22	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG989710	1	06/16/17 10:43	06/16/17 10:43	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 20:15	06/19/17 20:15	JAH

## MW103-061417 L916025-06 GW

Collected by Shannon McKernan  
Collected date/time 06/14/17 15:00  
Received date/time 06/15/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG990920	1	06/22/17 01:47	06/22/17 01:47	MCG
Wet Chemistry by Method 9056A	WG989400	1	06/15/17 14:37	06/15/17 14:37	DR
Wet Chemistry by Method 9060A	WG990593	1	06/19/17 12:00	06/19/17 12:00	SJM
Metals (ICPMS) by Method 6020A	WG990560	1	06/19/17 19:03	06/21/17 14:26	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG989710	1	06/16/17 10:45	06/16/17 10:45	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG989777	1	06/19/17 20:37	06/19/17 20:37	JAH



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

Brian Ford  
Technical Service Representative

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



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.18	J	1.05	25.0	1	06/19/2017 18:44	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 18:44	WG989777
Benzene	U		0.0896	0.500	1	06/19/2017 18:44	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 18:44	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 18:44	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 18:44	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 18:44	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 18:44	WG989777
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 18:44	WG989777
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 18:44	WG989777
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 18:44	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 18:44	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 18:44	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 18:44	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 18:44	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 18:44	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 18:44	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 18:44	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 18:44	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 18:44	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 18:44	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 18:44	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 18:44	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 18:44	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 18:44	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 18:44	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 18:44	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 18:44	WG989777
cis-1,2-Dichloroethene	0.180	J	0.0933	0.500	1	06/19/2017 18:44	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 18:44	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 18:44	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 18:44	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 18:44	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 18:44	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 18:44	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 18:44	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 18:44	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 18:44	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 18:44	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 18:44	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 18:44	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 18:44	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 18:44	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 18:44	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 18:44	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 18:44	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 18:44	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 18:44	WG989777
Naphthalene	1.41	J	0.174	2.50	1	06/19/2017 18:44	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 18:44	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 18:44	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 18:44	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 18:44	WG989777

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Toluene	U		0.412	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Trichloroethene	0.356	J	0.153	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,2,4-Trimethylbenzene	0.216	J	0.123	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Vinyl acetate	U		0.645	5.00	1	06/19/2017 18:44	<a href="#">WG989777</a>
Vinyl chloride	0.514		0.118	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>
Xylenes, Total	U		0.316	1.50	1	06/19/2017 18:44	<a href="#">WG989777</a>
(S) Toluene-d8	100			80.0-120		06/19/2017 18:44	<a href="#">WG989777</a>
(S) Dibromofluoromethane	108			76.0-123		06/19/2017 18:44	<a href="#">WG989777</a>
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 18:44	<a href="#">WG989777</a>

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	290000		2710	20000	1	06/22/2017 01:33	<a href="#">WG990920</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	10200		51.9	1000	1	06/15/2017 13:52	<a href="#">WG989400</a>
Nitrate	2740		22.7	100	1	06/15/2017 13:52	<a href="#">WG989400</a>
Sulfate	56900		77.4	5000	1	06/15/2017 13:52	<a href="#">WG989400</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	3340		102	1000	1	06/16/2017 19:17	<a href="#">WG989915</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	34.8	J	15.0	100	1	06/21/2017 14:19	<a href="#">WG990560</a>
Manganese	47.5		0.250	5.00	1	06/21/2017 14:19	<a href="#">WG990560</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	U		0.287	0.678	1	06/16/2017 10:40	<a href="#">WG989710</a>
Ethane	U		0.296	1.29	1	06/16/2017 10:40	<a href="#">WG989710</a>
Ethene	U		0.422	1.27	1	06/16/2017 10:40	<a href="#">WG989710</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.50	J	1.05	25.0	1	06/19/2017 19:06	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:06	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromomethane	U		0.157	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/19/2017 19:06	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/14/17 10:50

L916025

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:06	WG989777	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:06	WG989777	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:06	WG989777	
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:06	WG989777	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:06	WG989777	
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:06	WG989777	4 Cn
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:06	WG989777	
cis-1,2-Dichloroethene	12.6		0.0933	0.500	1	06/19/2017 19:06	WG989777	
trans-1,2-Dichloroethene	0.155	J	0.152	0.500	1	06/19/2017 19:06	WG989777	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:06	WG989777	
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:06	WG989777	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:06	WG989777	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:06	WG989777	
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:06	WG989777	7 Gl
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:06	WG989777	
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:06	WG989777	8 Al
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:06	WG989777	
Ethylbenzene	U		0.158	0.500	1	06/19/2017 19:06	WG989777	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:06	WG989777	9 Sc
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:06	WG989777	
n-Hexane	U		0.305	5.00	1	06/19/2017 19:06	WG989777	
Iodomethane	U		0.377	10.0	1	06/19/2017 19:06	WG989777	
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 19:06	WG989777	
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:06	WG989777	
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:06	WG989777	
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:06	WG989777	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:06	WG989777	
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:06	WG989777	
Naphthalene	0.184	J	0.174	2.50	1	06/19/2017 19:06	WG989777	
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 19:06	WG989777	
Styrene	U		0.117	0.500	1	06/19/2017 19:06	WG989777	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:06	WG989777	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:06	WG989777	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:06	WG989777	
Tetrachloroethene	26.0		0.199	0.500	1	06/19/2017 19:06	WG989777	
Toluene	U		0.412	0.500	1	06/19/2017 19:06	WG989777	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:06	WG989777	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:06	WG989777	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:06	WG989777	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:06	WG989777	
Trichloroethene	8.57		0.153	0.500	1	06/19/2017 19:06	WG989777	
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:06	WG989777	
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:06	WG989777	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 19:06	WG989777	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 19:06	WG989777	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 19:06	WG989777	
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:06	WG989777	
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:06	WG989777	
Xylenes, Total	U		0.316	1.50	1	06/19/2017 19:06	WG989777	
(S) Toluene-d8	103			80.0-120		06/19/2017 19:06	WG989777	
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 19:06	WG989777	
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 19:06	WG989777	



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/19/2017 19:29	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:29	WG989777
Benzene	18.6		0.0896	0.500	1	06/19/2017 19:29	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:29	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:29	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:29	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 19:29	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 19:29	WG989777
n-Butylbenzene	6.97		0.143	0.500	1	06/19/2017 19:29	WG989777
sec-Butylbenzene	8.01		0.134	0.500	1	06/19/2017 19:29	WG989777
tert-Butylbenzene	0.219	J	0.183	0.500	1	06/19/2017 19:29	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:29	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:29	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:29	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:29	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 19:29	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 19:29	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 19:29	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:29	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:29	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:29	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:29	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:29	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:29	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:29	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:29	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:29	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:29	WG989777
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/19/2017 19:29	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:29	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:29	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:29	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:29	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:29	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:29	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:29	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:29	WG989777
Ethylbenzene	17.1		0.158	0.500	1	06/19/2017 19:29	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:29	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:29	WG989777
n-Hexane	3.39	J	0.305	5.00	1	06/19/2017 19:29	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 19:29	WG989777
Isopropylbenzene	29.9		0.126	0.500	1	06/19/2017 19:29	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:29	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:29	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:29	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:29	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:29	WG989777
Naphthalene	4.76		0.174	2.50	1	06/19/2017 19:29	WG989777
n-Propylbenzene	75.3		0.162	0.500	1	06/19/2017 19:29	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 19:29	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:29	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:29	WG989777

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Toluene	1.68		0.412	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Trichloroethene	U		0.153	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,4-Trimethylbenzene	1.12		0.123	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trimethylbenzene	2.03		0.0739	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,3,5-Trimethylbenzene	0.185	J	0.124	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:29	<a href="#">WG989777</a>
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Xylenes, Total	3.50		0.316	1.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
(S) Toluene-d8	102			80.0-120		06/19/2017 19:29	<a href="#">WG989777</a>
(S) Dibromofluoromethane	105			76.0-123		06/19/2017 19:29	<a href="#">WG989777</a>
(S) 4-Bromofluorobenzene	98.1			80.0-120		06/19/2017 19:29	<a href="#">WG989777</a>

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/19/2017 19:52	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:52	WG989777
Benzene	U		0.0896	0.500	1	06/19/2017 19:52	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:52	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:52	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:52	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 19:52	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 19:52	WG989777
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 19:52	WG989777
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 19:52	WG989777
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 19:52	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:52	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:52	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:52	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:52	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 19:52	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 19:52	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 19:52	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:52	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:52	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:52	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:52	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:52	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:52	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:52	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:52	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:52	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:52	WG989777
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/19/2017 19:52	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:52	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:52	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:52	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:52	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:52	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:52	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:52	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:52	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 19:52	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:52	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:52	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 19:52	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 19:52	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 19:52	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:52	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:52	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:52	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:52	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:52	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 19:52	WG989777
n-Propylbenzene	0.382	J	0.162	0.500	1	06/19/2017 19:52	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 19:52	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:52	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:52	WG989777

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Toluene	U		0.412	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Trichloroethene	0.162	J	0.153	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:52	<a href="#">WG989777</a>
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:52	<a href="#">WG989777</a>
Xylenes, Total	U		0.316	1.50	1	06/19/2017 19:52	<a href="#">WG989777</a>
(S) Toluene-d8	99.9			80.0-120		06/19/2017 19:52	<a href="#">WG989777</a>
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 19:52	<a href="#">WG989777</a>
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 19:52	<a href="#">WG989777</a>

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	202000		2710	20000	1	06/22/2017 01:40	<a href="#">WG990920</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	23200		51.9	1000	1	06/15/2017 14:22	<a href="#">WG989400</a>
Nitrate	U		22.7	100	1	06/15/2017 14:22	<a href="#">WG989400</a>
Sulfate	8970		77.4	5000	1	06/15/2017 14:22	<a href="#">WG989400</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1200		102	1000	1	06/19/2017 11:47	<a href="#">WG990593</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	298		15.0	100	1	06/21/2017 14:22	<a href="#">WG990560</a>
Manganese	142		0.250	5.00	1	06/21/2017 14:22	<a href="#">WG990560</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	231		0.287	0.678	1	06/16/2017 10:43	<a href="#">WG989710</a>
Ethane	7.73		0.296	1.29	1	06/16/2017 10:43	<a href="#">WG989710</a>
Ethene	6.71		0.422	1.27	1	06/16/2017 10:43	<a href="#">WG989710</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/19/2017 20:15	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/19/2017 20:15	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Bromomethane	U		0.157	2.50	1	06/19/2017 20:15	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/19/2017 20:15	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/19/2017 20:15	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 20:15	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/19/2017 20:15	<a href="#">WG989777</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Collected date/time: 06/14/17 15:00

L916025

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 20:15	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 20:15	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 20:15	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 20:15	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 20:15	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 20:15	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 20:15	WG989777
cis-1,2-Dichloroethene	1.24		0.0933	0.500	1	06/19/2017 20:15	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 20:15	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 20:15	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 20:15	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 20:15	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 20:15	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 20:15	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 20:15	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 20:15	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 20:15	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 20:15	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 20:15	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 20:15	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 20:15	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 20:15	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 20:15	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 20:15	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 20:15	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 20:15	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 20:15	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 20:15	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 20:15	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 20:15	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 20:15	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 20:15	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 20:15	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 20:15	WG989777
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 20:15	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 20:15	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 20:15	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 20:15	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 20:15	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 20:15	WG989777
Trichloroethene	0.408	J	0.153	0.500	1	06/19/2017 20:15	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 20:15	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 20:15	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 20:15	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 20:15	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 20:15	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 20:15	WG989777
Vinyl chloride	3.22		0.118	0.500	1	06/19/2017 20:15	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 20:15	WG989777
(S) Toluene-d8	101			80.0-120		06/19/2017 20:15	WG989777
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 20:15	WG989777
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 20:15	WG989777

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	339000		2710	20000	1	06/22/2017 01:47	<a href="#">WG990920</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	34700		51.9	1000	1	06/15/2017 14:37	<a href="#">WG989400</a>
Nitrate	U		22.7	100	1	06/15/2017 14:37	<a href="#">WG989400</a>
Sulfate	28100		77.4	5000	1	06/15/2017 14:37	<a href="#">WG989400</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	2580		102	1000	1	06/19/2017 12:00	<a href="#">WG990593</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	4560		15.0	100	1	06/21/2017 14:26	<a href="#">WG990560</a>
Manganese	936		0.250	5.00	1	06/21/2017 14:26	<a href="#">WG990560</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	863		0.287	0.678	1	06/16/2017 10:45	<a href="#">WG989710</a>
Ethane	84.6		0.296	1.29	1	06/16/2017 10:45	<a href="#">WG989710</a>
Ethene	43.1		0.422	1.27	1	06/16/2017 10:45	<a href="#">WG989710</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.76	J	1.05	25.0	1	06/19/2017 20:37	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/19/2017 20:37	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromomethane	U		0.157	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/19/2017 20:37	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 20:37	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 20:37	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 20:37	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 20:37	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 20:37	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 20:37	WG989777
1,1-Dichloroethene	1.98		0.188	0.500	1	06/19/2017 20:37	WG989777
cis-1,2-Dichloroethene	120		0.0933	0.500	1	06/19/2017 20:37	WG989777
trans-1,2-Dichloroethene	0.369	J	0.152	0.500	1	06/19/2017 20:37	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 20:37	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 20:37	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 20:37	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 20:37	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 20:37	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 20:37	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 20:37	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 20:37	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 20:37	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 20:37	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 20:37	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 20:37	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 20:37	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 20:37	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 20:37	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 20:37	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 20:37	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 20:37	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 20:37	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 20:37	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 20:37	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 20:37	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 20:37	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 20:37	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 20:37	WG989777
Tetrachloroethene	0.626		0.199	0.500	1	06/19/2017 20:37	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 20:37	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 20:37	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 20:37	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 20:37	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 20:37	WG989777
Trichloroethene	23.0		0.153	0.500	1	06/19/2017 20:37	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 20:37	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 20:37	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 20:37	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 20:37	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 20:37	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 20:37	WG989777
Vinyl chloride	69.2		0.118	0.500	1	06/19/2017 20:37	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 20:37	WG989777
(S) Toluene-d8	101			80.0-120		06/19/2017 20:37	WG989777
(S) Dibromofluoromethane	105			76.0-123		06/19/2017 20:37	WG989777
(S) 4-Bromofluorobenzene	100			80.0-120		06/19/2017 20:37	WG989777

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3227880-2 06/22/17 00:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	2830	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

L915502-01 Original Sample (OS) • Duplicate (DUP)

(OS) L915502-01 06/22/17 00:26 • (DUP) R3227880-3 06/22/17 00:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	ND	17500	1	0.000		20

<sup>4</sup> Cn

<sup>5</sup> Sr

L916773-17 Original Sample (OS) • Duplicate (DUP)

(OS) L916773-17 06/22/17 06:48 • (DUP) R3227880-6 06/22/17 06:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	101000	99200	1	2.00		20

<sup>6</sup> Qc

<sup>7</sup> Gl

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

(LCS) R3227880-4 06/22/17 01:24 • (LCSD) R3227880-5 06/22/17 02:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	109000	108000	109	108	85.0-115			2.00	20

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3226220-1 06/15/17 07:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	117	J	77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L915950-01 Original Sample (OS) • Duplicate (DUP)

(OS) L915950-01 06/15/17 09:06 • (DUP) R3226220-4 06/15/17 09:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	24600	24500	1	1		15
Nitrate	1190	1180	1	1		15
Sulfate	28400	28300	1	0		15

L915998-02 Original Sample (OS) • Duplicate (DUP)

(OS) L915998-02 06/15/17 12:52 • (DUP) R3226220-6 06/15/17 13:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	13900	14300	1	2		15
Nitrate	102	102	1	0		15
Sulfate	ND	1190	1	0		15

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

(LCS) R3226220-2 06/15/17 07:15 • (LCSD) R3226220-3 06/15/17 07:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39500	39600	99	99	80-120			0	15
Nitrate	8000	8080	8080	101	101	80-120			0	15
Sulfate	40000	39900	39900	100	100	80-120			0	15

L915950-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L915950-03 06/15/17 09:50 • (MS) R3226220-5 06/15/17 10:05

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	28500	77500	98	1	80-120	
Nitrate	5000	1760	6680	98	1	80-120	



L915950-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L915950-03 06/15/17 09:50 • (MS) R3226220-5 06/15/17 10:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50000	23100	71900	98	1	80-120	

L916078-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916078-14 06/15/17 15:21 • (MS) R3226220-7 06/15/17 15:36 • (MSD) R3226220-8 06/15/17 15:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	6910	57700	57600	102	101	1	80-120			0	15
Nitrate	5000	1350	6450	6440	102	102	1	80-120			0	15
Sulfate	50000	ND	51900	51900	102	102	1	80-120			0	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3226627-1 06/16/17 12:04

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L915586-04 Original Sample (OS) • Duplicate (DUP)

(OS) L915586-04 06/16/17 14:46 • (DUP) R3226627-3 06/16/17 15:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	1420	1490	1	5		20

L916081-03 Original Sample (OS) • Duplicate (DUP)

(OS) L916081-03 06/16/17 21:50 • (DUP) R3226627-7 06/16/17 22:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	1020	992	1	3	J	20

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

(LCS) R3226627-2 06/16/17 14:12 • (LCSD) R3226627-4 06/16/17 16:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	71200	71600	95	96	85-115			1	20

L915799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L915799-01 06/16/17 17:27 • (MS) R3226627-5 06/16/17 17:45 • (MSD) R3226627-6 06/16/17 18:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	6600	50500	49600	88	86	1	80-120			2	20



Method Blank (MB)

(MB) R3226906-1 06/19/17 10:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L916181-04 Original Sample (OS) • Duplicate (DUP)

(OS) L916181-04 06/19/17 12:18 • (DUP) R3226906-3 06/19/17 12:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	ND	637	1	0		20

L916429-03 Original Sample (OS) • Duplicate (DUP)

(OS) L916429-03 06/19/17 19:13 • (DUP) R3226906-7 06/19/17 19:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	2250	2200	1	2		20

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

(LCS) R3226906-2 06/19/17 11:32 • (LCSD) R3226906-4 06/19/17 13:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	71200	72200	95	96	85-115			1	20

L916184-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916184-01 06/19/17 15:42 • (MS) R3226906-5 06/19/17 16:00 • (MSD) R3226906-6 06/19/17 16:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	16600	64000	64400	95	96	1	80-120			1	20





Method Blank (MB)

(MB) R3227505-1 06/21/17 13:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	U		15.0	100
Manganese	0.371	J	0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3227505-2 06/21/17 13:39 • (LCSD) R3227505-3 06/21/17 13:42

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	4780	4760	96	95	80-120			0	20
Manganese	50.0	45.8	45.4	92	91	80-120			1	20

5 Sr

6 Qc

L916657-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916657-02 06/21/17 13:46 • (MS) R3227505-5 06/21/17 13:53 • (MSD) R3227505-6 06/21/17 13:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	17.9	4710	4650	94	93	1	75-125			1	20
Manganese	50.0	144	190	189	92	89	1	75-125			1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3226293-1 06/16/17 10:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L916025-02 Original Sample (OS) • Duplicate (DUP)

(OS) L916025-02 06/16/17 10:40 • (DUP) R3226293-2 06/16/17 11:08

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

L916295-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916295-01 06/16/17 11:44 • (DUP) R3226293-3 06/16/17 11:51

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

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

(LCS) R3226293-4 06/16/17 11:58 • (LCSD) R3226293-5 06/16/17 12:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	63.8	76.7	94.2	113	70.0-130			18.3	20
Ethane	129	121	127	94.0	98.5	70.0-130			4.68	20
Ethene	127	116	121	91.6	94.9	70.0-130			3.60	20



Method Blank (MB)

(MB) R3227153-3 06/17/17 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3227153-3 06/17/17 11:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
n-Hexane	U		0.305	5.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
Methyl tert-butyl ether	U		0.102	0.500
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Naphthalene	U		0.174	2.50
1,1,2,2-Tetrachloroethane	U		0.130	0.500
n-Propylbenzene	U		0.162	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
Toluene	U		0.412	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
Trichloroethene	U		0.153	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
Vinyl chloride	U		0.118	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	104			80.0-120
(S) Dibromofluoromethane	101			76.0-123
(S) 4-Bromofluorobenzene	99.8			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3227153-1 06/17/17 08:45 • (LCSD) R3227153-2 06/17/17 09:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	25.0	25.8	25.9	103	104	76.0-122			0.370	20
Acetone	125	142	140	113	112	10.0-160			0.890	23
Acrylonitrile	125	121	129	97.1	103	60.0-142			5.78	20
Benzene	25.0	25.0	25.1	99.9	101	69.0-123			0.620	20
trans-1,4-Dichloro-2-butene	25.0	19.0	19.9	75.8	79.5	55.0-134			4.72	20
Bromobenzene	25.0	24.0	24.5	96.0	98.1	79.0-120			2.17	20
Bromodichloromethane	25.0	25.5	25.0	102	99.9	76.0-120			2.25	20
Bromoform	25.0	26.3	26.8	105	107	67.0-132			1.99	20
2-Hexanone	125	144	144	115	115	58.0-147			0.210	20
Bromomethane	25.0	19.2	18.0	76.8	72.0	18.0-160			6.48	20
Iodomethane	125	103	117	82.1	93.4	57.0-140			12.8	20
n-Butylbenzene	25.0	23.6	24.5	94.3	97.9	72.0-126			3.74	20
sec-Butylbenzene	25.0	23.3	24.5	93.3	98.0	74.0-121			4.92	20
tert-Butylbenzene	25.0	23.3	24.5	93.4	98.2	75.0-122			5.02	20
Carbon disulfide	25.0	29.7	30.3	119	121	55.0-127			1.94	20
Carbon tetrachloride	25.0	26.4	26.9	105	108	63.0-122			2.00	20
Chlorobenzene	25.0	25.4	26.2	102	105	79.0-121			2.85	20
Chlorodibromomethane	25.0	27.2	27.2	109	109	75.0-125			0.0900	20
Chloroethane	25.0	22.2	22.2	88.9	88.7	47.0-152			0.230	20
Chloroform	25.0	24.1	24.0	96.4	96.1	72.0-121			0.370	20
Chloromethane	25.0	21.5	22.2	85.9	88.8	48.0-139			3.41	20
2-Chlorotoluene	25.0	24.2	24.8	96.9	99.3	74.0-122			2.46	20
4-Chlorotoluene	25.0	24.6	25.5	98.6	102	79.0-120			3.57	20
1,2-Dibromo-3-Chloropropane	25.0	22.4	23.6	89.6	94.5	64.0-127			5.33	20
1,2-Dibromoethane	25.0	25.7	26.7	103	107	77.0-123			3.65	20
1,2-Dichlorobenzene	25.0	25.6	26.0	102	104	80.0-120			1.68	20
Dibromomethane	25.0	25.5	25.8	102	103	78.0-120			1.10	20
1,3-Dichlorobenzene	25.0	24.8	25.3	99.3	101	72.0-123			1.98	20
1,4-Dichlorobenzene	25.0	24.9	24.9	99.4	99.4	77.0-120			0.0300	20
Dichlorodifluoromethane	25.0	25.7	25.3	103	101	49.0-155			1.31	20
1,1-Dichloroethane	25.0	24.9	25.0	99.6	100	70.0-126			0.570	20
1,2-Dichloroethane	25.0	25.6	25.6	102	103	67.0-126			0.270	20
1,1-Dichloroethene	25.0	29.1	29.2	116	117	64.0-129			0.400	20
Vinyl acetate	125	80.5	88.2	64.4	70.6	46.0-160			9.15	20
cis-1,2-Dichloroethene	25.0	24.6	25.5	98.6	102	73.0-120			3.44	20
trans-1,2-Dichloroethene	25.0	25.1	25.6	100	103	71.0-121			2.25	20
1,2-Dichloropropane	25.0	25.0	25.3	100	101	75.0-125			1.08	20
1,1-Dichloropropene	25.0	25.7	26.1	103	104	71.0-129			1.41	20
1,3-Dichloropropane	25.0	25.6	25.9	103	103	80.0-121			0.810	20
cis-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.4	79.0-123			0.570	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3227153-1 06/17/17 08:45 • (LCSD) R3227153-2 06/17/17 09:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.8	74.0-127			0.880	20
2,2-Dichloropropane	25.0	22.3	22.6	89.0	90.2	60.0-125			1.36	20
Di-isopropyl ether	25.0	25.2	25.2	101	101	59.0-133			0.0700	20
Ethylbenzene	25.0	25.7	26.4	103	105	77.0-120			2.59	20
Hexachloro-1,3-butadiene	25.0	23.5	24.0	94.0	95.8	64.0-131			1.93	20
n-Hexane	25.0	23.5	23.4	94.1	93.7	56.0-124			0.390	20
Isopropylbenzene	25.0	24.4	25.2	97.4	101	75.0-120			3.27	20
p-Isopropyltoluene	25.0	23.6	24.6	94.6	98.4	74.0-126			3.95	20
2-Butanone (MEK)	125	122	122	97.9	97.4	37.0-158			0.480	20
Methylene Chloride	25.0	24.7	24.7	98.8	98.8	66.0-121			0.0300	20
4-Methyl-2-pentanone (MIBK)	125	127	129	102	103	59.0-143			1.85	20
Methyl tert-butyl ether	25.0	25.3	25.0	101	99.9	64.0-123			1.17	20
Naphthalene	25.0	22.4	23.5	89.6	94.0	62.0-128			4.87	20
n-Propylbenzene	25.0	24.1	24.6	96.5	98.4	79.0-120			1.93	20
Styrene	25.0	25.4	25.7	101	103	78.0-124			1.15	20
1,1,1,2-Tetrachloroethane	25.0	25.9	25.8	104	103	75.0-122			0.650	20
1,1,2,2-Tetrachloroethane	25.0	22.1	22.9	88.4	91.6	71.0-122			3.56	20
Tetrachloroethene	25.0	26.2	26.6	105	106	70.0-127			1.53	20
Toluene	25.0	25.8	25.8	103	103	77.0-120			0.0800	20
1,1,2-Trichlorotrifluoroethane	25.0	28.8	29.2	115	117	61.0-136			1.54	20
1,2,3-Trichlorobenzene	25.0	22.5	22.6	90.2	90.5	61.0-133			0.370	20
1,1,1-Trichloroethane	25.0	26.8	27.0	107	108	68.0-122			0.740	20
1,2,4-Trichlorobenzene	25.0	25.1	26.4	100	106	69.0-129			5.32	20
1,1,2-Trichloroethane	25.0	25.7	26.1	103	104	78.0-120			1.56	20
Trichloroethene	25.0	26.5	27.4	106	110	78.0-120			3.37	20
Trichlorofluoromethane	25.0	26.3	26.2	105	105	56.0-137			0.420	20
1,2,3-Trichloropropane	25.0	22.8	24.5	91.2	97.9	72.0-124			7.10	20
1,2,3-Trimethylbenzene	25.0	25.2	25.8	101	103	75.0-120			2.40	20
1,2,4-Trimethylbenzene	25.0	24.6	24.9	98.5	99.6	75.0-120			1.20	20
1,3,5-Trimethylbenzene	25.0	24.1	24.4	96.6	97.5	75.0-120			0.900	20
Vinyl chloride	25.0	24.6	25.2	98.5	101	64.0-133			2.48	20
Xylenes, Total	75.0	75.8	75.8	101	101	77.0-120			0.000	20
(S) Toluene-d8				106	106	80.0-120				
(S) Dibromofluoromethane				98.8	99.2	76.0-123				
(S) 4-Bromofluorobenzene				101	103	80.0-120				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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 \* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

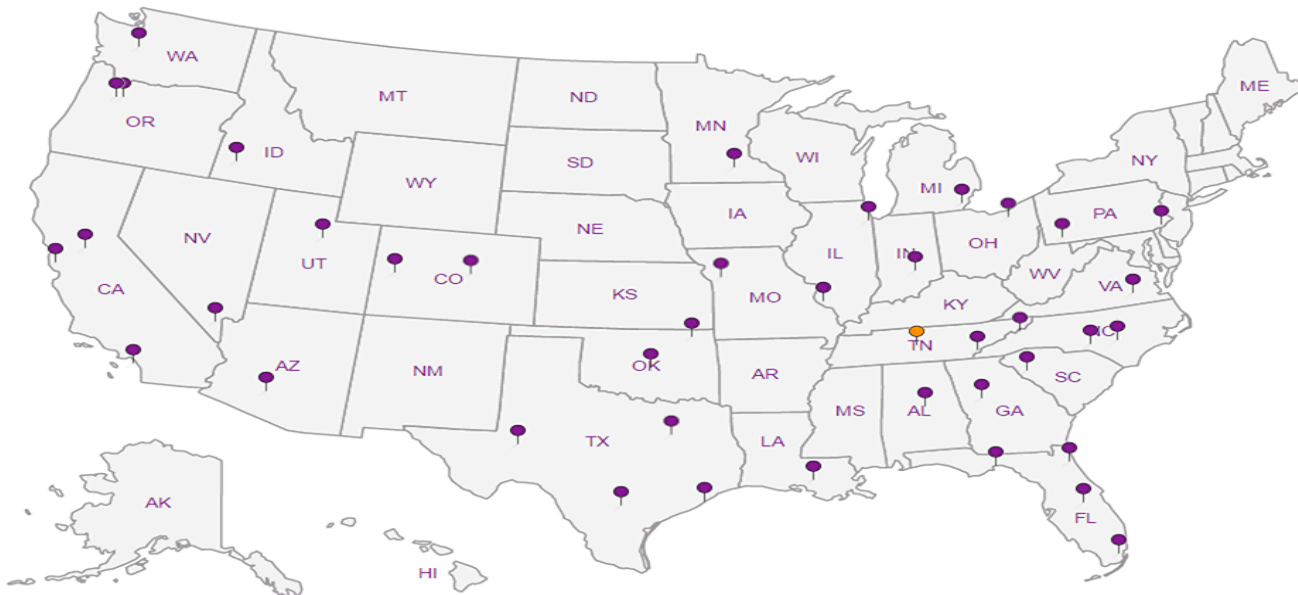
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



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



L# 916025

**F004**

Acctnum: PESENVSWA

Template: T124201

Prelogin: P603202

TSR: 110 - Brian Ford

PB: 5-31-17

Shipped Via: FedEX Ground

Report to:  
**Bill Haldeman**

Email To: bhaldean@pesenv.com

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: 206-529-3980  
Fax: 206-529-3985

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

\_\_\_ Same Day \_\_\_ Five Day  
\_\_\_ Next Day \_\_\_ 5 Day (Rad Only)  
\_\_\_ Two Day \_\_\_ 10 Day (Rad Only)  
\_\_\_ Three Day

Quote #

Date Results Needed

Immediately  
Packed on Ice N \_\_\_ Y **X**

No.  
of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk, Cl, NO3, SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl	Remarks	Sample # (lab only)
MW105-061317061417	GRAB	GW	135	6/14/17	1030	4								-01
BB-8-061417	GRAB	GW	35	↓	1050	9	X	X	X	X	X	X		-02
SGL-MW100-061417		GW												
SGL-MW101-061417	GRAB	GW	12	6/14/17	1300	4								-03
MW122-061417	↓	GW	112	↓	1300	4								-04
MW111-061417	↓	GW	75	↓	1500	9	X	X	X	X	X	X		-05
MW103-061417	↓	GW	108.5	↓	1500	9	X	X	X	X	X	X		-06
		GW												
		GW												
		GW												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier

Tracking #

Sample Receipt Checklist  
COC Seal Present/Intact: \_\_\_ NP \_\_\_ Y \_\_\_ N  
COC Signed/Accurate: \_\_\_ Y \_\_\_ N  
Bottles arrive intact: \_\_\_ Y \_\_\_ N  
Correct bottles used: \_\_\_ Y \_\_\_ N  
Sufficient volume sent: \_\_\_ Y \_\_\_ N  
If Applicable  
VOA Zero Headspace: \_\_\_ Y \_\_\_ N  
Preservation Correct/Checked: \_\_\_ Y \_\_\_ N

Relinquished by: (Signature)  
*[Signature]*

Date: 6/14/17  
Time: 1625

Received by: (Signature)

Trip Blank Received: Yes/No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: 7.9°C  
Bottles Received: 39

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: 6/16/17  
Time: 845

Hold: \_\_\_\_\_  
Condition: NCF / OK

## MEMORANDUM

**TO:** Project File **DATE:** July 24, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 14, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L916025

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Six (6) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 14, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L916025. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L916025 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.8 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. Temperature receipt was confirmed by ESC since the chain of custody notes were difficult to read. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable and ESC notes do not indicate any issues with the calibrations.

## **Method Blank Results**

### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or above the RDL with the following discussion:

- Low level manganese was detected in the method blank (WG990560) less than the RDL but greater than the method detection limit (MDL). No action was necessary as associated manganese results are significantly greater than low level manganese detection in the blank.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- Low levels of alkalinity and sulfate were detected in the respective method blanks between the RDL and MDL. No action was necessary as associated alkalinity and sulfate sample results are significantly greater than the detections in the blank.

## **Trip Blank Results**

### *USEPA Method 8260C:*

A trip blank was not collected.

## **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

## **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

## **Laboratory Duplicate Analyses**

### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample

duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client sample and on sample BB-8-061417. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate samples were performed on non-client samples within the analytical batch. The primary/duplicate RPDs for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on non-client samples within the analytical batches. The primary/duplicate RPD for TOC analyses are within the laboratory control limit of 20%.

**Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

**Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPDs for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS/MSD analyses were performed on non-client samples within the analytical batch. MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analyses were performed on non-client sample within the analytical batches. MS/MSD % Rs and RPDs for TOC were within the laboratory control criteria for water.

**Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

**Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Other than detections between the MDL and RDL no other data qualifiers were assigned. Laboratory report pages with the less than RDL qualifiers are attached. All data are judged to be acceptable for their intended use.



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.18	J ↓	1.05	25.0	1	06/19/2017 18:44	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 18:44	WG989777
Benzene	U		0.0896	0.500	1	06/19/2017 18:44	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 18:44	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 18:44	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 18:44	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 18:44	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 18:44	WG989777
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 18:44	WG989777
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 18:44	WG989777
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 18:44	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 18:44	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 18:44	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 18:44	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 18:44	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 18:44	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 18:44	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 18:44	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 18:44	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 18:44	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 18:44	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 18:44	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 18:44	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 18:44	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 18:44	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 18:44	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 18:44	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 18:44	WG989777
cis-1,2-Dichloroethene	0.180	J ↓	0.0933	0.500	1	06/19/2017 18:44	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 18:44	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 18:44	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 18:44	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 18:44	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 18:44	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 18:44	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 18:44	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 18:44	WG989777
Di-Isopropyl ether	U		0.0924	0.500	1	06/19/2017 18:44	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 18:44	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 18:44	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 18:44	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 18:44	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 18:44	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 18:44	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 18:44	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 18:44	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 18:44	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 18:44	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 18:44	WG989777
Naphthalene	1.41	J ↓	0.174	2.50	1	06/19/2017 18:44	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 18:44	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 18:44	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 18:44	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 18:44	WG989777

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

QC 7/24/17



MW105-061417

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/14/17 10:30

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
	ug/l		ug/l	ug/l				
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	1 Cp
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	2 Tc
Toluene	U		0.412	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	3 Ss
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	4 Cn
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	
Trichloroethene	0.356	J J	0.153	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	5 Sr
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 18:44	<a href="#">WG989777</a>	
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 18:44	<a href="#">WG989777</a>	
1,2,4-Trimethylbenzene	0.216	J J	0.123	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	6 Qc
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	7 Gl
Vinyl acetate	U		0.645	5.00	1	06/19/2017 18:44	<a href="#">WG989777</a>	
Vinyl chloride	0.514		0.118	0.500	1	06/19/2017 18:44	<a href="#">WG989777</a>	8 Al
Xylenes, Total	U		0.316	1.50	1	06/19/2017 18:44	<a href="#">WG989777</a>	9 Sc
(S) Toluene-d8	100			80.0-120		06/19/2017 18:44	<a href="#">WG989777</a>	
(S) Dibromofluoromethane	108			76.0-123		06/19/2017 18:44	<a href="#">WG989777</a>	
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 18:44	<a href="#">WG989777</a>	

*Jc 7/21/17*



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	290000		2710	20000	1	06/22/2017 01:33	<a href="#">WG990920</a>

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	10200		51.9	1000	1	06/15/2017 13:52	<a href="#">WG989400</a>
Nitrate	2740		22.7	100	1	06/15/2017 13:52	<a href="#">WG989400</a>
Sulfate	56900		77.4	5000	1	06/15/2017 13:52	<a href="#">WG989400</a>

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	3340		102	1000	1	06/16/2017 19:17	<a href="#">WG989915</a>

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	34.8	J ↓	15.0	100	1	06/21/2017 14:19	<a href="#">WG990560</a>
Manganese	47.5		0.250	5.00	1	06/21/2017 14:19	<a href="#">WG990560</a>

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	U		0.287	0.678	1	06/16/2017 10:40	<a href="#">WG989710</a>
Ethane	U		0.296	1.29	1	06/16/2017 10:40	<a href="#">WG989710</a>
Ethene	U		0.422	1.27	1	06/16/2017 10:40	<a href="#">WG989710</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.50	J ↓	1.05	25.0	1	06/19/2017 19:06	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:06	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Bromomethane	U		0.157	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/19/2017 19:06	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:06	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:06	<a href="#">WG989777</a>

JCA 7/24/17



Collected date/time: 06/14/17 10:50

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:06	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:06	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:06	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:06	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:06	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:06	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:06	WG989777
cis-1,2-Dichloroethene	12.6		0.0933	0.500	1	06/19/2017 19:06	WG989777
trans-1,2-Dichloroethene	0.155	J ↓	0.152	0.500	1	06/19/2017 19:06	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:06	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:06	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:06	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:06	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:06	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:06	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:06	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:06	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 19:06	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:06	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:06	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 19:06	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 19:06	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 19:06	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:06	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:06	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:06	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:06	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:06	WG989777
Naphthalene	0.184	J ↓	0.174	2.50	1	06/19/2017 19:06	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 19:06	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 19:06	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:06	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:06	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:06	WG989777
Tetrachloroethene	26.0		0.199	0.500	1	06/19/2017 19:06	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 19:06	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:06	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:06	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:06	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:06	WG989777
Trichloroethene	8.57		0.153	0.500	1	06/19/2017 19:06	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:06	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:06	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 19:06	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 19:06	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 19:06	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:06	WG989777
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:06	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 19:06	WG989777
(S) Toluene-d8	103			80.0-120		06/19/2017 19:06	WG989777
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 19:06	WG989777
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 19:06	WG989777

Cp

Tc

Ss

Cn

Si

Qc

Gl

Al

Sc

JC 7/24/17



Collected date/time: 06/14/17 13:00

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/19/2017 19:29	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:29	WG989777
Benzene	18.6		0.0896	0.500	1	06/19/2017 19:29	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:29	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:29	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:29	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 19:29	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 19:29	WG989777
n-Butylbenzene	6.97		0.143	0.500	1	06/19/2017 19:29	WG989777
sec-Butylbenzene	8.01		0.134	0.500	1	06/19/2017 19:29	WG989777
tert-Butylbenzene	0.219	J	0.183	0.500	1	06/19/2017 19:29	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:29	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:29	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:29	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:29	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 19:29	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 19:29	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 19:29	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:29	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:29	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:29	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:29	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:29	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:29	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:29	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:29	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:29	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:29	WG989777
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/19/2017 19:29	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 19:29	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:29	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:29	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:29	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:29	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:29	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:29	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:29	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:29	WG989777
Ethylbenzene	17.1		0.158	0.500	1	06/19/2017 19:29	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:29	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:29	WG989777
n-Hexane	3.39	J	0.305	5.00	1	06/19/2017 19:29	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 19:29	WG989777
Isopropylbenzene	29.9		0.126	0.500	1	06/19/2017 19:29	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:29	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:29	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:29	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:29	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:29	WG989777
Naphthalene	4.76		0.174	2.50	1	06/19/2017 19:29	WG989777
n-Propylbenzene	75.3		0.162	0.500	1	06/19/2017 19:29	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 19:29	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:29	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:29	WG989777

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*JC*  
*7/24/17*



Collected date/time: 06/14/17 13:00

L916025

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Toluene	1.68		0.412	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Trichloroethene	U		0.153	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,4-Trimethylbenzene	1.12		0.123	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,2,3-Trimethylbenzene	2.03		0.0739	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
1,3,5-Trimethylbenzene	0.185	J	0.124	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:29	<a href="#">WG989777</a>
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:29	<a href="#">WG989777</a>
Xylenes, Total	3.50		0.316	1.50	1	06/19/2017 19:29	<a href="#">WG989777</a>
(S) Toluene-d8	102			80.0-120		06/19/2017 19:29	<a href="#">WG989777</a>
(S) Dibromofluoromethane	105			76.0-123		06/19/2017 19:29	<a href="#">WG989777</a>
(S) 4-Bromofluorobenzene	98.1			80.0-120		06/19/2017 19:29	<a href="#">WG989777</a>

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

JC  
7/24/17



Collected date/time: 06/14/17 13:00

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/19/2017 19:52	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 19:52	WG989777
Benzene	U		0.0896	0.500	1	06/19/2017 19:52	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 19:52	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 19:52	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 19:52	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 19:52	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 19:52	WG989777
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 19:52	WG989777
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 19:52	WG989777
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 19:52	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 19:52	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 19:52	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 19:52	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 19:52	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 19:52	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 19:52	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 19:52	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 19:52	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 19:52	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 19:52	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 19:52	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 19:52	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 19:52	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 19:52	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 19:52	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 19:52	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 19:52	WG989777
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/19/2017 19:52	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 19:52	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 19:52	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 19:52	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 19:52	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 19:52	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 19:52	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 19:52	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 19:52	WG989777
Di-isopropyl ether	U		0.0924	0.500	1	06/19/2017 19:52	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 19:52	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 19:52	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 19:52	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 19:52	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 19:52	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 19:52	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 19:52	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 19:52	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 19:52	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 19:52	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 19:52	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 19:52	WG989777
n-Propylbenzene	0.382	J U	0.162	0.500	1	06/19/2017 19:52	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 19:52	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 19:52	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 19:52	WG989777

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

*Jc*  
6/24/17

MW122-061417

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/14/17 13:00

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 19:52	WG989777
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 19:52	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 19:52	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 19:52	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 19:52	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 19:52	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 19:52	WG989777
Trichloroethene	0.162	J	0.153	0.500	1	06/19/2017 19:52	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 19:52	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 19:52	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 19:52	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 19:52	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 19:52	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 19:52	WG989777
Vinyl chloride	U		0.118	0.500	1	06/19/2017 19:52	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 19:52	WG989777
(S) Toluene-d8	99.9			80.0-120		06/19/2017 19:52	WG989777
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 19:52	WG989777
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 19:52	WG989777

- Cp
- Tc
- Ss
- Cn
- Si
- Qc
- Gl
- Al
- Sc

JC  
7/24/17



Collected date/time: 06/14/17 15:00

L916025

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	202000		2710	20000	1	06/22/2017 01:40	WG990920

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	23200		51.9	1000	1	06/15/2017 14:22	WG989400
Nitrate	U		22.7	100	1	06/15/2017 14:22	WG989400
Sulfate	8970		77.4	5000	1	06/15/2017 14:22	WG989400

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1200		102	1000	1	06/19/2017 11:47	WG990593

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	298		15.0	100	1	06/21/2017 14:22	WG990560
Manganese	142		0.250	5.00	1	06/21/2017 14:22	WG990560

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	231		0.287	0.678	1	06/16/2017 10:43	WG989710
Ethane	7.73		0.296	1.29	1	06/16/2017 10:43	WG989710
Ethene	6.71		0.422	1.27	1	06/16/2017 10:43	WG989710

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/19/2017 20:15	WG989777
Acrylonitrile	U		0.873	5.00	1	06/19/2017 20:15	WG989777
Benzene	U		0.0896	0.500	1	06/19/2017 20:15	WG989777
Bromobenzene	U		0.133	0.500	1	06/19/2017 20:15	WG989777
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 20:15	WG989777
Bromochloromethane	U		0.145	0.500	1	06/19/2017 20:15	WG989777
Bromoform	U		0.186	0.500	1	06/19/2017 20:15	WG989777
Bromomethane	U		0.157	2.50	1	06/19/2017 20:15	WG989777
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 20:15	WG989777
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 20:15	WG989777
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 20:15	WG989777
Carbon disulfide	U		0.101	0.500	1	06/19/2017 20:15	WG989777
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 20:15	WG989777
Chlorobenzene	U		0.140	0.500	1	06/19/2017 20:15	WG989777
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 20:15	WG989777
Chloroethane	U		0.141	2.50	1	06/19/2017 20:15	WG989777
Chloroform	U		0.0860	0.500	1	06/19/2017 20:15	WG989777
Chloromethane	U		0.153	1.25	1	06/19/2017 20:15	WG989777
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 20:15	WG989777
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 20:15	WG989777
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 20:15	WG989777
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 20:15	WG989777
Dibromomethane	U		0.117	0.500	1	06/19/2017 20:15	WG989777

*JC*  
7/24/17



MW111-061417

SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.



Collected date/time: 06/14/17 15:00

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 20:15	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 20:15	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 20:15	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 20:15	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 20:15	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 20:15	WG989777
1,1-Dichloroethene	U		0.188	0.500	1	06/19/2017 20:15	WG989777
cis-1,2-Dichloroethene	1.24		0.0933	0.500	1	06/19/2017 20:15	WG989777
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/19/2017 20:15	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 20:15	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 20:15	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 20:15	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 20:15	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 20:15	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 20:15	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 20:15	WG989777
Di-Isopropyl ether	U		0.0924	0.500	1	06/19/2017 20:15	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 20:15	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 20:15	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 20:15	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 20:15	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 20:15	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 20:15	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 20:15	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 20:15	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 20:15	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 20:15	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 20:15	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 20:15	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 20:15	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 20:15	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 20:15	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 20:15	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 20:15	WG989777
Tetrachloroethene	U		0.199	0.500	1	06/19/2017 20:15	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 20:15	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 20:15	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 20:15	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 20:15	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 20:15	WG989777
Trichloroethene	0.408	J	0.153	0.500	1	06/19/2017 20:15	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 20:15	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 20:15	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 20:15	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 20:15	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 20:15	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 20:15	WG989777
Vinyl chloride	3.22		0.118	0.500	1	06/19/2017 20:15	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 20:15	WG989777
(S) Toluene-d8	101			80.0-120		06/19/2017 20:15	WG989777
(S) Dibromofluoromethane	106			76.0-123		06/19/2017 20:15	WG989777
(S) 4-Bromofluorobenzene	101			80.0-120		06/19/2017 20:15	WG989777

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

Jc  
7/24/17

MW103-061417

## SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.



Collected date/time: 06/14/17 15:00

L916025

## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	ug/l		ug/l	ug/l		date / time	
	339000		2710	20000	1	06/22/2017 01:47	<a href="#">WG990920</a>

Cp

Tc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	ug/l		ug/l	ug/l		date / time	
	34700		51.9	1000	1	06/15/2017 14:37	<a href="#">WG989400</a>
Nitrate	U		22.7	100	1	06/15/2017 14:37	<a href="#">WG989400</a>
Sulfate	28100		77.4	5000	1	06/15/2017 14:37	<a href="#">WG989400</a>

Ss

Cn

Sr

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	ug/l		ug/l	ug/l		date / time	
	2580		102	1000	1	06/19/2017 12:00	<a href="#">WG990593</a>

Qc

Gl

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	ug/l		ug/l	ug/l		date / time	
	4560		15.0	100	1	06/21/2017 14:26	<a href="#">WG990560</a>
Manganese	936		0.250	5.00	1	06/21/2017 14:26	<a href="#">WG990560</a>

Al

Sc

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	ug/l		ug/l	ug/l		date / time	
	863		0.287	0.678	1	06/16/2017 10:45	<a href="#">WG989710</a>
Ethane	84.6		0.296	1.29	1	06/16/2017 10:45	<a href="#">WG989710</a>
Ethene	43.1		0.422	1.27	1	06/16/2017 10:45	<a href="#">WG989710</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	1.76	J ↓	1.05	25.0	1	06/19/2017 20:37	<a href="#">WG989777</a>
Acrylonitrile	U		0.873	5.00	1	06/19/2017 20:37	<a href="#">WG989777</a>
Benzene	U		0.0896	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromobenzene	U		0.133	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromodichloromethane	U		0.0800	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromochloromethane	U		0.145	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromoform	U		0.186	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Bromomethane	U		0.157	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
n-Butylbenzene	U		0.143	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
sec-Butylbenzene	U		0.134	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
tert-Butylbenzene	U		0.183	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Carbon disulfide	U		0.101	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Carbon tetrachloride	U		0.159	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chlorobenzene	U		0.140	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chlorodibromomethane	U		0.128	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloroethane	U		0.141	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloroform	U		0.0860	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Chloromethane	U		0.153	1.25	1	06/19/2017 20:37	<a href="#">WG989777</a>
2-Chlorotoluene	U		0.111	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	06/19/2017 20:37	<a href="#">WG989777</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>
Dibromomethane	U		0.117	0.500	1	06/19/2017 20:37	<a href="#">WG989777</a>

Jc  
7/24/17

MW103-061417

SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.



Collected date/time: 06/14/17 15:00

L916025

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.101	0.500	1	06/19/2017 20:37	WG989777
1,3-Dichlorobenzene	U		0.130	0.500	1	06/19/2017 20:37	WG989777
1,4-Dichlorobenzene	U		0.121	0.500	1	06/19/2017 20:37	WG989777
Dichlorodifluoromethane	U		0.127	2.50	1	06/19/2017 20:37	WG989777
1,1-Dichloroethane	U		0.114	0.500	1	06/19/2017 20:37	WG989777
1,2-Dichloroethane	U		0.108	0.500	1	06/19/2017 20:37	WG989777
1,1-Dichloroethene	1.98		0.188	0.500	1	06/19/2017 20:37	WG989777
cis-1,2-Dichloroethene	120		0.0933	0.500	1	06/19/2017 20:37	WG989777
trans-1,2-Dichloroethene	0.369	J J	0.152	0.500	1	06/19/2017 20:37	WG989777
1,2-Dichloropropane	U		0.190	0.500	1	06/19/2017 20:37	WG989777
1,1-Dichloropropene	U		0.128	0.500	1	06/19/2017 20:37	WG989777
1,3-Dichloropropane	U		0.147	1.00	1	06/19/2017 20:37	WG989777
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/19/2017 20:37	WG989777
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/19/2017 20:37	WG989777
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	06/19/2017 20:37	WG989777
2,2-Dichloropropane	U		0.0929	0.500	1	06/19/2017 20:37	WG989777
Diisopropyl ether	U		0.0924	0.500	1	06/19/2017 20:37	WG989777
Ethylbenzene	U		0.158	0.500	1	06/19/2017 20:37	WG989777
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/19/2017 20:37	WG989777
2-Hexanone	U		0.757	5.00	1	06/19/2017 20:37	WG989777
n-Hexane	U		0.305	5.00	1	06/19/2017 20:37	WG989777
Iodomethane	U		0.377	10.0	1	06/19/2017 20:37	WG989777
Isopropylbenzene	U		0.126	0.500	1	06/19/2017 20:37	WG989777
p-Isopropyltoluene	U		0.138	0.500	1	06/19/2017 20:37	WG989777
2-Butanone (MEK)	U		1.28	5.00	1	06/19/2017 20:37	WG989777
Methylene Chloride	U		1.07	2.50	1	06/19/2017 20:37	WG989777
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/19/2017 20:37	WG989777
Methyl tert-butyl ether	U		0.102	0.500	1	06/19/2017 20:37	WG989777
Naphthalene	U		0.174	2.50	1	06/19/2017 20:37	WG989777
n-Propylbenzene	U		0.162	0.500	1	06/19/2017 20:37	WG989777
Styrene	U		0.117	0.500	1	06/19/2017 20:37	WG989777
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/19/2017 20:37	WG989777
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/19/2017 20:37	WG989777
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/19/2017 20:37	WG989777
Tetrachloroethene	0.626		0.199	0.500	1	06/19/2017 20:37	WG989777
Toluene	U		0.412	0.500	1	06/19/2017 20:37	WG989777
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/19/2017 20:37	WG989777
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/19/2017 20:37	WG989777
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/19/2017 20:37	WG989777
1,1,2-Trichloroethane	U		0.186	0.500	1	06/19/2017 20:37	WG989777
Trichloroethene	23.0		0.153	0.500	1	06/19/2017 20:37	WG989777
Trichlorofluoromethane	U		0.130	2.50	1	06/19/2017 20:37	WG989777
1,2,3-Trichloropropane	U		0.247	2.50	1	06/19/2017 20:37	WG989777
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/19/2017 20:37	WG989777
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/19/2017 20:37	WG989777
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/19/2017 20:37	WG989777
Vinyl acetate	U		0.645	5.00	1	06/19/2017 20:37	WG989777
Vinyl chloride	69.2		0.118	0.500	1	06/19/2017 20:37	WG989777
Xylenes, Total	U		0.316	1.50	1	06/19/2017 20:37	WG989777
(S) Toluene-d8	101			80.0-120		06/19/2017 20:37	WG989777
(S) Dibromofluoromethane	105			76.0-123		06/19/2017 20:37	WG989777
(S) 4-Bromofluorobenzene	100			80.0-120		06/19/2017 20:37	WG989777

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

JC 7/24/17

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L916678  
Samples Received: 06/16/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Jason Romer  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b><sup>1</sup>Cp</b>
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b><sup>2</sup>Tc</b>
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b><sup>3</sup>Ss</b>
<b>SCL-MW105-061517 L916678-01</b>	<b>5</b>	
<b>MW126-061517 L916678-02</b>	<b>7</b>	<b><sup>4</sup>Cn</b>
<b>RMW-2-061517 L916678-03</b>	<b>9</b>	<b><sup>5</sup>Sr</b>
<b>MW102-061517 L916678-04</b>	<b>11</b>	
<b>MW124-061517 L916678-05</b>	<b>13</b>	<b><sup>6</sup>Qc</b>
<b>Qc: Quality Control Summary</b>	<b>15</b>	
<b>Volatile Organic Compounds (GC/MS) by Method 8260C</b>	<b>15</b>	<b><sup>7</sup>Gl</b>
<b>Gl: Glossary of Terms</b>	<b>19</b>	<b><sup>8</sup>Al</b>
<b>Al: Accreditations &amp; Locations</b>	<b>20</b>	
<b>Sc: Chain of Custody</b>	<b>21</b>	<b><sup>9</sup>Sc</b>

# SAMPLE SUMMARY



## SCL-MW105-061517 L916678-01 GW

Collected by Shannon McKernan  
 Collected date/time 06/15/17 08:30  
 Received date/time 06/16/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 03:02	06/22/17 03:02	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	10	06/26/17 02:21	06/26/17 02:21	ACG

1 Cp

2 Tc

3 Ss

## MW126-061517 L916678-02 GW

Collected by Shannon McKernan  
 Collected date/time 06/15/17 08:45  
 Received date/time 06/16/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 03:25	06/22/17 03:25	BMB

4 Cn

5 Sr

6 Qc

## RMW-2-061517 L916678-03 GW

Collected by Shannon McKernan  
 Collected date/time 06/15/17 10:30  
 Received date/time 06/16/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 03:48	06/22/17 03:48	BMB

7 Gl

8 Al

## MW102-061517 L916678-04 GW

Collected by Shannon McKernan  
 Collected date/time 06/15/17 10:54  
 Received date/time 06/16/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 04:10	06/22/17 04:10	BMB

9 Sc

## MW124-061517 L916678-05 GW

Collected by Shannon McKernan  
 Collected date/time 06/15/17 12:40  
 Received date/time 06/16/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 04:33	06/22/17 04:33	BMB



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

Jason Romer  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>JO</u>	1.05	25.0	1	06/22/2017 03:02	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
Benzene	208		0.896	5.00	10	06/26/2017 02:21	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
n-Butylbenzene	4.77		0.143	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
sec-Butylbenzene	4.25		0.134	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 03:02	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Ethylbenzene	109		0.158	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
n-Hexane	65.1		0.305	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 03:02	<a href="#">WG991349</a>
Isopropylbenzene	67.3		0.126	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
p-Isopropyltoluene	1.08		0.138	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Naphthalene	5.20		0.174	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
n-Propylbenzene	126		0.162	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Styrene	U		0.117	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>

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





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Toluene	14.3		0.412	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	0.562		0.123	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	9.29		0.0739	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	3.45		0.124	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:02	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 03:02	<a href="#">WG991349</a>
Xylenes, Total	40.8		0.316	1.50	1	06/22/2017 03:02	<a href="#">WG991349</a>
(S) Toluene-d8	91.8			80.0-120		06/22/2017 03:02	<a href="#">WG991349</a>
(S) Toluene-d8	101			80.0-120		06/26/2017 02:21	<a href="#">WG991349</a>
(S) Dibromofluoromethane	103			76.0-123		06/22/2017 03:02	<a href="#">WG991349</a>
(S) Dibromofluoromethane	101			76.0-123		06/26/2017 02:21	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	97.0			80.0-120		06/22/2017 03:02	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	107			80.0-120		06/26/2017 02:21	<a href="#">WG991349</a>

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



## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>JO</u>	1.05	25.0	1	06/22/2017 03:25	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:25	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 03:25	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:25	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:25	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:25	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 03:25	WG991349
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 03:25	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 03:25	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 03:25	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:25	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:25	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:25	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:25	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:25	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 03:25	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 03:25	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 03:25	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:25	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:25	WG991349
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 03:25	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:25	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:25	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:25	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:25	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:25	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 03:25	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:25	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 03:25	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:25	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:25	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:25	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:25	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:25	WG991349
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 03:25	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:25	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:25	WG991349
Ethylbenzene	0.179	<u>J</u>	0.158	0.500	1	06/22/2017 03:25	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:25	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:25	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 03:25	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 03:25	WG991349
Isopropylbenzene	0.245	<u>J</u>	0.126	0.500	1	06/22/2017 03:25	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 03:25	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:25	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:25	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:25	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:25	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 03:25	WG991349
n-Propylbenzene	0.636		0.162	0.500	1	06/22/2017 03:25	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 03:25	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:25	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:25	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:25	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 03:25	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 03:25	<a href="#">WG991349</a>
(S) Toluene-d8	98.7			80.0-120		06/22/2017 03:25	<a href="#">WG991349</a>
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 03:25	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	99.3			80.0-120		06/22/2017 03:25	<a href="#">WG991349</a>

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.48	J JO	1.05	25.0	1	06/22/2017 03:48	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:48	WG991349
Benzene	0.694		0.0896	0.500	1	06/22/2017 03:48	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:48	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:48	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:48	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 03:48	WG991349
Bromomethane	U	JO	0.157	2.50	1	06/22/2017 03:48	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 03:48	WG991349
sec-Butylbenzene	0.180	J	0.134	0.500	1	06/22/2017 03:48	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:48	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:48	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:48	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:48	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:48	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 03:48	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 03:48	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 03:48	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:48	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:48	WG991349
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/22/2017 03:48	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:48	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:48	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:48	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:48	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:48	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichloroethane	0.199	J	0.108	0.500	1	06/22/2017 03:48	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:48	WG991349
cis-1,2-Dichloroethene	0.682		0.0933	0.500	1	06/22/2017 03:48	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:48	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:48	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:48	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:48	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:48	WG991349
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/22/2017 03:48	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:48	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:48	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 03:48	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:48	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:48	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 03:48	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 03:48	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 03:48	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 03:48	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:48	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:48	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:48	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:48	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 03:48	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 03:48	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 03:48	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:48	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:48	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:48	<a href="#">WG991349</a>
Vinyl chloride	0.609		0.118	0.500	1	06/22/2017 03:48	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 03:48	<a href="#">WG991349</a>
(S) Toluene-d8	101			80.0-120		06/22/2017 03:48	<a href="#">WG991349</a>
(S) Dibromofluoromethane	102			76.0-123		06/22/2017 03:48	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	98.4			80.0-120		06/22/2017 03:48	<a href="#">WG991349</a>

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



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>JO</u>	1.05	25.0	1	06/22/2017 04:10	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
Benzene	U		0.0896	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 04:10	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
n-Hexane	U		0.305	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 04:10	<a href="#">WG991349</a>
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Naphthalene	U		0.174	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Styrene	U		0.117	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:10	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:10	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:10	<a href="#">WG991349</a>
(S) Toluene-d8	101			80.0-120		06/22/2017 04:10	<a href="#">WG991349</a>
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 04:10	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	99.5			80.0-120		06/22/2017 04:10	<a href="#">WG991349</a>

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



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>JO</u>	1.05	25.0	1	06/22/2017 04:33	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:33	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 04:33	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:33	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:33	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:33	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 04:33	WG991349
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 04:33	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:33	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:33	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:33	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:33	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:33	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:33	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:33	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 04:33	WG991349
Chloroform	0.614		0.0860	0.500	1	06/22/2017 04:33	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 04:33	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:33	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:33	WG991349
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 04:33	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:33	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:33	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:33	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:33	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:33	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:33	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:33	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:33	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:33	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:33	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:33	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:33	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:33	WG991349
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 04:33	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:33	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:33	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:33	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:33	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:33	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 04:33	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 04:33	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:33	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:33	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:33	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:33	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:33	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:33	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 04:33	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:33	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 04:33	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:33	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:33	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:33	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
(S) Toluene-d8	98.0			80.0-120		06/22/2017 04:33	<a href="#">WG991349</a>
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 04:33	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	99.3			80.0-120		06/22/2017 04:33	<a href="#">WG991349</a>

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



Method Blank (MB)

(MB) R3228522-3 06/22/17 01:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
n-Hexane	U		0.305	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3228522-3 06/22/17 01:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	100			80.0-120
(S) Dibromofluoromethane	101			76.0-123
(S) 4-Bromofluorobenzene	98.9			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3228522-1 06/22/17 00:01 • (LCSD) R3228522-2 06/22/17 00:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	180	167	144	133	10.0-160			8.03	23
Acrylonitrile	125	133	129	106	104	60.0-142			2.81	20
Benzene	25.0	24.8	25.8	99.2	103	69.0-123			4.07	20
trans-1,4-Dichloro-2-butene	25.0	21.2	21.5	84.7	86.0	55.0-134			1.45	20
Bromobenzene	25.0	22.5	23.5	90.0	93.8	79.0-120			4.14	20
Bromodichloromethane	25.0	25.3	26.1	101	105	76.0-120			3.06	20
Bromochloromethane	25.0	25.4	26.1	102	104	76.0-122			2.58	20
Bromoform	25.0	23.5	24.0	93.9	96.0	67.0-132			2.14	20
Bromomethane	25.0	17.8	18.3	71.3	73.2	18.0-160			2.62	20
n-Hexane	25.0	26.1	27.5	104	110	56.0-124			5.10	20
Iodomethane	125	113	127	90.3	102	57.0-140			11.9	20
n-Butylbenzene	25.0	22.7	24.1	90.7	96.4	72.0-126			6.19	20
sec-Butylbenzene	25.0	22.1	23.5	88.2	94.1	74.0-121			6.48	20
tert-Butylbenzene	25.0	22.4	23.3	89.6	93.4	75.0-122			4.13	20
Carbon disulfide	25.0	28.5	30.5	114	122	55.0-127			6.66	20
Carbon tetrachloride	25.0	24.9	27.3	99.4	109	63.0-122			9.49	20
Chlorobenzene	25.0	24.2	25.3	96.7	101	79.0-121			4.69	20
Chlorodibromomethane	25.0	25.2	26.8	101	107	75.0-125			6.17	20
Chloroethane	25.0	22.5	23.4	90.2	93.7	47.0-152			3.80	20
Chloroform	25.0	23.8	25.2	95.3	101	72.0-121			5.73	20
Chloromethane	25.0	17.8	18.6	71.2	74.3	48.0-139			4.24	20
2-Chlorotoluene	25.0	23.0	24.1	92.1	96.4	74.0-122			4.57	20
4-Chlorotoluene	25.0	23.8	24.8	95.2	99.1	79.0-120			3.99	20
1,2-Dibromo-3-Chloropropane	25.0	21.4	21.3	85.4	85.2	64.0-127			0.260	20
1,2-Dibromoethane	25.0	24.8	25.4	99.3	102	77.0-123			2.51	20
Dibromomethane	25.0	25.7	26.3	103	105	78.0-120			2.13	20
1,2-Dichlorobenzene	25.0	23.7	24.5	94.8	98.2	80.0-120			3.52	20
1,3-Dichlorobenzene	25.0	22.5	23.5	89.9	93.9	72.0-123			4.39	20
1,4-Dichlorobenzene	25.0	22.7	23.3	90.9	93.0	77.0-120			2.28	20
Dichlorodifluoromethane	25.0	21.7	21.9	86.9	87.6	49.0-155			0.880	20
1,1-Dichloroethane	25.0	24.5	25.9	98.1	104	70.0-126			5.62	20
1,2-Dichloroethane	25.0	25.8	26.0	103	104	67.0-126			0.650	20
1,1-Dichloroethene	25.0	29.1	30.0	116	120	64.0-129			3.08	20
cis-1,2-Dichloroethene	25.0	25.9	25.8	103	103	73.0-120			0.170	20
Vinyl acetate	125	157	156	126	125	46.0-160			0.590	20
trans-1,2-Dichloroethene	25.0	24.9	26.5	99.7	106	71.0-121			5.99	20
1,2-Dichloropropane	25.0	25.9	26.4	103	106	75.0-125			2.23	20
1,1-Dichloropropene	25.0	26.9	28.2	107	113	71.0-129			5.00	20
1,3-Dichloropropane	25.0	24.3	25.4	97.1	102	80.0-121			4.48	20
cis-1,3-Dichloropropene	25.0	25.9	27.4	104	109	79.0-123			5.53	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3228522-1 06/22/17 00:01 • (LCSD) R3228522-2 06/22/17 00:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	25.0	24.9	26.1	99.4	104	74.0-127			4.76	20
2,2-Dichloropropane	25.0	25.7	26.8	103	107	60.0-125			4.28	20
Di-isopropyl ether	25.0	24.8	25.2	99.1	101	59.0-133			1.52	20
Ethylbenzene	25.0	24.0	25.8	96.1	103	77.0-120			7.28	20
Hexachloro-1,3-butadiene	25.0	22.1	23.7	88.2	94.9	64.0-131			7.33	20
2-Hexanone	125	143	137	115	110	58.0-147			4.17	20
Isopropylbenzene	25.0	22.8	23.9	91.1	95.7	75.0-120			4.99	20
p-Isopropyltoluene	25.0	23.0	24.2	91.8	96.9	74.0-126			5.34	20
2-Butanone (MEK)	125	141	133	113	107	37.0-158			5.71	20
Methylene Chloride	25.0	24.9	25.8	99.4	103	66.0-121			3.55	20
4-Methyl-2-pentanone (MIBK)	125	123	124	98.1	99.0	59.0-143			0.940	20
Methyl tert-butyl ether	25.0	24.6	24.8	98.6	99.4	64.0-123			0.820	20
Naphthalene	25.0	21.1	21.8	84.4	87.2	62.0-128			3.26	20
n-Propylbenzene	25.0	23.0	24.1	92.1	96.6	79.0-120			4.69	20
Styrene	25.0	25.1	26.0	100	104	78.0-124			3.35	20
1,1,1,2-Tetrachloroethane	25.0	23.8	25.1	95.4	100	75.0-122			5.08	20
1,1,2,2-Tetrachloroethane	25.0	21.8	21.6	87.4	86.3	71.0-122			1.22	20
Tetrachloroethene	25.0	23.7	25.6	94.8	102	70.0-127			7.62	20
Toluene	25.0	23.5	25.7	94.1	103	77.0-120			8.63	20
1,1,2-Trichlorotrifluoroethane	25.0	29.8	30.3	119	121	61.0-136			1.70	20
1,2,3-Trichlorobenzene	25.0	21.1	22.3	84.5	89.3	61.0-133			5.54	20
1,2,4-Trichlorobenzene	25.0	24.0	24.9	95.9	99.6	69.0-129			3.76	20
1,1,1-Trichloroethane	25.0	26.2	27.7	105	111	68.0-122			5.52	20
1,1,2-Trichloroethane	25.0	23.9	25.0	95.7	100	78.0-120			4.53	20
Trichloroethene	25.0	24.8	26.3	99.2	105	78.0-120			6.01	20
Trichlorofluoromethane	25.0	28.3	29.2	113	117	56.0-137			3.03	20
1,2,3-Trichloropropane	25.0	23.0	22.1	91.8	88.3	72.0-124			3.93	20
1,2,3-Trimethylbenzene	25.0	23.2	24.1	92.8	96.5	75.0-120			3.97	20
1,2,4-Trimethylbenzene	25.0	23.1	24.2	92.3	96.8	75.0-120			4.76	20
1,3,5-Trimethylbenzene	25.0	22.5	23.5	90.1	94.1	75.0-120			4.32	20
Vinyl chloride	25.0	21.7	22.0	86.7	88.1	64.0-133			1.62	20
Xylenes, Total	75.0	71.3	75.3	95.1	100	77.0-120			5.46	20
(S) Toluene-d8				100	102	80.0-120				
(S) Dibromofluoromethane				99.1	98.5	76.0-123				
(S) 4-Bromofluorobenzene				104	103	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
JO	JO: Calibration verification outside of acceptance limits. Result is estimated.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

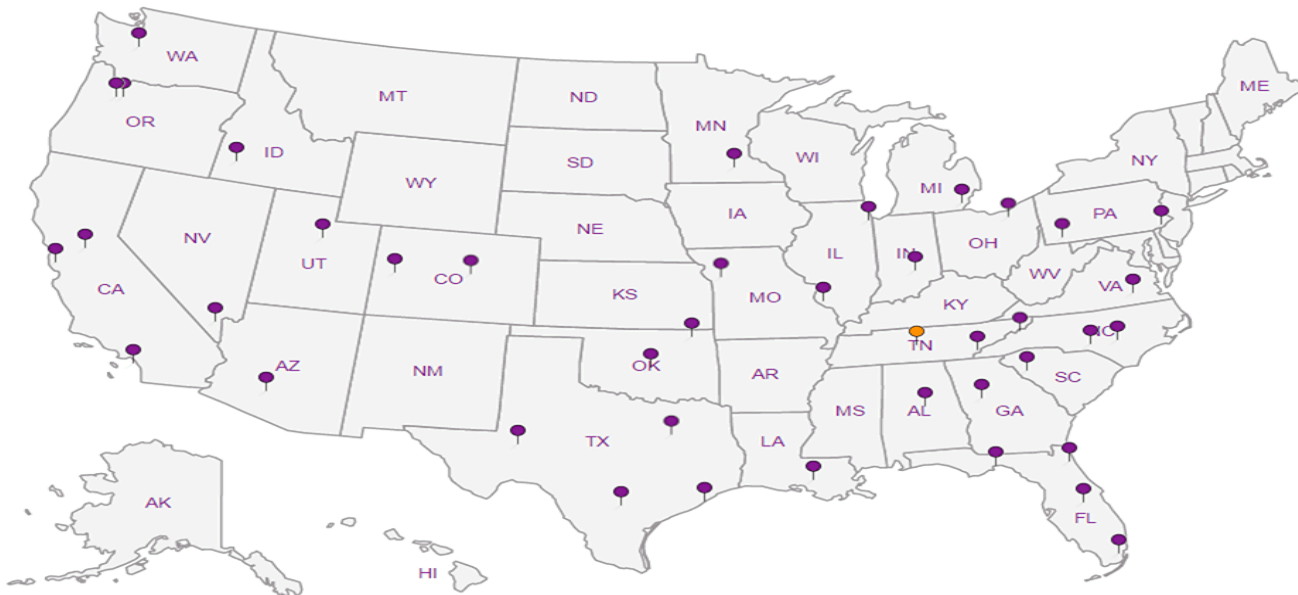
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

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



L# 916678  
**G104**

Acctnum: PESENVSWA

Template: T124201

Prelogin: P603202

TSR: 110 - Brian Ford

FB: 5-31-17

Shipped Via: FedEX Ground

Report to:  
Bill Haldeman

Email To: bhaldean@pesenv.com

Project  
Description: American Linen Supply

City/State  
Collected: SEATTLE, WA

Phone: 206-529-3980  
Fax: 206-529-3985

Client Project #  
1413.001.02.002

Lab Project #  
PESENVSWA-141300102

Collected by (print):  
SHANNON MCKERNAN

Site/Facility ID #  
700 DEXTER AVE N SEATTLE

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

Immediately Packed on Ice N    Y X

\*Alk, Cl, NO3, SO4 250mlHDPE-NoPres  
NWTPhGX 40ml/Amb HCl  
TOC 250ml/Amb-HCl  
Total Fe Mn 6020 250mlHDPE-HNO3  
low level 8260C 40ml/Amb-HCl  
low level RSK175 40ml/Amb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
SCL-MW105-061517	GRAB	GW	27.5	6/15/17	0930	4
MW126-061517	↓	GW	90	↓	0845	4
RMW-2-061517	↓	GW	10	↓	1030	4
MW102-061517	↓	GW	120	↓	1054	4
MW124-061517	↓	GW	115	↓	1240	4
		GW				
		GW				
		GW				
		GW				
		GW				

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier

Tracking #

Sample Receipt Checklist  
COC Seal Present/Intact:  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  
Date: 6/15/17 Time: 1445

Received by: (Signature)  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

Trip Blank Received: Yes / No  
HCL / MeOH  
TBR  
Temp: 3.0 °C  
Bottles Received: 20  
Date: 6.16.17 Time: 845

If preservation required by Login: Date/Time  
Hold:  
Condition: NCF / OK



## MEMORANDUM

**TO:** Project File **DATE:** July 24, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 15, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L916678

---

Five (5) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 15, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C.

The results are reported in ESC Sample Delivery Group (SDG) L916678. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L916678 is summarized below.

### DATA QUALIFICATIONS

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017).

### DATA VALIDATION

#### Completeness

All samples were collected and analyzed as requested.

## **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 3.0 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

## **Holding Times**

*USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

## **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C:* Continuing calibration verification (CCV) issues for acetone, bromomethane, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene were identified by the laboratory for all samples associated with analytical batch WG991349 (analyzed on June 22, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for acetone, bromomethane, carbon disulfide, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene are estimated and qualified (UJ or J).**

## **Method Blank Results**

*USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

## **Trip Blank Results**

*USEPA Method 8260C:*

A trip blank was not collected.

## **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

## **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

#### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision and accuracy data.

### **Surrogate Recoveries**

#### *USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

#### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water.

### **Matrix Spike/Matrix Spike Duplicates**

#### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the method detection limit (MDL) and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned. Laboratory report pages with these qualifiers are attached. All data are judged to be acceptable for their intended use.



Collected date/time: 06/15/17 08:30

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
Acetone	U	<i>UJ</i> <u>JO</u>	1.05	25.0	1	06/22/2017 03:02	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:02	WG991349
Benzene	208		0.896	5.00	10	06/26/2017 02:21	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:02	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:02	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:02	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 03:02	WG991349
Bromomethane	U	<i>UJ</i> <u>JO</u>	0.157	2.50	1	06/22/2017 03:02	WG991349
n-Butylbenzene	4.77		0.143	0.500	1	06/22/2017 03:02	WG991349
sec-Butylbenzene	4.25		0.134	0.500	1	06/22/2017 03:02	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:02	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:02	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:02	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:02	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:02	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 03:02	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 03:02	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 03:02	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:02	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:02	WG991349
1,2-Dibromo-3-Chloropropane	U	<i>UJ</i> <u>JO</u>	0.325	2.50	1	06/22/2017 03:02	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:02	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:02	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:02	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:02	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:02	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:02	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:02	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 03:02	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:02	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 03:02	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:02	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:02	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:02	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:02	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:02	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:02	WG991349
trans-1,4-Dichloro-2-butene	U	<i>UJ</i> <u>JO</u>	0.257	5.00	1	06/22/2017 03:02	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:02	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:02	WG991349
Ethylbenzene	109		0.158	0.500	1	06/22/2017 03:02	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:02	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:02	WG991349
n-Hexane	65.1		0.305	5.00	1	06/22/2017 03:02	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 03:02	WG991349
Isopropylbenzene	67.3		0.126	0.500	1	06/22/2017 03:02	WG991349
p-Isopropyltoluene	1.08		0.138	0.500	1	06/22/2017 03:02	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:02	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:02	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:02	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:02	WG991349
Naphthalene	5.20		0.174	2.50	1	06/22/2017 03:02	WG991349
n-Propylbenzene	126		0.162	0.500	1	06/22/2017 03:02	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 03:02	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:02	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:02	WG991349

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*JC 7/24/17*



Collected date/time: 06/15/17 08:30

L916678

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:02	WG991349	Cp
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:02	WG991349	Tc
Toluene	14.3		0.412	0.500	1	06/22/2017 03:02	WG991349	Ss
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:02	WG991349	Cn
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:02	WG991349	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:02	WG991349	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:02	WG991349	
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:02	WG991349	
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:02	WG991349	Sr
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:02	WG991349	
1,2,4-Trimethylbenzene	0.562		0.123	0.500	1	06/22/2017 03:02	WG991349	Qc
1,2,3-Trimethylbenzene	9.29		0.0739	0.500	1	06/22/2017 03:02	WG991349	
1,3,5-Trimethylbenzene	3.45		0.124	0.500	1	06/22/2017 03:02	WG991349	Gl
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:02	WG991349	
Vinyl chloride	U		0.118	0.500	1	06/22/2017 03:02	WG991349	Al
Xylenes, Total	40.8		0.316	1.50	1	06/22/2017 03:02	WG991349	Sc
(S) Toluene-d8	91.8			80.0-120		06/22/2017 03:02	WG991349	
(S) Toluene-d8	101			80.0-120		06/26/2017 02:21	WG991349	
(S) Dibromofluoromethane	103			76.0-123		06/22/2017 03:02	WG991349	
(S) Dibromofluoromethane	101			76.0-123		06/26/2017 02:21	WG991349	
(S) 4-Bromofluorobenzene	97.0			80.0-120		06/22/2017 03:02	WG991349	
(S) 4-Bromofluorobenzene	107			80.0-120		06/26/2017 02:21	WG991349	

*Jc*  
*7/29/17*



Collected date/time: 06/15/17 08:45

L916678

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<i>VJ</i> <u>JO</u>	1.05	25.0	1	06/22/2017 03:25	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:25	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 03:25	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:25	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:25	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:25	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 03:25	WG991349
Bromomethane	U	<i>VJ</i> <u>JO</u>	0.157	2.50	1	06/22/2017 03:25	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 03:25	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 03:25	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:25	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:25	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:25	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:25	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:25	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 03:25	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 03:25	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 03:25	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:25	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:25	WG991349
1,2-Dibromo-3-Chloropropane	U	<i>VJ</i> <u>JO</u>	0.325	2.50	1	06/22/2017 03:25	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:25	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:25	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:25	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:25	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:25	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 03:25	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:25	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 03:25	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:25	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:25	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:25	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:25	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:25	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:25	WG991349
trans-1,4-Dichloro-2-butene	U	<i>VJ</i> <u>JO</u>	0.257	5.00	1	06/22/2017 03:25	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:25	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:25	WG991349
Ethylbenzene	0.179	<i>J</i> <u>J</u>	0.158	0.500	1	06/22/2017 03:25	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:25	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:25	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 03:25	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 03:25	WG991349
Isopropylbenzene	0.245	<i>J</i> <u>J</u>	0.126	0.500	1	06/22/2017 03:25	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 03:25	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:25	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:25	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:25	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:25	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 03:25	WG991349
n-Propylbenzene	0.636		0.162	0.500	1	06/22/2017 03:25	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 03:25	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:25	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:25	WG991349

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

*Jc*  
*7/24/17*

MW126-061517

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.



Collected date/time: 06/15/17 08:45

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:25	WG991349
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:25	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 03:25	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:25	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:25	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:25	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:25	WG991349
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:25	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:25	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:25	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 03:25	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 03:25	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 03:25	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:25	WG991349
Vinyl chloride	U		0.118	0.500	1	06/22/2017 03:25	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 03:25	WG991349
(S) Toluene-d8	98.7			80.0-120		06/22/2017 03:25	WG991349
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 03:25	WG991349
(S) 4-Bromofluorobenzene	99.3			80.0-120		06/22/2017 03:25	WG991349

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

Je  
7/24/17



Collected date/time: 06/15/17 10:30

L916678

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.48	<i>JS</i> <u>JO</u>	1.05	25.0	1	06/22/2017 03:48	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 03:48	WG991349
Benzene	0.694		0.0896	0.500	1	06/22/2017 03:48	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 03:48	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 03:48	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 03:48	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 03:48	WG991349
Bromomethane	U	<i>JS</i> <u>JO</u>	0.157	2.50	1	06/22/2017 03:48	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 03:48	WG991349
sec-Butylbenzene	0.180	<i>J</i> <u>J</u>	0.134	0.500	1	06/22/2017 03:48	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 03:48	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 03:48	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 03:48	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 03:48	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 03:48	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 03:48	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 03:48	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 03:48	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 03:48	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 03:48	WG991349
1,2-Dibromo-3-Chloropropane	U	<i>JS</i> <u>JO</u>	0.325	2.50	1	06/22/2017 03:48	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 03:48	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 03:48	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 03:48	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 03:48	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 03:48	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichloroethane	0.199	<i>J</i> <u>J</u>	0.108	0.500	1	06/22/2017 03:48	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 03:48	WG991349
cis-1,2-Dichloroethene	0.682		0.0933	0.500	1	06/22/2017 03:48	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 03:48	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 03:48	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 03:48	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 03:48	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 03:48	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 03:48	WG991349
trans-1,4-Dichloro-2-butene	U	<i>JS</i> <u>JO</u>	0.257	5.00	1	06/22/2017 03:48	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 03:48	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 03:48	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 03:48	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 03:48	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 03:48	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 03:48	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 03:48	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 03:48	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 03:48	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 03:48	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 03:48	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 03:48	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 03:48	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 03:48	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 03:48	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 03:48	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 03:48	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 03:48	WG991349

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

*JS*  
7/12/17





Collected date/time: 06/15/17 10:30

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 03:48	WG991349
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 03:48	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 03:48	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 03:48	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 03:48	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 03:48	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 03:48	WG991349
Trichloroethene	U		0.153	0.500	1	06/22/2017 03:48	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 03:48	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 03:48	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 03:48	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 03:48	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 03:48	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 03:48	WG991349
Vinyl chloride	0.609		0.118	0.500	1	06/22/2017 03:48	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 03:48	WG991349
(S) Toluene-d8	101			80.0-120		06/22/2017 03:48	WG991349
(S) Dibromofluoromethane	102			76.0-123		06/22/2017 03:48	WG991349
(S) 4-Bromofluorobenzene	98.4			80.0-120		06/22/2017 03:48	WG991349

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

JK 7/24/17

MW102-061517

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/15/17 10:54

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<i>UJ</i> <u>JO</u>	1.05	25.0	1	06/22/2017 04:10	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:10	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 04:10	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:10	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:10	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:10	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 04:10	WG991349
Bromomethane	U	<i>UJ</i> <u>JO</u>	0.157	2.50	1	06/22/2017 04:10	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:10	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:10	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:10	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:10	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:10	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:10	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:10	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 04:10	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 04:10	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 04:10	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:10	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:10	WG991349
1,2-Dibromo-3-Chloropropane	U	<i>UJ</i> <u>JO</u>	0.325	2.50	1	06/22/2017 04:10	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:10	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:10	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:10	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:10	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:10	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:10	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:10	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:10	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:10	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:10	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:10	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:10	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:10	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:10	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:10	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:10	WG991349
trans-1,4-Dichloro-2-butene	U	<i>UJ</i> <u>JO</u>	0.257	5.00	1	06/22/2017 04:10	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:10	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:10	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:10	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:10	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:10	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 04:10	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 04:10	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:10	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:10	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:10	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:10	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:10	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:10	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 04:10	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:10	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 04:10	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:10	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:10	WG991349

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

*Handwritten signature*

MW102-061517

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/15/17 10:54

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:10	WG991349
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 04:10	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 04:10	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:10	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:10	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:10	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:10	WG991349
Trichloroethene	U		0.153	0.500	1	06/22/2017 04:10	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:10	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:10	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:10	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:10	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:10	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:10	WG991349
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:10	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:10	WG991349
(S) Toluene-d8	101			80.0-120		06/22/2017 04:10	WG991349
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 04:10	WG991349
(S) 4-Bromofluorobenzene	99.5			80.0-120		06/22/2017 04:10	WG991349

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

*Je*  
7/24/17



Collected date/time: 06/15/17 12:40

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
Acetone	U	VJ JO	1.05	25.0	1	06/22/2017 04:33	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:33	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 04:33	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:33	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:33	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:33	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 04:33	WG991349
Bromomethane	U	VJ JO	0.157	2.50	1	06/22/2017 04:33	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:33	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:33	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:33	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:33	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:33	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:33	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:33	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 04:33	WG991349
Chloroform	0.614		0.0860	0.500	1	06/22/2017 04:33	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 04:33	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:33	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:33	WG991349
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/22/2017 04:33	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:33	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:33	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:33	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:33	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:33	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:33	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:33	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:33	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:33	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:33	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:33	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:33	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:33	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:33	WG991349
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/22/2017 04:33	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:33	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:33	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:33	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:33	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:33	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 04:33	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 04:33	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:33	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:33	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:33	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:33	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:33	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:33	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 04:33	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:33	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 04:33	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:33	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:33	WG991349

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

*JC 7/24/17*

MW124-061517

SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.



Collected date/time: 06/15/17 12:40

L916678

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:33	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:33	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:33	<a href="#">WG991349</a>
(S) Toluene-d8	98.0			80.0-120		06/22/2017 04:33	<a href="#">WG991349</a>
(S) Dibromofluoromethane	101			76.0-123		06/22/2017 04:33	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	99.3			80.0-120		06/22/2017 04:33	<a href="#">WG991349</a>

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

JG  
7/24/17

June 26, 2017

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L916723  
Samples Received: 06/17/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Jason Romer  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
R-MW5-061617 L916723-01	<b>5</b>	
MW112-061617 L916723-02	<b>7</b>	
MW113-061617 L916723-03	<b>9</b>	
MW116-061617 L916723-04	<b>12</b>	
<b>Qc: Quality Control Summary</b>	<b>15</b>	<b>6</b> Qc
Wet Chemistry by Method 2320 B-2011	<b>15</b>	
Wet Chemistry by Method 9056A	<b>16</b>	<b>7</b> Gl
Wet Chemistry by Method 9060A	<b>17</b>	<b>8</b> Al
Metals (ICPMS) by Method 6020A	<b>18</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>19</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>22</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>26</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>27</b>	
<b>Sc: Chain of Custody</b>	<b>28</b>	

# SAMPLE SUMMARY



## R-MW5-061617 L916723-01 GW

Collected by  
Shannon McKernan

Collected date/time  
06/16/17 10:05

Received date/time  
06/17/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG991499	1	06/23/17 01:56	06/23/17 01:56	MCG
Wet Chemistry by Method 9056A	WG990314	1	06/17/17 10:52	06/17/17 10:52	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 15:52	06/22/17 15:52	SJM
Metals (ICPMS) by Method 6020A	WG991323	1	06/21/17 15:03	06/21/17 21:07	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG990586	1	06/19/17 12:09	06/19/17 12:09	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 04:56	06/22/17 04:56	BMB

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## MW112-061617 L916723-02 GW

Collected by  
Shannon McKernan

Collected date/time  
06/16/17 11:50

Received date/time  
06/17/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG991499	1	06/23/17 10:38	06/23/17 10:38	MCG
Wet Chemistry by Method 9056A	WG990314	1	06/17/17 11:17	06/17/17 11:17	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 16:44	06/22/17 16:44	SJM
Metals (ICPMS) by Method 6020A	WG991323	1	06/21/17 15:03	06/21/17 21:11	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG990586	1	06/19/17 12:11	06/19/17 12:11	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 05:18	06/22/17 05:18	BMB

## MW113-061617 L916723-03 GW

Collected by  
Shannon McKernan

Collected date/time  
06/16/17 13:55

Received date/time  
06/17/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG991499	1	06/23/17 02:17	06/23/17 02:17	MCG
Wet Chemistry by Method 9056A	WG990314	1	06/17/17 11:30	06/17/17 11:30	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 18:11	06/22/17 18:11	SJM
Metals (ICPMS) by Method 6020A	WG991323	1	06/21/17 15:03	06/21/17 21:14	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG990586	1	06/19/17 12:17	06/19/17 12:17	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG990743	10	06/20/17 09:32	06/20/17 09:32	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 05:41	06/22/17 05:41	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	100	06/26/17 02:37	06/26/17 02:37	ACG

## MW116-061617 L916723-04 GW

Collected by  
Shannon McKernan

Collected date/time  
06/16/17 14:10

Received date/time  
06/17/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG991499	1	06/23/17 02:24	06/23/17 02:24	MCG
Wet Chemistry by Method 9056A	WG990314	1	06/17/17 11:43	06/17/17 11:43	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 18:25	06/22/17 18:25	SJM
Metals (ICPMS) by Method 6020A	WG991323	1	06/21/17 15:03	06/21/17 21:18	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG990586	1	06/19/17 12:54	06/19/17 12:54	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG990743	20	06/20/17 09:34	06/20/17 09:34	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/22/17 06:04	06/22/17 06:04	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG991349	1	06/26/17 02:52	06/26/17 02:52	ACG





All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	152000		2710	20000	1	06/23/2017 01:56	<a href="#">WG991499</a>

## Sample Narrative:

2320 B-2011 L916723-01 WG991499: ending pH=4.5

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	58300		51.9	1000	1	06/17/2017 10:52	<a href="#">WG990314</a>
Nitrate	253		22.7	100	1	06/17/2017 10:52	<a href="#">WG990314</a>
Sulfate	21800		77.4	5000	1	06/17/2017 10:52	<a href="#">WG990314</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	2590		102	1000	1	06/22/2017 15:52	<a href="#">WG991744</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	2740		15.0	100	1	06/21/2017 21:07	<a href="#">WG991323</a>
Manganese	1290		0.250	5.00	1	06/21/2017 21:07	<a href="#">WG991323</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	275		0.287	0.678	1	06/19/2017 12:09	<a href="#">WG990586</a>
Ethane	U		0.296	1.29	1	06/19/2017 12:09	<a href="#">WG990586</a>
Ethene	U		0.422	1.27	1	06/19/2017 12:09	<a href="#">WG990586</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<u>JO</u>	1.05	25.0	1	06/22/2017 04:56	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
Benzene	U		0.0896	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Bromomethane	U	<u>JO</u>	0.157	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 04:56	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/16/17 10:05

L916723

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
n-Hexane	U		0.305	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 04:56	<a href="#">WG991349</a>
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Naphthalene	U		0.174	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Styrene	U		0.117	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Tetrachloroethene	0.257	<u>J</u>	0.199	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Trichloroethene	0.245	<u>J</u>	0.153	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:56	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:56	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:56	<a href="#">WG991349</a>
(S) Toluene-d8	96.6			80.0-120		06/22/2017 04:56	<a href="#">WG991349</a>
(S) Dibromofluoromethane	97.3			76.0-123		06/22/2017 04:56	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 04:56	<a href="#">WG991349</a>

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	24000		2710	20000	1	06/23/2017 10:38	<a href="#">WG991499</a>

## Sample Narrative:

2320 B-2011 L916723-02 WG991499: ending pH=4.5

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	1150		51.9	1000	1	06/17/2017 11:17	<a href="#">WG990314</a>
Nitrate	162		22.7	100	1	06/17/2017 11:17	<a href="#">WG990314</a>
Sulfate	1260	J	77.4	5000	1	06/17/2017 11:17	<a href="#">WG990314</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	5480		102	1000	1	06/22/2017 16:44	<a href="#">WG991744</a>

## Metals (ICPMS) by Method 6020A

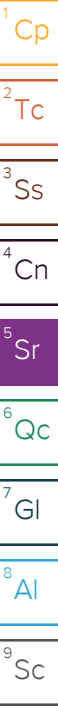
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	2560		15.0	100	1	06/21/2017 21:11	<a href="#">WG991323</a>
Manganese	87.1		0.250	5.00	1	06/21/2017 21:11	<a href="#">WG991323</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	1.78		0.287	0.678	1	06/19/2017 12:11	<a href="#">WG990586</a>
Ethane	U		0.296	1.29	1	06/19/2017 12:11	<a href="#">WG990586</a>
Ethene	U		0.422	1.27	1	06/19/2017 12:11	<a href="#">WG990586</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	9.22	J JO	1.05	25.0	1	06/22/2017 05:18	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
Benzene	U		0.0896	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Bromomethane	U	JO	0.157	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 05:18	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>





Collected date/time: 06/16/17 11:50

L916723

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Ethylbenzene	U		0.158	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
n-Hexane	U		0.305	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 05:18	<a href="#">WG991349</a>
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
4-Methyl-2-pentanone (MIBK)	8.50		0.823	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Naphthalene	U		0.174	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Styrene	U		0.117	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Trichloroethene	U		0.153	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 05:18	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 05:18	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 05:18	<a href="#">WG991349</a>
(S) Toluene-d8	96.9			80.0-120		06/22/2017 05:18	<a href="#">WG991349</a>
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 05:18	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 05:18	<a href="#">WG991349</a>

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	587000		2710	20000	1	06/23/2017 02:17	<a href="#">WG991499</a>

Sample Narrative:

2320 B-2011 L916723-03 WG991499: ending pH=4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	57500		51.9	1000	1	06/17/2017 11:30	<a href="#">WG990314</a>
Nitrate	U		22.7	100	1	06/17/2017 11:30	<a href="#">WG990314</a>
Sulfate	41900		77.4	5000	1	06/17/2017 11:30	<a href="#">WG990314</a>

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	18000		102	1000	1	06/22/2017 18:11	<a href="#">WG991744</a>

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	14400		15.0	100	1	06/21/2017 21:14	<a href="#">WG991323</a>
Manganese	990		0.250	5.00	1	06/21/2017 21:14	<a href="#">WG991323</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	6520		2.87	6.78	10	06/20/2017 09:32	<a href="#">WG990743</a>
Ethane	147		0.296	1.29	1	06/19/2017 12:17	<a href="#">WG990586</a>
Ethene	U		0.422	1.27	1	06/19/2017 12:17	<a href="#">WG990586</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.90	<a href="#">J JO</a>	1.05	25.0	1	06/22/2017 05:41	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 05:41	<a href="#">WG991349</a>
Benzene	0.468	<a href="#">J</a>	0.0896	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Bromomethane	U	<a href="#">JO</a>	0.157	2.50	1	06/22/2017 05:41	<a href="#">WG991349</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 05:41	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 05:41	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 05:41	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/22/2017 05:41	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 05:41	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 05:41	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 05:41	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 05:41	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 05:41	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 05:41	WG991349
1,1-Dichloroethane	0.474	J	0.114	0.500	1	06/22/2017 05:41	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 05:41	WG991349
1,1-Dichloroethene	5.93		0.188	0.500	1	06/22/2017 05:41	WG991349
cis-1,2-Dichloroethene	4750		9.33	50.0	100	06/26/2017 02:37	WG991349
trans-1,2-Dichloroethene	28.2		0.152	0.500	1	06/22/2017 05:41	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 05:41	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 05:41	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 05:41	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 05:41	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 05:41	WG991349
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/22/2017 05:41	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 05:41	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 05:41	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 05:41	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 05:41	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 05:41	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 05:41	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 05:41	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 05:41	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 05:41	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 05:41	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 05:41	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 05:41	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 05:41	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 05:41	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 05:41	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 05:41	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 05:41	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 05:41	WG991349
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 05:41	WG991349
Tetrachloroethene	0.522		0.199	0.500	1	06/22/2017 05:41	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 05:41	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 05:41	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 05:41	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 05:41	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 05:41	WG991349
Trichloroethene	148		0.153	0.500	1	06/22/2017 05:41	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 05:41	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 05:41	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 05:41	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 05:41	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 05:41	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 05:41	WG991349
Vinyl chloride	53.3		0.118	0.500	1	06/22/2017 05:41	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 05:41	WG991349
(S) Toluene-d8	99.0			80.0-120		06/22/2017 05:41	WG991349
(S) Toluene-d8	101			80.0-120		06/26/2017 02:37	WG991349
(S) Dibromofluoromethane	101			76.0-123		06/26/2017 02:37	WG991349
(S) Dibromofluoromethane	96.5			76.0-123		06/22/2017 05:41	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	104			80.0-120		06/26/2017 02:37	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 05:41	<a href="#">WG991349</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	377000		2710	20000	1	06/23/2017 02:24	<a href="#">WG991499</a>

Sample Narrative:

2320 B-2011 L916723-04 WG991499: ending pH=4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	25100		51.9	1000	1	06/17/2017 11:43	<a href="#">WG990314</a>
Nitrate	U		22.7	100	1	06/17/2017 11:43	<a href="#">WG990314</a>
Sulfate	9310		77.4	5000	1	06/17/2017 11:43	<a href="#">WG990314</a>

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	6800		102	1000	1	06/22/2017 18:25	<a href="#">WG991744</a>

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	6690		15.0	100	1	06/21/2017 21:18	<a href="#">WG991323</a>
Manganese	793		0.250	5.00	1	06/21/2017 21:18	<a href="#">WG991323</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	8610		5.74	13.6	20	06/20/2017 09:34	<a href="#">WG990743</a>
Ethane	U		0.296	1.29	1	06/19/2017 12:54	<a href="#">WG990586</a>
Ethene	U		0.422	1.27	1	06/19/2017 12:54	<a href="#">WG990586</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	<a href="#">JO</a>	1.05	25.0	1	06/22/2017 06:04	<a href="#">WG991349</a>
Acrylonitrile	U		0.873	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
Benzene	U		0.0896	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Bromobenzene	U		0.133	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Bromochloromethane	U		0.145	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Bromoform	U		0.186	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Bromomethane	U	<a href="#">JO</a>	0.157	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Carbon disulfide	U		0.101	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Chlorobenzene	U		0.140	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Chloroethane	U		0.141	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
Chloroform	U		0.0860	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Chloromethane	U		0.153	1.25	1	06/22/2017 06:04	<a href="#">WG991349</a>
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/16/17 14:10

L916723

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Dibromomethane	U		0.117	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/26/2017 02:52	<a href="#">WG991349</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Ethylbenzene	U		0.158	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
2-Hexanone	U		0.757	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
n-Hexane	U		0.305	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
Iodomethane	U		0.377	10.0	1	06/22/2017 06:04	<a href="#">WG991349</a>
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
Methylene Chloride	U		1.07	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Naphthalene	U		0.174	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Styrene	U		0.117	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Toluene	U		0.412	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Trichloroethene	0.303	<u>J</u>	0.153	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Vinyl acetate	U		0.645	5.00	1	06/22/2017 06:04	<a href="#">WG991349</a>
Vinyl chloride	U		0.118	0.500	1	06/22/2017 06:04	<a href="#">WG991349</a>
Xylenes, Total	U		0.316	1.50	1	06/22/2017 06:04	<a href="#">WG991349</a>
(S) Toluene-d8	101			80.0-120		06/26/2017 02:52	<a href="#">WG991349</a>
(S) Toluene-d8	99.7			80.0-120		06/22/2017 06:04	<a href="#">WG991349</a>
(S) Dibromofluoromethane	103			76.0-123		06/26/2017 02:52	<a href="#">WG991349</a>
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 06:04	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	99.7			80.0-120		06/22/2017 06:04	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	105			80.0-120		06/26/2017 02:52	<a href="#">WG991349</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3228216-2 06/23/17 00:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	U		2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L917236-03 Original Sample (OS) • Duplicate (DUP)

(OS) L917236-03 06/23/17 03:33 • (DUP) R3228216-6 06/23/17 03:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	586000	588000	1	0.000		20

L916201-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916201-01 06/23/17 10:10 • (DUP) R3228216-8 06/23/17 10:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	71500	70200	1	2.00		20

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

(LCS) R3228216-4 06/23/17 02:02 • (LCSD) R3228216-5 06/23/17 03:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	104000	109000	104	109	85.0-115			4.00	20



Method Blank (MB)

(MB) R3226927-1 06/17/17 06:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L916723-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916723-01 06/17/17 10:52 • (DUP) R3226927-4 06/17/17 11:04

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	58300	58200	1	0		15
Nitrate	253	234	1	8		15
Sulfate	21800	21700	1	0		15

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

(LCS) R3226927-2 06/17/17 07:08 • (LCSD) R3226927-3 06/17/17 07:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39000	39000	98	98	80-120			0	15
Nitrate	8000	8200	8220	103	103	80-120			0	15
Sulfate	40000	39300	39300	98	98	80-120			0	15

L916723-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L916723-04 06/17/17 11:43 • (MS) R3226927-5 06/17/17 12:22

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	25100	74200	98	1	80-120	
Nitrate	5000	U	4900	98	1	80-120	
Sulfate	50000	9310	59000	99	1	80-120	



Method Blank (MB)

(MB) R3228098-1 06/22/17 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L916367-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916367-01 06/22/17 14:59 • (DUP) R3228098-3 06/22/17 15:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	ND	791	1	0		20

L917439-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917439-04 06/22/17 21:31 • (DUP) R3228098-7 06/22/17 21:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	13600	13800	1	1		20

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

(LCS) R3228098-2 06/22/17 14:42 • (LCSD) R3228098-6 06/22/17 17:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	69900	72200	93	96	85-115			3	20

L916723-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916723-01 06/22/17 15:52 • (MS) R3228098-4 06/22/17 16:10 • (MSD) R3228098-5 06/22/17 16:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	2590	46200	47800	87	90	1	80-120			3	20



Method Blank (MB)

(MB) R3227635-1 06/21/17 20:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3227635-2 06/21/17 20:22 • (LCSD) R3227635-3 06/21/17 20:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	5250	5000	105	100	80-120			5	20
Manganese	50.0	48.4	47.6	97	95	80-120			2	20

5 Sr

6 Qc

L916598-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916598-02 06/21/17 20:29 • (MS) R3227635-5 06/21/17 20:36 • (MSD) R3227635-6 06/21/17 20:39

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	2010	6990	7100	100	102	1	75-125			2	20
Manganese	50.0	28.3	74.8	75.8	93	95	1	75-125			1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3226747-1 06/19/17 11:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L916718-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916718-01 06/19/17 12:05 • (DUP) R3226747-2 06/19/17 12:51

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

L916768-02 Original Sample (OS) • Duplicate (DUP)

(OS) L916768-02 06/19/17 12:59 • (DUP) R3226747-3 06/19/17 13:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	770	700	1	9.50		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3226747-6 06/19/17 13:48 • (LCSD) R3226747-7 06/19/17 13:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	74.6	75.1	110	111	70.0-130			0.580	20
Ethane	129	127	140	98.2	109	70.0-130			10.3	20
Ethene	127	123	136	96.9	107	70.0-130			10.3	20

L916829-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916829-01 06/19/17 13:10 • (MS) R3226747-4 06/19/17 13:26 • (MSD) R3226747-5 06/19/17 13:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Methane	67.8	185	203	222	26.3	53.8	1	70.0-130	J6	J6	8.78	20
Ethane	129	U	141	148	109	114	1	70.0-130			4.84	20





L916829-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916829-01 06/19/17 13:10 • (MS) R3226747-4 06/19/17 13:26 • (MSD) R3226747-5 06/19/17 13:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits
Ethene	127	U	136	142	107	112	1	70.0-130			4.61	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3226980-1 06/20/17 09:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L916768-09 Original Sample (OS) • Duplicate (DUP)

(OS) L916768-09 06/20/17 09:36 • (DUP) R3226980-2 06/20/17 09:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	1780	1790	2	0.590		20

L916915-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916915-01 06/20/17 10:04 • (DUP) R3226980-3 06/20/17 10:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	900	908	1	0.960		20

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

(LCS) R3226980-4 06/20/17 10:19 • (LCSD) R3226980-5 06/20/17 10:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	72.2	72.9	107	108	70.0-130			0.940	20



Method Blank (MB)

(MB) R3228522-3 06/22/17 01:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
n-Hexane	U		0.305	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3228522-3 06/22/17 01:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	100			80.0-120
(S) Dibromofluoromethane	101			76.0-123
(S) 4-Bromofluorobenzene	98.9			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3228522-1 06/22/17 00:01 • (LCSD) R3228522-2 06/22/17 00:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	180	167	144	133	10.0-160			8.03	23
Acrylonitrile	125	133	129	106	104	60.0-142			2.81	20
Benzene	25.0	24.8	25.8	99.2	103	69.0-123			4.07	20
trans-1,4-Dichloro-2-butene	25.0	21.2	21.5	84.7	86.0	55.0-134			1.45	20
Bromobenzene	25.0	22.5	23.5	90.0	93.8	79.0-120			4.14	20
Bromodichloromethane	25.0	25.3	26.1	101	105	76.0-120			3.06	20
Bromochloromethane	25.0	25.4	26.1	102	104	76.0-122			2.58	20
Bromoform	25.0	23.5	24.0	93.9	96.0	67.0-132			2.14	20
Bromomethane	25.0	17.8	18.3	71.3	73.2	18.0-160			2.62	20
n-Hexane	25.0	26.1	27.5	104	110	56.0-124			5.10	20
Iodomethane	125	113	127	90.3	102	57.0-140			11.9	20
n-Butylbenzene	25.0	22.7	24.1	90.7	96.4	72.0-126			6.19	20
sec-Butylbenzene	25.0	22.1	23.5	88.2	94.1	74.0-121			6.48	20
tert-Butylbenzene	25.0	22.4	23.3	89.6	93.4	75.0-122			4.13	20
Carbon disulfide	25.0	28.5	30.5	114	122	55.0-127			6.66	20
Carbon tetrachloride	25.0	24.9	27.3	99.4	109	63.0-122			9.49	20
Chlorobenzene	25.0	24.2	25.3	96.7	101	79.0-121			4.69	20
Chlorodibromomethane	25.0	25.2	26.8	101	107	75.0-125			6.17	20
Chloroethane	25.0	22.5	23.4	90.2	93.7	47.0-152			3.80	20
Chloroform	25.0	23.8	25.2	95.3	101	72.0-121			5.73	20
Chloromethane	25.0	17.8	18.6	71.2	74.3	48.0-139			4.24	20
2-Chlorotoluene	25.0	23.0	24.1	92.1	96.4	74.0-122			4.57	20
4-Chlorotoluene	25.0	23.8	24.8	95.2	99.1	79.0-120			3.99	20
1,2-Dibromo-3-Chloropropane	25.0	21.4	21.3	85.4	85.2	64.0-127			0.260	20
1,2-Dibromoethane	25.0	24.8	25.4	99.3	102	77.0-123			2.51	20
Dibromomethane	25.0	25.7	26.3	103	105	78.0-120			2.13	20
1,2-Dichlorobenzene	25.0	23.7	24.5	94.8	98.2	80.0-120			3.52	20
1,3-Dichlorobenzene	25.0	22.5	23.5	89.9	93.9	72.0-123			4.39	20
1,4-Dichlorobenzene	25.0	22.7	23.3	90.9	93.0	77.0-120			2.28	20
Dichlorodifluoromethane	25.0	21.7	21.9	86.9	87.6	49.0-155			0.880	20
1,1-Dichloroethane	25.0	24.5	25.9	98.1	104	70.0-126			5.62	20
1,2-Dichloroethane	25.0	25.8	26.0	103	104	67.0-126			0.650	20
1,1-Dichloroethene	25.0	29.1	30.0	116	120	64.0-129			3.08	20
cis-1,2-Dichloroethene	25.0	25.9	25.8	103	103	73.0-120			0.170	20
Vinyl acetate	125	157	156	126	125	46.0-160			0.590	20
trans-1,2-Dichloroethene	25.0	24.9	26.5	99.7	106	71.0-121			5.99	20
1,2-Dichloropropane	25.0	25.9	26.4	103	106	75.0-125			2.23	20
1,1-Dichloropropene	25.0	26.9	28.2	107	113	71.0-129			5.00	20
1,3-Dichloropropane	25.0	24.3	25.4	97.1	102	80.0-121			4.48	20
cis-1,3-Dichloropropene	25.0	25.9	27.4	104	109	79.0-123			5.53	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3228522-1 06/22/17 00:01 • (LCSD) R3228522-2 06/22/17 00:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	25.0	24.9	26.1	99.4	104	74.0-127			4.76	20
2,2-Dichloropropane	25.0	25.7	26.8	103	107	60.0-125			4.28	20
Di-isopropyl ether	25.0	24.8	25.2	99.1	101	59.0-133			1.52	20
Ethylbenzene	25.0	24.0	25.8	96.1	103	77.0-120			7.28	20
Hexachloro-1,3-butadiene	25.0	22.1	23.7	88.2	94.9	64.0-131			7.33	20
2-Hexanone	125	143	137	115	110	58.0-147			4.17	20
Isopropylbenzene	25.0	22.8	23.9	91.1	95.7	75.0-120			4.99	20
p-Isopropyltoluene	25.0	23.0	24.2	91.8	96.9	74.0-126			5.34	20
2-Butanone (MEK)	125	141	133	113	107	37.0-158			5.71	20
Methylene Chloride	25.0	24.9	25.8	99.4	103	66.0-121			3.55	20
4-Methyl-2-pentanone (MIBK)	125	123	124	98.1	99.0	59.0-143			0.940	20
Methyl tert-butyl ether	25.0	24.6	24.8	98.6	99.4	64.0-123			0.820	20
Naphthalene	25.0	21.1	21.8	84.4	87.2	62.0-128			3.26	20
n-Propylbenzene	25.0	23.0	24.1	92.1	96.6	79.0-120			4.69	20
Styrene	25.0	25.1	26.0	100	104	78.0-124			3.35	20
1,1,1,2-Tetrachloroethane	25.0	23.8	25.1	95.4	100	75.0-122			5.08	20
1,1,2,2-Tetrachloroethane	25.0	21.8	21.6	87.4	86.3	71.0-122			1.22	20
Tetrachloroethene	25.0	23.7	25.6	94.8	102	70.0-127			7.62	20
Toluene	25.0	23.5	25.7	94.1	103	77.0-120			8.63	20
1,1,2-Trichlorotrifluoroethane	25.0	29.8	30.3	119	121	61.0-136			1.70	20
1,2,3-Trichlorobenzene	25.0	21.1	22.3	84.5	89.3	61.0-133			5.54	20
1,2,4-Trichlorobenzene	25.0	24.0	24.9	95.9	99.6	69.0-129			3.76	20
1,1,1-Trichloroethane	25.0	26.2	27.7	105	111	68.0-122			5.52	20
1,1,2-Trichloroethane	25.0	23.9	25.0	95.7	100	78.0-120			4.53	20
Trichloroethene	25.0	24.8	26.3	99.2	105	78.0-120			6.01	20
Trichlorofluoromethane	25.0	28.3	29.2	113	117	56.0-137			3.03	20
1,2,3-Trichloropropane	25.0	23.0	22.1	91.8	88.3	72.0-124			3.93	20
1,2,3-Trimethylbenzene	25.0	23.2	24.1	92.8	96.5	75.0-120			3.97	20
1,2,4-Trimethylbenzene	25.0	23.1	24.2	92.3	96.8	75.0-120			4.76	20
1,3,5-Trimethylbenzene	25.0	22.5	23.5	90.1	94.1	75.0-120			4.32	20
Vinyl chloride	25.0	21.7	22.0	86.7	88.1	64.0-133			1.62	20
Xylenes, Total	75.0	71.3	75.3	95.1	100	77.0-120			5.46	20
(S) Toluene-d8				100	102	80.0-120				
(S) Dibromofluoromethane				99.1	98.5	76.0-123				
(S) 4-Bromofluorobenzene				104	103	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

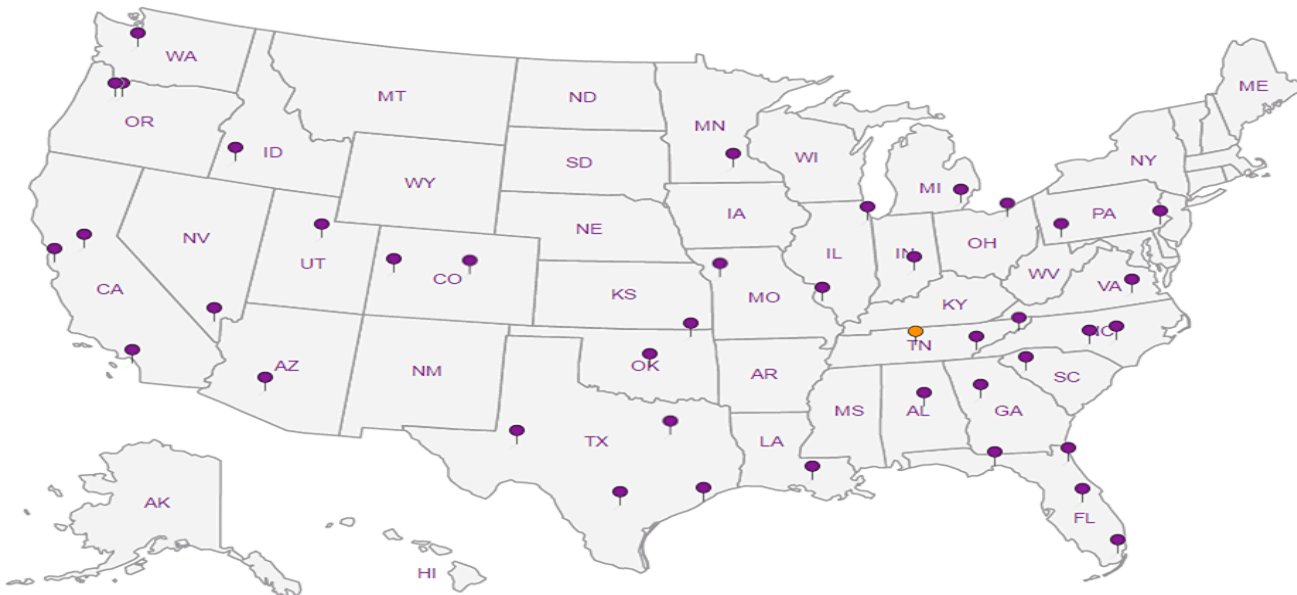
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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


## Our Locations

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





<b>PES Environmental, Inc.- WA</b> 1215 Fourth Ave., Suite 1350 Seattle, WA 98161	Billing Information: <b>Attn: Accounts Payable</b> <b>1215 Fourth Ave., Ste. 1350</b> <b>Seattle, WA 98161</b>	Pres Chk	Analysis / Container / Preservative					Chain of Custody Page ___ of ___
	Report to: <b>Bill Haldeman</b>		Email To: <b>bhaldeman@pesenv.com</b>	*Alk,Cl,NO3,SO4 250mlHDPE-NoPres NWTPHGX 40mlAmb HCl TOC 250mlAmb-HCl Total Fe Mn 6020 250mlHDPE-HNO3 low level 8260C 40mlAmb-HCl low level RSK175 40mlAmb-HCl				

Project Description: <b>American Linen Supply</b>	City/State Collected: <b>SEATTLE WA</b>
Phone: <b>206-529-3980</b> Fax: <b>206-529-3985</b>	Client Project # <b>1413.001.02.002</b>
Collected by (print): <b>SHANNON MCKERNAN</b>	Site/Facility ID # <b>700 DEXTER AVE N SEATTLE</b>
Collected by (signature): 	P.O. #


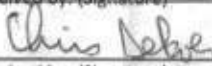
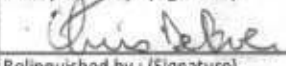
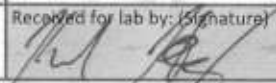
Lab Project # <b>PESENVSWA-141300102</b>	Quote #
Date Results Needed	No. of Cntrs

Immediately Packed on Ice N <u>  </u> Y <u>  </u>	<b>Rush?</b> (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day
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Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk,Cl,NO3,SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
R-MW5-061617	GRAB	GW	25	6/16/17	1005	9	X	X	X	X	X	X
MW112-061617	↓	GW	80	6/16/17	1150	9	X	X	X	X	X	X
MW113-061617	↓	GW	75	↓	1355	9	X	X	X	X	X	X
MW116-061617	↓	GW	45	↓	1410	9	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	Remarks: *NO3 nitrate has a 48 hour holding time	pH _____ Temp _____ Flow _____ Other _____	Sample Receipt Check COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
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Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier	Tracking # <b>7372 1955 0785</b>
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Relinquished by: (Signature) 	Date: <b>6/16/17</b>	Time: <b>1435</b>	Received by: (Signature) 	Trip Blank Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	HCL/MeOH TBR
Relinquished by: (Signature) 	Date: <b>6/16/17</b>	Time: <b>1435</b>	Received by: (Signature)	Temp: <b>27°</b> °C <b>TDH 36</b>	Bottles Received:
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: <b>6/17/17</b>	Time: <b>0845</b>

Remarks Sample # (lab only)

01  
02  
07  
09

L# **716723**  
**A190**  
 Acctnum: **PESENVSWA**  
 Template: **T124201**  
 Prelogin: **P603202**  
 TSR: **110 - Brian Ford**  
 PB: **5-31-176**  
 Shipped Via: **FedEX Ground**

## MEMORANDUM

**TO:** Project File **DATE:** July 24, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 16, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L916723

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Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 16, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L916723. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L915737 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.7 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for acetone, bromomethane, carbon disulfide, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene were identified by the laboratory for sample SCS-2-061217 associated with analytical batch WG991349 (analyzed on June 22, 2017). These results are qualified by the laboratory “J0” to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for acetone, bromomethane, 1,2-dibromo-3-chloropropane, and trans-1,4-dichloro-2-butene are estimated and qualified (UJ or J).**

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

#### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

#### *USEPA Method 6020:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or above the RDL.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL.

### **Trip Blank Results**

#### *USEPA Method 8260C:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

#### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample

duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* A laboratory duplicate sample was performed on non-client samples within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* A laboratory duplicate sample was performed on sample R-MW5-061617. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on non-client samples within the analytical batch. The primary/duplicate RPD for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analysis was performed on sample R-MW-6-032117. Refer to LCS/LCSD results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*General Chemistry:*

*SM 2320B:* Matrix spike (MS) analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS analysis was performed on sample MW116-061617. MS % Rs for anions were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analysis was performed on sample R-MW5-061617. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

**Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

**Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the method detection limit (MDL) and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

## **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Collected date/time: 06/16/17 10:05

L916723

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	152000		2710	20000	1	06/23/2017 01:56	WG991499

Sample Narrative:

2320 B-2011 L916723-01 WG991499: ending pH=4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	58300		51.9	1000	1	06/17/2017 10:52	WG990314
Nitrate	253		22.7	100	1	06/17/2017 10:52	WG990314
Sulfate	21800		77.4	5000	1	06/17/2017 10:52	WG990314

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	2590		102	1000	1	06/22/2017 15:52	WG991744

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	2740		15.0	100	1	06/21/2017 21:07	WG991323
Manganese	1290		0.250	5.00	1	06/21/2017 21:07	WG991323

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	275		0.287	0.678	1	06/19/2017 12:09	WG990586
Ethane	U		0.296	1.29	1	06/19/2017 12:09	WG990586
Ethene	U		0.422	1.27	1	06/19/2017 12:09	WG990586

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U <i>VS</i>	<u>JO</u>	1.05	25.0	1	06/22/2017 04:56	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 04:56	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 04:56	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 04:56	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 04:56	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 04:56	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 04:56	WG991349
Bromomethane	U <i>VS</i>	<u>JO</u>	0.157	2.50	1	06/22/2017 04:56	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 04:56	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 04:56	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 04:56	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 04:56	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 04:56	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 04:56	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 04:56	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 04:56	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 04:56	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 04:56	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 04:56	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 04:56	WG991349

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*GC 7/24/17*



R-MW5-061617

## SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/16/17 10:05

L916723

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/22/2017 04:56	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 04:56	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 04:56	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 04:56	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 04:56	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 04:56	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 04:56	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 04:56	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 04:56	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 04:56	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 04:56	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 04:56	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 04:56	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 04:56	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 04:56	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 04:56	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 04:56	WG991349
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/22/2017 04:56	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 04:56	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 04:56	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 04:56	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 04:56	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 04:56	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 04:56	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 04:56	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 04:56	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 04:56	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 04:56	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 04:56	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 04:56	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 04:56	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 04:56	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 04:56	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 04:56	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 04:56	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 04:56	WG991349
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 04:56	WG991349
Tetrachloroethene	0.257	J J	0.199	0.500	1	06/22/2017 04:56	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 04:56	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 04:56	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 04:56	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 04:56	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 04:56	WG991349
Trichloroethene	0.245	J J	0.153	0.500	1	06/22/2017 04:56	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 04:56	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 04:56	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 04:56	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 04:56	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 04:56	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 04:56	WG991349
Vinyl chloride	U		0.118	0.500	1	06/22/2017 04:56	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 04:56	WG991349
(S) Toluene-d8	96.6			80.0-120		06/22/2017 04:56	WG991349
(S) Dibromofluoromethane	97.3			76.0-123		06/22/2017 04:56	WG991349
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 04:56	WG991349

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Jc 7/24/17

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	24000		2710	20000	1	06/23/2017 10:38	WG991499

Sample Narrative:

2320 B-2011 L916723-02 WG991499: ending pH=4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1150		51.9	1000	1	06/17/2017 11:17	WG990314
Nitrate	162		22.7	100	1	06/17/2017 11:17	WG990314
Sulfate	1260	J J	77.4	5000	1	06/17/2017 11:17	WG990314

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	5480		102	1000	1	06/22/2017 16:44	WG991744

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	2560		15.0	100	1	06/21/2017 21:11	WG991323
Manganese	87.1		0.250	5.00	1	06/21/2017 21:11	WG991323

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	1.78		0.287	0.678	1	06/19/2017 12:11	WG990586
Ethane	U		0.296	1.29	1	06/19/2017 12:11	WG990586
Ethene	U		0.422	1.27	1	06/19/2017 12:11	WG990586

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	9.22	J JJO	1.05	25.0	1	06/22/2017 05:18	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 05:18	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 05:18	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 05:18	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 05:18	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 05:18	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 05:18	WG991349
Bromomethane	U	VJ JO	0.157	2.50	1	06/22/2017 05:18	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 05:18	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 05:18	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 05:18	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 05:18	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 05:18	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 05:18	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 05:18	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 05:18	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 05:18	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 05:18	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 05:18	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 05:18	WG991349

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

OC  
7/24/17



Collected date/time: 06/16/17 11:50

L916723

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,2-Dibromo-3-Chloropropane	U	<i>VJ</i> <u>JO</u>	0.325	2.50	1	06/22/2017 05:18	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 05:18	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 05:18	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 05:18	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 05:18	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 05:18	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 05:18	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 05:18	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 05:18	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 05:18	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/22/2017 05:18	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 05:18	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 05:18	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 05:18	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 05:18	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 05:18	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 05:18	WG991349
trans-1,4-Dichloro-2-butene	U	<i>VJ</i> <u>JO</u>	0.257	5.00	1	06/22/2017 05:18	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 05:18	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 05:18	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 05:18	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 05:18	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 05:18	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 05:18	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 05:18	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 05:18	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 05:18	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 05:18	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 05:18	WG991349
4-Methyl-2-pentanone (MIBK)	8.50		0.823	5.00	1	06/22/2017 05:18	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 05:18	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 05:18	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 05:18	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 05:18	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 05:18	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 05:18	WG991349
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 05:18	WG991349
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 05:18	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 05:18	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 05:18	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 05:18	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 05:18	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 05:18	WG991349
Trichloroethene	U		0.153	0.500	1	06/22/2017 05:18	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 05:18	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 05:18	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 05:18	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 05:18	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 05:18	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 05:18	WG991349
Vinyl chloride	U		0.118	0.500	1	06/22/2017 05:18	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 05:18	WG991349
(S) Toluene-d8	96.9			80.0-120		06/22/2017 05:18	WG991349
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 05:18	WG991349
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 05:18	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

*Handwritten signature and date: Jc 7/24/17*

MW113-061617

Collected date/time: 06/16/17 13:55

## SAMPLE RESULTS - 03

L916723

ONE LAB. NATIONWIDE.



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	587000		2710	20000	1	06/23/2017 02:17	WG991499

## Sample Narrative:

2320 B-2011 L916723-03 WG991499: ending pH=4.5

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	57500		51.9	1000	1	06/17/2017 11:30	WG990314
Nitrate	U		22.7	100	1	06/17/2017 11:30	WG990314
Sulfate	41900		77.4	5000	1	06/17/2017 11:30	WG990314

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	18000		102	1000	1	06/22/2017 18:11	WG991744

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	14400		15.0	100	1	06/21/2017 21:14	WG991323
Manganese	990		0.250	5.00	1	06/21/2017 21:14	WG991323

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	6520		2.87	6.78	10	06/20/2017 09:32	WG990743
Ethane	147		0.296	1.29	1	06/19/2017 12:17	WG990586
Ethene	U		0.422	1.27	1	06/19/2017 12:17	WG990586

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.90	J JO	1.05	25.0	1	06/22/2017 05:41	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 05:41	WG991349
Benzene	0.468	J J	0.0896	0.500	1	06/22/2017 05:41	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 05:41	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 05:41	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 05:41	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 05:41	WG991349
Bromomethane	U	VJ JO	0.157	2.50	1	06/22/2017 05:41	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 05:41	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 05:41	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 05:41	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 05:41	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 05:41	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 05:41	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 05:41	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 05:41	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 05:41	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 05:41	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 05:41	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 05:41	WG991349

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

JG 7/24/17

MW113-061617

## SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/16/17 13:55

L916723

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dibromo-3-Chloropropane	U	US JO	0.325	2.50	1	06/22/2017 05:41	WG991349	Cp
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 05:41	WG991349	Tc
Dibromomethane	U		0.117	0.500	1	06/22/2017 05:41	WG991349	Ss
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 05:41	WG991349	Cn
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 05:41	WG991349	Cn
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 05:41	WG991349	Cn
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 05:41	WG991349	Cn
1,1-Dichloroethane	0.474	J J	0.114	0.500	1	06/22/2017 05:41	WG991349	Si
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 05:41	WG991349	Si
1,1-Dichloroethene	5.93		0.188	0.500	1	06/22/2017 05:41	WG991349	Si
cis-1,2-Dichloroethene	4750		9.33	50.0	100	06/26/2017 02:37	WG991349	Si
trans-1,2-Dichloroethene	28.2		0.152	0.500	1	06/22/2017 05:41	WG991349	Si
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 05:41	WG991349	Si
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 05:41	WG991349	Si
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 05:41	WG991349	Si
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 05:41	WG991349	Si
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 05:41	WG991349	Si
trans-1,4-Dichloro-2-butene	U	US JO	0.257	5.00	1	06/22/2017 05:41	WG991349	Si
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 05:41	WG991349	Si
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 05:41	WG991349	Si
Ethylbenzene	U		0.158	0.500	1	06/22/2017 05:41	WG991349	Si
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 05:41	WG991349	Si
2-Hexanone	U		0.757	5.00	1	06/22/2017 05:41	WG991349	Si
n-Hexane	U		0.305	5.00	1	06/22/2017 05:41	WG991349	Si
Iodomethane	U		0.377	10.0	1	06/22/2017 05:41	WG991349	Si
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 05:41	WG991349	Si
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 05:41	WG991349	Si
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 05:41	WG991349	Si
Methylene Chloride	U		1.07	2.50	1	06/22/2017 05:41	WG991349	Si
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 05:41	WG991349	Si
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 05:41	WG991349	Si
Naphthalene	U		0.174	2.50	1	06/22/2017 05:41	WG991349	Si
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 05:41	WG991349	Si
Styrene	U		0.117	0.500	1	06/22/2017 05:41	WG991349	Si
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 05:41	WG991349	Si
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 05:41	WG991349	Si
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 05:41	WG991349	Si
Tetrachloroethene	0.522		0.199	0.500	1	06/22/2017 05:41	WG991349	Si
Toluene	U		0.412	0.500	1	06/22/2017 05:41	WG991349	Si
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 05:41	WG991349	Si
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 05:41	WG991349	Si
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 05:41	WG991349	Si
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 05:41	WG991349	Si
Trichloroethene	148		0.153	0.500	1	06/22/2017 05:41	WG991349	Si
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 05:41	WG991349	Si
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 05:41	WG991349	Si
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 05:41	WG991349	Si
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 05:41	WG991349	Si
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 05:41	WG991349	Si
Vinyl acetate	U		0.645	5.00	1	06/22/2017 05:41	WG991349	Si
Vinyl chloride	53.3		0.118	0.500	1	06/22/2017 05:41	WG991349	Si
Xylenes, Total	U		0.316	1.50	1	06/22/2017 05:41	WG991349	Si
(S) Toluene-d8	99.0			80.0-120		06/22/2017 05:41	WG991349	Si
(S) Toluene-d8	101			80.0-120		06/26/2017 02:37	WG991349	Si
(S) Dibromofluoromethane	101			76.0-123		06/26/2017 02:37	WG991349	Si
(S) Dibromofluoromethane	96.5			76.0-123		06/22/2017 05:41	WG991349	Si

Cp

Tc

Ss

Cn

Si

Qc

GI

AI

Sc

JC  
7/24/17

MW113-061617

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/16/17 13:55

L916723

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	104			80.0-120		06/26/2017 02:37	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	100			80.0-120		06/22/2017 05:41	<a href="#">WG991349</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

*Handwritten signature and date: J. 7/26/17*



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	377000		2710	20000	1	06/23/2017 02:24	WG991499

Sample Narrative:

2320 B-2011 L916723-04 WG991499: ending pH=4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	25100		51.9	1000	1	06/17/2017 11:43	WG990314
Nitrate	U		22.7	100	1	06/17/2017 11:43	WG990314
Sulfate	9310		77.4	5000	1	06/17/2017 11:43	WG990314

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	6800		102	1000	1	06/22/2017 18:25	WG991744

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	6690		15.0	100	1	06/21/2017 21:18	WG991323
Manganese	793		0.250	5.00	1	06/21/2017 21:18	WG991323

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	8610		5.74	13.6	20	06/20/2017 09:34	WG990743
Ethane	U		0.296	1.29	1	06/19/2017 12:54	WG990586
Ethene	U		0.422	1.27	1	06/19/2017 12:54	WG990586

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U	US JO	1.05	25.0	1	06/22/2017 06:04	WG991349
Acrylonitrile	U		0.873	5.00	1	06/22/2017 06:04	WG991349
Benzene	U		0.0896	0.500	1	06/22/2017 06:04	WG991349
Bromobenzene	U		0.133	0.500	1	06/22/2017 06:04	WG991349
Bromodichloromethane	U		0.0800	0.500	1	06/22/2017 06:04	WG991349
Bromochloromethane	U		0.145	0.500	1	06/22/2017 06:04	WG991349
Bromoform	U		0.186	0.500	1	06/22/2017 06:04	WG991349
Bromomethane	U	US JO	0.157	2.50	1	06/22/2017 06:04	WG991349
n-Butylbenzene	U		0.143	0.500	1	06/22/2017 06:04	WG991349
sec-Butylbenzene	U		0.134	0.500	1	06/22/2017 06:04	WG991349
tert-Butylbenzene	U		0.183	0.500	1	06/22/2017 06:04	WG991349
Carbon disulfide	U		0.101	0.500	1	06/22/2017 06:04	WG991349
Carbon tetrachloride	U		0.159	0.500	1	06/22/2017 06:04	WG991349
Chlorobenzene	U		0.140	0.500	1	06/22/2017 06:04	WG991349
Chlorodibromomethane	U		0.128	0.500	1	06/22/2017 06:04	WG991349
Chloroethane	U		0.141	2.50	1	06/22/2017 06:04	WG991349
Chloroform	U		0.0860	0.500	1	06/22/2017 06:04	WG991349
Chloromethane	U		0.153	1.25	1	06/22/2017 06:04	WG991349
2-Chlorotoluene	U		0.111	0.500	1	06/22/2017 06:04	WG991349
4-Chlorotoluene	U		0.0972	0.500	1	06/22/2017 06:04	WG991349

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

*Handwritten signature and date: JG 7/2/17*

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	U	<i>JS</i> <u>JO</u>	0.325	2.50	1	06/22/2017 06:04	WG991349
1,2-Dibromoethane	U		0.193	0.500	1	06/22/2017 06:04	WG991349
Dibromomethane	U		0.117	0.500	1	06/22/2017 06:04	WG991349
1,2-Dichlorobenzene	U		0.101	0.500	1	06/22/2017 06:04	WG991349
1,3-Dichlorobenzene	U		0.130	0.500	1	06/22/2017 06:04	WG991349
1,4-Dichlorobenzene	U		0.121	0.500	1	06/22/2017 06:04	WG991349
Dichlorodifluoromethane	U		0.127	2.50	1	06/22/2017 06:04	WG991349
1,1-Dichloroethane	U		0.114	0.500	1	06/22/2017 06:04	WG991349
1,2-Dichloroethane	U		0.108	0.500	1	06/22/2017 06:04	WG991349
1,1-Dichloroethene	U		0.188	0.500	1	06/22/2017 06:04	WG991349
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/26/2017 02:52	WG991349
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/22/2017 06:04	WG991349
1,2-Dichloropropane	U		0.190	0.500	1	06/22/2017 06:04	WG991349
1,1-Dichloropropene	U		0.128	0.500	1	06/22/2017 06:04	WG991349
1,3-Dichloropropane	U		0.147	1.00	1	06/22/2017 06:04	WG991349
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/22/2017 06:04	WG991349
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/22/2017 06:04	WG991349
trans-1,4-Dichloro-2-butene	U	<i>JS</i> <u>JO</u>	0.257	5.00	1	06/22/2017 06:04	WG991349
2,2-Dichloropropane	U		0.0929	0.500	1	06/22/2017 06:04	WG991349
Di-isopropyl ether	U		0.0924	0.500	1	06/22/2017 06:04	WG991349
Ethylbenzene	U		0.158	0.500	1	06/22/2017 06:04	WG991349
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/22/2017 06:04	WG991349
2-Hexanone	U		0.757	5.00	1	06/22/2017 06:04	WG991349
n-Hexane	U		0.305	5.00	1	06/22/2017 06:04	WG991349
Iodomethane	U		0.377	10.0	1	06/22/2017 06:04	WG991349
Isopropylbenzene	U		0.126	0.500	1	06/22/2017 06:04	WG991349
p-Isopropyltoluene	U		0.138	0.500	1	06/22/2017 06:04	WG991349
2-Butanone (MEK)	U		1.28	5.00	1	06/22/2017 06:04	WG991349
Methylene Chloride	U		1.07	2.50	1	06/22/2017 06:04	WG991349
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/22/2017 06:04	WG991349
Methyl tert-butyl ether	U		0.102	0.500	1	06/22/2017 06:04	WG991349
Naphthalene	U		0.174	2.50	1	06/22/2017 06:04	WG991349
n-Propylbenzene	U		0.162	0.500	1	06/22/2017 06:04	WG991349
Styrene	U		0.117	0.500	1	06/22/2017 06:04	WG991349
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/22/2017 06:04	WG991349
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	06/22/2017 06:04	WG991349
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/22/2017 06:04	WG991349
Tetrachloroethene	U		0.199	0.500	1	06/22/2017 06:04	WG991349
Toluene	U		0.412	0.500	1	06/22/2017 06:04	WG991349
1,2,3-Trichlorobenzene	U		0.164	0.500	1	06/22/2017 06:04	WG991349
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/22/2017 06:04	WG991349
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/22/2017 06:04	WG991349
1,1,2-Trichloroethane	U		0.186	0.500	1	06/22/2017 06:04	WG991349
Trichloroethene	0.303	<i>J</i> <u>J</u>	0.153	0.500	1	06/22/2017 06:04	WG991349
Trichlorofluoromethane	U		0.130	2.50	1	06/22/2017 06:04	WG991349
1,2,3-Trichloropropane	U		0.247	2.50	1	06/22/2017 06:04	WG991349
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/22/2017 06:04	WG991349
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/22/2017 06:04	WG991349
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/22/2017 06:04	WG991349
Vinyl acetate	U		0.645	5.00	1	06/22/2017 06:04	WG991349
Vinyl chloride	U		0.118	0.500	1	06/22/2017 06:04	WG991349
Xylenes, Total	U		0.316	1.50	1	06/22/2017 06:04	WG991349
(S) Toluene-d8	101			80.0-120		06/26/2017 02:52	WG991349
(S) Toluene-d8	99.7			80.0-120		06/22/2017 06:04	WG991349
(S) Dibromofluoromethane	103			76.0-123		06/26/2017 02:52	WG991349
(S) Dibromofluoromethane	100			76.0-123		06/22/2017 06:04	WG991349

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

*JS*  
7/29/17



MW116-061617

Collected date/time: 06/16/17 14:10

# SAMPLE RESULTS - 04

L916723

ONE LAB. NATIONWIDE.



## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	99.7			80.0-120		06/22/2017 06:04	<a href="#">WG991349</a>
(S) 4-Bromofluorobenzene	105			80.0-120		06/26/2017 02:52	<a href="#">WG991349</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

*Jc*  
7/24/17

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L917439  
Samples Received: 06/21/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Jason Romer  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
W-MW-02-061917 L917439-01	<b>5</b>	
MW107-061917 L917439-02	<b>7</b>	
W-MW-01-061917 L917439-03	<b>9</b>	
R-MW6-062017 L917439-04	<b>11</b>	
TRIP BLANK L917439-05	<b>14</b>	<b>6</b> Qc
<b>Qc: Quality Control Summary</b>	<b>16</b>	<b>7</b> Gl
Wet Chemistry by Method 2320 B-2011	<b>16</b>	
Wet Chemistry by Method 9056A	<b>17</b>	<b>8</b> Al
Wet Chemistry by Method 9060A	<b>20</b>	
Metals (ICPMS) by Method 6020A	<b>21</b>	<b>9</b> Sc
Volatile Organic Compounds (GC) by Method NWTPHGX	<b>22</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>23</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>25</b>	
<b>Gl: Glossary of Terms</b>	<b>29</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>30</b>	
<b>Sc: Chain of Custody</b>	<b>31</b>	

# SAMPLE SUMMARY



## W-MW-02-061917 L917439-01 GW

Collected by  
Shannon McKernan      Collected date/time  
06/19/17 11:10      Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 07:38	06/27/17 07:38	MCG
Wet Chemistry by Method 9056A	WG991373	1	06/21/17 14:15	06/21/17 14:15	DR
Wet Chemistry by Method 9056A	WG993012	5	06/27/17 20:29	06/27/17 20:29	SAM
Wet Chemistry by Method 9060A	WG991744	10	06/22/17 19:34	06/22/17 19:34	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 07:04	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG991508	1	06/22/17 12:16	06/22/17 12:16	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992024	25	06/22/17 15:09	06/22/17 15:09	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 13:46	06/27/17 13:46	ACG

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## MW107-061917 L917439-02 GW

Collected by  
Shannon McKernan      Collected date/time  
06/19/17 13:40      Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 07:45	06/27/17 07:45	MCG
Wet Chemistry by Method 9056A	WG991373	1	06/21/17 13:31	06/21/17 13:31	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 19:51	06/22/17 19:51	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 07:07	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG991508	1	06/22/17 12:18	06/22/17 12:18	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992024	20	06/22/17 15:12	06/22/17 15:12	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 14:03	06/27/17 14:03	ACG

## W-MW-01-061917 L917439-03 GW

Collected by  
Shannon McKernan      Collected date/time  
06/19/17 16:20      Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 07:51	06/27/17 07:51	MCG
Wet Chemistry by Method 9056A	WG991373	1	06/21/17 14:00	06/21/17 14:00	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 20:04	06/22/17 20:04	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 07:11	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG991508	1	06/22/17 12:20	06/22/17 12:20	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 14:20	06/27/17 14:20	ACG

## R-MW6-062017 L917439-04 GW

Collected by  
Shannon McKernan      Collected date/time  
06/20/17 09:10      Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 07:58	06/27/17 07:58	MCG
Wet Chemistry by Method 9056A	WG991373	1	06/21/17 21:13	06/21/17 21:13	DR
Wet Chemistry by Method 9060A	WG991744	1	06/22/17 21:31	06/22/17 21:31	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 08:09	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG991730	1	06/22/17 06:44	06/22/17 06:44	BMB
Volatile Organic Compounds (GC) by Method RSK175	WG991508	1	06/22/17 12:22	06/22/17 12:22	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992024	10	06/22/17 15:14	06/22/17 15:14	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 14:37	06/27/17 14:37	ACG

## TRIP BLANK L917439-05 GW

Collected by  
Shannon McKernan      Collected date/time  
06/20/17 00:00      Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG991730	1	06/22/17 01:33	06/22/17 01:33	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 12:54	06/27/17 12:54	ACG



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All 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  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	520000		2710	20000	1	06/27/2017 07:38	<a href="#">WG992368</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	103000		260	5000	5	06/27/2017 20:29	<a href="#">WG993012</a>
Nitrate	U	Q	22.7	100	1	06/21/2017 14:15	<a href="#">WG991373</a>
Sulfate	U		77.4	5000	1	06/21/2017 14:15	<a href="#">WG991373</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	116000		1020	10000	10	06/22/2017 19:34	<a href="#">WG991744</a>

## Metals (ICPMS) by Method 6020A

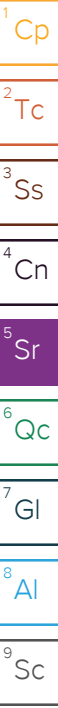
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	33700		15.0	100	1	06/23/2017 07:04	<a href="#">WG991760</a>
Manganese	2980		0.250	5.00	1	06/23/2017 07:04	<a href="#">WG991760</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	16900		7.18	17.0	25	06/22/2017 15:09	<a href="#">WG992024</a>
Ethane	U		0.296	1.29	1	06/22/2017 12:16	<a href="#">WG991508</a>
Ethene	3.71		0.422	1.27	1	06/22/2017 12:16	<a href="#">WG991508</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	8.12	J	1.05	25.0	1	06/27/2017 13:46	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 13:46	<a href="#">WG993152</a>
Benzene	0.307	J	0.0896	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Carbon disulfide	0.386	J	0.101	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloromethane	U	JO	0.153	1.25	1	06/27/2017 13:46	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 13:46	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 13:46	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 13:46	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 13:46	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 13:46	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 13:46	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 13:46	WG993152
cis-1,2-Dichloroethene	18.2		0.0933	0.500	1	06/27/2017 13:46	WG993152
trans-1,2-Dichloroethene	0.746		0.152	0.500	1	06/27/2017 13:46	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 13:46	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 13:46	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 13:46	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 13:46	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 13:46	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 13:46	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 13:46	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 13:46	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 13:46	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 13:46	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 13:46	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 13:46	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 13:46	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 13:46	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 13:46	WG993152
2-Butanone (MEK)	3.57	J JO	1.28	5.00	1	06/27/2017 13:46	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 13:46	WG993152
4-Methyl-2-pentanone (MIBK)	0.929	J JO	0.823	5.00	1	06/27/2017 13:46	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 13:46	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 13:46	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 13:46	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 13:46	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 13:46	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 13:46	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 13:46	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 13:46	WG993152
Toluene	0.970		0.412	0.500	1	06/27/2017 13:46	WG993152
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 13:46	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 13:46	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 13:46	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 13:46	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 13:46	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 13:46	WG993152
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 13:46	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 13:46	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 13:46	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 13:46	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 13:46	WG993152
Vinyl chloride	25.6		0.118	0.500	1	06/27/2017 13:46	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 13:46	WG993152
(S) Toluene-d8	111			80.0-120		06/27/2017 13:46	WG993152
(S) Dibromofluoromethane	99.7			76.0-123		06/27/2017 13:46	WG993152
(S) 4-Bromofluorobenzene	97.8			80.0-120		06/27/2017 13:46	WG993152

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	651000		2710	20000	1	06/27/2017 07:45	<a href="#">WG992368</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	89700		51.9	1000	1	06/21/2017 13:31	<a href="#">WG991373</a>
Nitrate	U		22.7	100	1	06/21/2017 13:31	<a href="#">WG991373</a>
Sulfate	U		77.4	5000	1	06/21/2017 13:31	<a href="#">WG991373</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	91000		102	1000	1	06/22/2017 19:51	<a href="#">WG991744</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	10500		15.0	100	1	06/23/2017 07:07	<a href="#">WG991760</a>
Manganese	955		0.250	5.00	1	06/23/2017 07:07	<a href="#">WG991760</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	7350		5.74	13.6	20	06/22/2017 15:12	<a href="#">WG992024</a>
Ethane	U		0.296	1.29	1	06/22/2017 12:18	<a href="#">WG991508</a>
Ethene	205		0.422	1.27	1	06/22/2017 12:18	<a href="#">WG991508</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	2.99	J	1.05	25.0	1	06/27/2017 14:03	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 14:03	<a href="#">WG993152</a>
Benzene	0.238	J	0.0896	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 14:03	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Carbon disulfide	0.162	J	0.101	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:03	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Chloromethane	U	JO	0.153	1.25	1	06/27/2017 14:03	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 14:03	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 14:03	<a href="#">WG993152</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:03	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:03	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:03	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:03	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:03	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 14:03	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:03	WG993152
cis-1,2-Dichloroethene	7.29		0.0933	0.500	1	06/27/2017 14:03	WG993152
trans-1,2-Dichloroethene	12.6		0.152	0.500	1	06/27/2017 14:03	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:03	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:03	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:03	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:03	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:03	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 14:03	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:03	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 14:03	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:03	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:03	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:03	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:03	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:03	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:03	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:03	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 14:03	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:03	WG993152
4-Methyl-2-pentanone (MIBK)	U	JO	0.823	5.00	1	06/27/2017 14:03	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 14:03	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 14:03	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:03	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:03	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:03	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 14:03	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:03	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:03	WG993152
Toluene	0.700		0.412	0.500	1	06/27/2017 14:03	WG993152
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 14:03	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:03	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:03	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:03	WG993152
Trichloroethene	0.290	J	0.153	0.500	1	06/27/2017 14:03	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:03	WG993152
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 14:03	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:03	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:03	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:03	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:03	WG993152
Vinyl chloride	15.0		0.118	0.500	1	06/27/2017 14:03	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:03	WG993152
(S) Toluene-d8	111			80.0-120		06/27/2017 14:03	WG993152
(S) Dibromofluoromethane	99.6			76.0-123		06/27/2017 14:03	WG993152
(S) 4-Bromofluorobenzene	98.1			80.0-120		06/27/2017 14:03	WG993152

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	250000		2710	20000	1	06/27/2017 07:51	<a href="#">WG992368</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	27600		51.9	1000	1	06/21/2017 14:00	<a href="#">WG991373</a>
Nitrate	72.7	J	22.7	100	1	06/21/2017 14:00	<a href="#">WG991373</a>
Sulfate	28300		77.4	5000	1	06/21/2017 14:00	<a href="#">WG991373</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	3000		102	1000	1	06/22/2017 20:04	<a href="#">WG991744</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	9480		15.0	100	1	06/23/2017 07:11	<a href="#">WG991760</a>
Manganese	321		0.250	5.00	1	06/23/2017 07:11	<a href="#">WG991760</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	461		0.287	0.678	1	06/22/2017 12:20	<a href="#">WG991508</a>
Ethane	U		0.296	1.29	1	06/22/2017 12:20	<a href="#">WG991508</a>
Ethene	U		0.422	1.27	1	06/22/2017 12:20	<a href="#">WG991508</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 14:20	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 14:20	<a href="#">WG993152</a>
Benzene	0.158	J	0.0896	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloromethane	U	JO	0.153	1.25	1	06/27/2017 14:20	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/19/17 16:20

L917439

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
	ug/l		ug/l	ug/l		date / time		
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:20	WG993152	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:20	WG993152	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:20	WG993152	
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:20	WG993152	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:20	WG993152	
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 14:20	WG993152	4 Cn
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:20	WG993152	
cis-1,2-Dichloroethene	0.320	J	0.0933	0.500	1	06/27/2017 14:20	WG993152	5 Sr
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 14:20	WG993152	
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:20	WG993152	
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:20	WG993152	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:20	WG993152	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:20	WG993152	
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:20	WG993152	7 Gl
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 14:20	WG993152	
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:20	WG993152	8 Al
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 14:20	WG993152	
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:20	WG993152	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:20	WG993152	9 Sc
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:20	WG993152	
n-Hexane	U		0.305	5.00	1	06/27/2017 14:20	WG993152	
Iodomethane	U		0.377	10.0	1	06/27/2017 14:20	WG993152	
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:20	WG993152	
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:20	WG993152	
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 14:20	WG993152	
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:20	WG993152	
4-Methyl-2-pentanone (MIBK)	U	JO	0.823	5.00	1	06/27/2017 14:20	WG993152	
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 14:20	WG993152	
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 14:20	WG993152	
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:20	WG993152	
Styrene	U		0.117	0.500	1	06/27/2017 14:20	WG993152	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:20	WG993152	
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 14:20	WG993152	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:20	WG993152	
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:20	WG993152	
Toluene	0.931		0.412	0.500	1	06/27/2017 14:20	WG993152	
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 14:20	WG993152	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:20	WG993152	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:20	WG993152	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:20	WG993152	
Trichloroethene	U		0.153	0.500	1	06/27/2017 14:20	WG993152	
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:20	WG993152	
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 14:20	WG993152	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:20	WG993152	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:20	WG993152	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:20	WG993152	
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:20	WG993152	
Vinyl chloride	1.09		0.118	0.500	1	06/27/2017 14:20	WG993152	
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:20	WG993152	
(S) Toluene-d8	112			80.0-120		06/27/2017 14:20	WG993152	
(S) Dibromofluoromethane	99.8			76.0-123		06/27/2017 14:20	WG993152	
(S) 4-Bromofluorobenzene	99.0			80.0-120		06/27/2017 14:20	WG993152	



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	718000		2710	20000	1	06/27/2017 07:58	<a href="#">WG992368</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	11100		51.9	1000	1	06/21/2017 21:13	<a href="#">WG991373</a>
Nitrate	U		22.7	100	1	06/21/2017 21:13	<a href="#">WG991373</a>
Sulfate	85700		77.4	5000	1	06/21/2017 21:13	<a href="#">WG991373</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	13600		102	1000	1	06/22/2017 21:31	<a href="#">WG991744</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	27000		15.0	100	1	06/23/2017 08:09	<a href="#">WG991760</a>
Manganese	8280		0.250	5.00	1	06/23/2017 08:09	<a href="#">WG991760</a>

## Volatile Organic Compounds (GC) by Method NWTPHGX

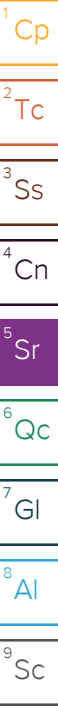
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	38.5	J	31.6	100	1	06/22/2017 06:44	<a href="#">WG991730</a>
(S) a,a,a-Trifluorotoluene(FID)	99.1			77.0-122		06/22/2017 06:44	<a href="#">WG991730</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	6980		2.87	6.78	10	06/22/2017 15:14	<a href="#">WG992024</a>
Ethane	10.7		0.296	1.29	1	06/22/2017 12:22	<a href="#">WG991508</a>
Ethene	11.2		0.422	1.27	1	06/22/2017 12:22	<a href="#">WG991508</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 14:37	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 14:37	<a href="#">WG993152</a>
Benzene	0.167	J	0.0896	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 14:37	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:37	<a href="#">WG993152</a>





Collected date/time: 06/20/17 09:10

L917439

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloroform	U		0.0860	0.500	1	06/27/2017 14:37	WG993152
Chloromethane	U	JO	0.153	1.25	1	06/27/2017 14:37	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:37	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:37	WG993152
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 14:37	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:37	WG993152
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:37	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:37	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:37	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:37	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 14:37	WG993152
1,1-Dichloroethene	0.337	J	0.188	0.500	1	06/27/2017 14:37	WG993152
cis-1,2-Dichloroethene	37.3		0.0933	0.500	1	06/27/2017 14:37	WG993152
trans-1,2-Dichloroethene	0.445	J	0.152	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:37	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:37	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:37	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:37	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:37	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 14:37	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:37	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 14:37	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:37	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:37	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:37	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:37	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:37	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:37	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:37	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 14:37	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:37	WG993152
4-Methyl-2-pentanone (MIBK)	U	JO	0.823	5.00	1	06/27/2017 14:37	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 14:37	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 14:37	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:37	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:37	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:37	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 14:37	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:37	WG993152
Tetrachloroethene	1.19		0.199	0.500	1	06/27/2017 14:37	WG993152
Toluene	0.619		0.412	0.500	1	06/27/2017 14:37	WG993152
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 14:37	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:37	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:37	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:37	WG993152
Trichloroethene	0.878		0.153	0.500	1	06/27/2017 14:37	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:37	WG993152
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 14:37	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:37	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:37	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:37	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:37	WG993152
Vinyl chloride	43.9		0.118	0.500	1	06/27/2017 14:37	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:37	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	112			80.0-120		06/27/2017 14:37	<a href="#">WG993152</a>
(S) Dibromofluoromethane	99.6			76.0-123		06/27/2017 14:37	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	99.2			80.0-120		06/27/2017 14:37	<a href="#">WG993152</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Collected date/time: 06/20/17 00:00

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Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 01:33	WG991730
(S) a,a,a-Trifluorotoluene(FID)	99.0			77.0-122		06/22/2017 01:33	WG991730

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 12:54	WG993152
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 12:54	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 12:54	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 12:54	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 12:54	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 12:54	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 12:54	WG993152
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 12:54	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 12:54	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 12:54	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 12:54	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 12:54	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 12:54	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 12:54	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 12:54	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 12:54	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 12:54	WG993152
Chloromethane	U	JO	0.153	1.25	1	06/27/2017 12:54	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 12:54	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 12:54	WG993152
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 12:54	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 12:54	WG993152
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 12:54	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 12:54	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 12:54	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 12:54	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 12:54	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 12:54	WG993152
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/27/2017 12:54	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 12:54	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 12:54	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 12:54	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 12:54	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 12:54	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 12:54	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 12:54	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 12:54	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 12:54	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 12:54	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 12:54	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 12:54	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 12:54	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 12:54	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 12:54	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 12:54	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 12:54	WG993152



Collected date/time: 06/20/17 00:00

L917439

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U	<u>JO</u>	0.823	5.00	1	06/27/2017 12:54	<a href="#">WG993152</a>
Methyl tert-butyl ether	U	<u>JO</u>	0.102	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Naphthalene	U	<u>JO</u>	0.174	2.50	1	06/27/2017 12:54	<a href="#">WG993152</a>
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Styrene	U		0.117	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,1,2,2-Tetrachloroethane	U	<u>JO</u>	0.130	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Toluene	U		0.412	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,2,3-Trichlorobenzene	U	<u>JO</u>	0.164	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Trichloroethene	U		0.153	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,2,3-Trichloropropane	U	<u>JO J4</u>	0.247	2.50	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Vinyl acetate	U		0.645	5.00	1	06/27/2017 12:54	<a href="#">WG993152</a>
Vinyl chloride	U		0.118	0.500	1	06/27/2017 12:54	<a href="#">WG993152</a>
Xylenes, Total	U		0.316	1.50	1	06/27/2017 12:54	<a href="#">WG993152</a>
(S) Toluene-d8	114			80.0-120		06/27/2017 12:54	<a href="#">WG993152</a>
(S) Dibromofluoromethane	97.6			76.0-123		06/27/2017 12:54	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	97.1			80.0-120		06/27/2017 12:54	<a href="#">WG993152</a>

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





Method Blank (MB)

(MB) R3228961-1 06/26/17 19:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	5320	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

L917181-09 Original Sample (OS) • Duplicate (DUP)

(OS) L917181-09 06/26/17 19:37 • (DUP) R3228961-3 06/26/17 19:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	274000	276000	1	1.00		20

<sup>4</sup> Cn

<sup>5</sup> Sr

L917461-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917461-04 06/27/17 09:00 • (DUP) R3228961-8 06/27/17 09:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	1050000	1050000	1	0.000		20

<sup>6</sup> Qc

<sup>7</sup> Gl

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

(LCS) R3228961-4 06/26/17 20:29 • (LCSD) R3228961-7 06/27/17 07:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	110000	106000	110	106	85.0-115			4.00	20

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3227820-1 06/21/17 08:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	103	J	51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L917437-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917437-01 06/21/17 14:30 • (DUP) R3227820-4 06/21/17 14:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	40100	40200	1	0		15
Nitrate	1590	1670	1	5		15

L917437-11 Original Sample (OS) • Duplicate (DUP)

(OS) L917437-11 06/21/17 18:29 • (DUP) R3227820-6 06/21/17 18:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	U	730	1	200	J3	15
Sulfate	647	501	1	25	J P1	15

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

(LCS) R3227820-2 06/21/17 08:47 • (LCSD) R3227820-3 06/21/17 09:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	38800	39100	97	98	80-120			1	15
Nitrate	8000	7940	8010	99	100	80-120			1	15
Sulfate	40000	38900	39200	97	98	80-120			1	15

L917437-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L917437-04 06/21/17 15:59 • (MS) R3227820-5 06/21/17 16:14

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	5570	55200	99	1	80-120	
Nitrate	5000	3950	8890	99	1	80-120	
Sulfate	50000	15800	65500	99	1	80-120	



L917437-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917437-12 06/21/17 18:58 • (MS) R3227820-7 06/21/17 19:13 • (MSD) R3227820-8 06/21/17 19:28

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate	5000	800	4960	4980	83	84	1	80-120			0	15
Sulfate	50000	U	49100	49300	98	99	1	80-120			0	15

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



Method Blank (MB)

(MB) R3229363-1 06/27/17 16:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L916411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916411-01 06/27/17 17:59 • (DUP) R3229363-5 06/27/17 18:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	78400	78300	1	0		15

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

(LCS) R3229363-2 06/27/17 16:29 • (LCSD) R3229363-3 06/27/17 17:49

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	38900	39200	97	98	80-120			1	15

L916953-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L916953-06 06/27/17 19:49 • (MS) R3229363-6 06/27/17 19:59

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	34700	87500	105	1	80-120	

L917418-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917418-15 06/27/17 22:38 • (MS) R3229363-8 06/27/17 23:08 • (MSD) R3229363-9 06/27/17 23:18

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	50000	11300	64300	65200	106	108	1	80-120			1	15



Method Blank (MB)

(MB) R3228098-1 06/22/17 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L916367-01 Original Sample (OS) • Duplicate (DUP)

(OS) L916367-01 06/22/17 14:59 • (DUP) R3228098-3 06/22/17 15:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	ND	791	1	0		20

L917439-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917439-04 06/22/17 21:31 • (DUP) R3228098-7 06/22/17 21:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	13600	13800	1	1		20

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

(LCS) R3228098-2 06/22/17 14:42 • (LCSD) R3228098-6 06/22/17 17:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	69900	72200	93	96	85-115			3	20

L916723-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916723-01 06/22/17 15:52 • (MS) R3228098-4 06/22/17 16:10 • (MSD) R3228098-5 06/22/17 16:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	2590	46200	47800	87	90	1	80-120			3	20



Method Blank (MB)

(MB) R3228105-1 06/23/17 05:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3228105-2 06/23/17 05:49 • (LCSD) R3228105-3 06/23/17 05:53

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Iron	5000	5230	5030	105	101	80-120			4	20
Manganese	50.0	47.7	47.0	95	94	80-120			1	20

5 Sr

6 Qc

L916811-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916811-01 06/23/17 05:57 • (MS) R3228105-5 06/23/17 06:04 • (MSD) R3228105-6 06/23/17 06:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron	5000	17.7	5100	5040	102	100	1	75-125			1	20
Manganese	50.0	0.641	47.3	46.6	93	92	1	75-125			1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3229107-3 06/22/17 00:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	99.5			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3229107-1 06/21/17 22:59 • (LCSD) R3229107-2 06/21/17 23:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	5640	5700	103	104	72.0-134			1.01	20
(S) a,a,a-Trifluorotoluene(FID)				106	106	77.0-122				

5 Sr

6 Qc

7 Gl

L917439-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917439-04 06/22/17 06:44 • (MS) R3229107-4 06/22/17 08:04 • (MSD) R3229107-5 06/22/17 08:26

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	38.5	5750	6650	104	120	1	23.0-159			14.6	20
(S) a,a,a-Trifluorotoluene(FID)					106	107		77.0-122				

8 Al

9 Sc



Method Blank (MB)

(MB) R3227836-1 06/22/17 11:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L917251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917251-01 06/22/17 11:23 • (DUP) R3227836-2 06/22/17 11:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	721	660	1	8.83		20
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

L917439-03 Original Sample (OS) • Duplicate (DUP)

(OS) L917439-03 06/22/17 12:20 • (DUP) R3227836-3 06/22/17 12:32

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	461	446	1	3.47		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3227836-4 06/22/17 12:35 • (LCSD) R3227836-5 06/22/17 12:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	68.2	66.6	101	98.3	70.0-130			2.28	20
Ethane	129	122	124	94.7	96.0	70.0-130			1.33	20
Ethene	127	117	118	92.1	93.2	70.0-130			1.20	20





Method Blank (MB)

(MB) R3227931-1 06/22/17 15:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L917449-10 Original Sample (OS) • Duplicate (DUP)

(OS) L917449-10 06/22/17 15:20 • (DUP) R3227931-2 06/22/17 15:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	2360	2260	5	4.43		20

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3227931-3 06/22/17 15:34 • (LCSD) R3227931-4 06/22/17 15:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	70.1	77.4	103	114	70.0-130			9.99	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U	<u>JO J4</u>	0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U	<u>JO</u>	0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U	<u>JO</u>	0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U	<u>JO</u>	0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U	<u>JO</u>	0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U	<u>JO</u>	0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U	<u>JO</u>	0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U	<u>JO</u>	0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U	JO	1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U	JO	0.823	5.00
Methyl tert-butyl ether	U	JO	0.102	0.500
Naphthalene	U	JO	0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U	JO	0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U	JO J4	0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	112			80.0-120
(S) Dibromofluoromethane	99.5			76.0-123
(S) 4-Bromofluorobenzene	98.0			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	104	103	83.6	82.1	10.0-160			1.74	23
Acrylonitrile	125	80.1	73.8	64.1	59.1	60.0-142	J4	J4	8.18	20
Benzene	25.0	22.8	23.3	91.2	93.1	69.0-123			2.11	20
Bromobenzene	25.0	23.5	23.3	94.0	93.2	79.0-120			0.800	20
Bromodichloromethane	25.0	21.2	21.9	84.8	87.5	76.0-120			3.17	20
Bromochloromethane	25.0	22.1	21.9	88.4	87.8	76.0-122			0.740	20
Bromoform	25.0	20.5	19.8	82.0	79.2	67.0-132			3.48	20
Bromomethane	25.0	16.6	18.9	66.4	75.6	18.0-160			13.0	20
n-Butylbenzene	25.0	25.3	26.0	101	104	72.0-126			2.75	20
sec-Butylbenzene	25.0	24.9	25.2	99.6	101	74.0-121			1.15	20
tert-Butylbenzene	25.0	24.6	24.9	98.3	99.6	75.0-122			1.24	20
Carbon disulfide	25.0	25.1	26.0	101	104	55.0-127			3.48	20
Carbon tetrachloride	25.0	20.4	21.6	81.7	86.4	63.0-122			5.61	20
Chlorobenzene	25.0	25.7	26.0	103	104	79.0-121			1.14	20
Chlorodibromomethane	25.0	23.5	22.8	94.1	91.1	75.0-125			3.28	20
Chloroethane	25.0	21.6	23.0	86.4	91.9	47.0-152			6.13	20
Chloroform	25.0	20.9	21.3	83.7	85.3	72.0-121			1.97	20
Chloromethane	25.0	19.9	20.9	79.6	83.5	48.0-139			4.73	20
2-Chlorotoluene	25.0	24.4	24.8	97.7	99.3	74.0-122			1.55	20
4-Chlorotoluene	25.0	25.1	24.9	100	99.6	79.0-120			0.800	20
1,2-Dibromo-3-Chloropropane	25.0	16.8	16.0	67.3	64.1	64.0-127			4.86	20
1,2-Dibromoethane	25.0	21.6	21.4	86.5	85.7	77.0-123			0.980	20
Dibromomethane	25.0	19.9	20.4	79.4	81.8	78.0-120			2.93	20
1,2-Dichlorobenzene	25.0	25.2	25.3	101	101	80.0-120			0.450	20
1,3-Dichlorobenzene	25.0	25.6	25.2	103	101	72.0-123			1.55	20
1,4-Dichlorobenzene	25.0	25.3	25.2	101	101	77.0-120			0.310	20
Dichlorodifluoromethane	25.0	21.2	22.1	84.7	88.5	49.0-155			4.50	20
1,1-Dichloroethane	25.0	21.7	22.1	86.9	88.5	70.0-126			1.73	20
1,2-Dichloroethane	25.0	19.3	19.3	77.2	77.3	67.0-126			0.110	20
1,1-Dichloroethene	25.0	24.9	26.5	99.5	106	64.0-129			6.29	20
cis-1,2-Dichloroethene	25.0	22.1	22.6	88.5	90.4	73.0-120			2.17	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.2	71.0-121			2.89	20
1,2-Dichloropropane	25.0	22.4	22.8	89.6	91.2	75.0-125			1.76	20
1,1-Dichloropropene	25.0	22.3	22.9	89.3	91.7	71.0-129			2.67	20
1,3-Dichloropropane	25.0	22.0	21.8	87.8	87.3	80.0-121			0.540	20
cis-1,3-Dichloropropene	25.0	23.5	23.6	93.9	94.3	79.0-123			0.440	20
trans-1,3-Dichloropropene	25.0	22.1	21.8	88.6	87.4	74.0-127			1.35	20
trans-1,4-Dichloro-2-butene	25.0	15.3	13.9	61.3	55.5	55.0-134			9.91	20
2,2-Dichloropropane	25.0	20.7	22.1	82.9	88.3	60.0-125			6.28	20
Di-isopropyl ether	25.0	19.3	19.4	77.3	77.4	59.0-133			0.190	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	26.3	27.0	105	108	77.0-120			2.44	20
Hexachloro-1,3-butadiene	25.0	21.8	23.7	87.3	94.9	64.0-131			8.38	20
2-Hexanone	125	106	106	84.5	84.8	58.0-147			0.330	20
n-Hexane	25.0	21.7	22.9	86.6	91.7	56.0-124			5.72	20
Iodomethane	125	112	119	89.7	95.0	57.0-140			5.82	20
Isopropylbenzene	25.0	24.9	25.3	99.6	101	75.0-120			1.78	20
p-Isopropyltoluene	25.0	24.9	25.4	99.6	102	74.0-126			1.93	20
2-Butanone (MEK)	125	80.7	79.5	64.5	63.6	37.0-158			1.44	20
Methylene Chloride	25.0	22.8	22.9	91.1	91.8	66.0-121			0.710	20
4-Methyl-2-pentanone (MIBK)	125	83.9	81.4	67.1	65.1	59.0-143			2.94	20
Methyl tert-butyl ether	25.0	18.2	17.9	72.7	71.5	64.0-123			1.68	20
Naphthalene	25.0	16.8	16.2	67.2	65.0	62.0-128			3.40	20
n-Propylbenzene	25.0	25.0	25.3	100	101	79.0-120			1.10	20
Styrene	25.0	25.4	25.5	102	102	78.0-124			0.340	20
1,1,1,2-Tetrachloroethane	25.0	23.9	24.1	95.5	96.4	75.0-122			0.940	20
1,1,2,2-Tetrachloroethane	25.0	19.3	18.1	77.1	72.3	71.0-122			6.51	20
1,1,2-Trichlorotrifluoroethane	25.0	24.6	25.7	98.2	103	61.0-136			4.46	20
Tetrachloroethene	25.0	26.8	27.3	107	109	70.0-127			1.89	20
Toluene	25.0	25.8	26.5	103	106	77.0-120			2.79	20
1,2,3-Trichlorobenzene	25.0	19.2	18.8	76.9	75.0	61.0-133			2.43	20
1,2,4-Trichlorobenzene	25.0	23.2	23.2	93.0	92.8	69.0-129			0.220	20
1,1,1-Trichloroethane	25.0	22.4	22.8	89.5	91.1	68.0-122			1.71	20
1,1,2-Trichloroethane	25.0	22.2	21.9	88.7	87.4	78.0-120			1.45	20
Trichloroethene	25.0	23.5	24.2	94.0	96.8	78.0-120			3.01	20
Trichlorofluoromethane	25.0	22.3	23.4	89.4	93.8	56.0-137			4.82	20
1,2,3-Trichloropropane	25.0	17.6	17.1	70.4	68.4	72.0-124	J4	J4	2.92	20
1,2,4-Trimethylbenzene	25.0	24.9	25.2	99.6	101	75.0-120			1.22	20
1,2,3-Trimethylbenzene	25.0	25.4	25.2	102	101	75.0-120			0.700	20
1,3,5-Trimethylbenzene	25.0	24.7	25.1	98.6	101	75.0-120			1.93	20
Vinyl acetate	125	84.3	80.9	67.4	64.7	46.0-160			4.15	20
Vinyl chloride	25.0	21.5	23.2	86.2	92.7	64.0-133			7.26	20
Xylenes, Total	75.0	76.8	79.3	102	106	77.0-120			3.20	20
(S) Toluene-d8				113	114	80.0-120				
(S) Dibromofluoromethane				94.6	95.2	76.0-123				
(S) 4-Bromofluorobenzene				99.1	98.3	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
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.
Q	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

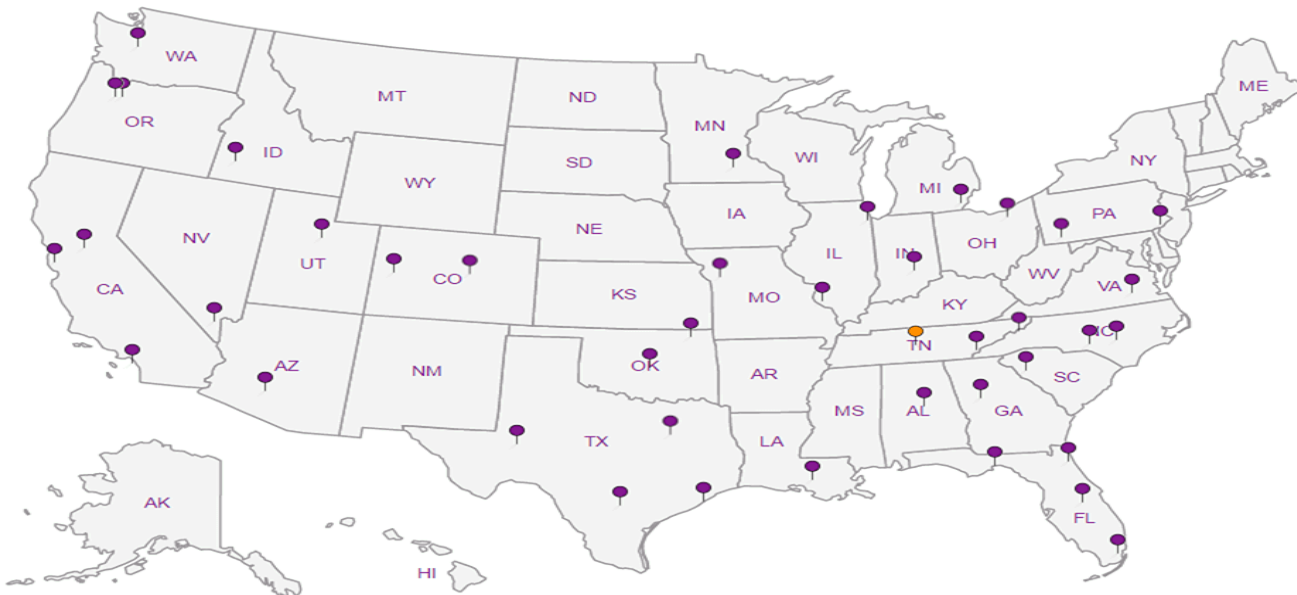
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

**PES Environmental, Inc. - WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #

Date Results Needed

No. of  
Cnts

Immediately  
Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	*Alk, Cl, NO3, SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb-HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
W-MW-02-061917	GRAB	GW	75	6/19/17	1110	9	X	X	X	X	X	X
MW107-061917	↓	GW	40	↓	1340	9	X	X	X	X	X	X
W-MW-01-061917	↓	GW	75	↓	1620	9	X	X	X	X	X	X
R-MW6-062017	↓	GW	20	6/20/17	0910	11	X	X	X	X	X	X
<del>MW121-062017</del>	↓	GW	20	↓	1145	9	X	X	X	X	X	X
TRIP BLANK	-	GW	-	4/11/17	-	-	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist

CDC Seal Present/Intact:  NP  Y  N  
CDC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  
*[Signature]*

Date: **6/20/17**  
Time: **1710**

Received by: (Signature)

Trip Blank Received:  Yes  No  
 HCl  MeOH  
 TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: **21.0** °C  
Bottles Received: **1011 38**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)  
*[Signature]*

Date: **6-21-17**  
Time: **855**

Hold:

Condition:  
NCF / **08**

Analysis / Container / Preservative

Pres  
Chk

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
Phone: 800-757-5859  
Fax: 615-758-5859



L# **917439**

**F120**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: **5-31-17**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

01

02

03

04

SM

05



**PES Environmental, Inc. - WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:

Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page    of   



YOUR LAB OF CHOICE

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



L# 917439  
**F120**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: 5-31-17

Shipped Via: **FedEX Ground**

Report to  
**Bill Haldeman**

Email To: **bhaldeman@pesenv.com**

Project  
Description: **American Linen Supply**

City/State/  
Collected: **SEATTLE/WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
SHANNON MCKERNAN

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Same Day  Five Day   
Next Day  5 Day (Rsd Only)   
Two Day  10 Day (Rsd Only)   
Three Day

Quote #

Date Results Needed

Immediately Packed on Ice: N  Y

No. of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk, Cl, NO3, SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Min 6020 250mlHDPE-HNO3	low level B260C 40mlAmb-HCl	low level BSK175 40mlAmb-HCl	Remarks	Sample # (lab only)
W MW-02-061917	GRAB	GW	75	6/19/17	1110	9	X	X	X	X	X	X		01
MW107-061917		GW	40		1340	9	X	X	X	X	X	X		02
W MW-01-061917		GW	75		1620	9	X	X	X	X	X	X		03
R-MW6-062017		GW	20	6/20/17	0910	11	X	X	X	X	X	X		04
<del>MW121-062017</del>		GW	20		1145	9	X	X	X	X	X	X		05
TRIP BLANK		GW	-	4/11/17	-						X			06
		GW												
		GW												
		GW												
		GW												

GRAB MATCH

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Sample Receipt Checklist:

COC Seal Present/Intact:  N  Y  N  
COC Signed Accurate:  N  Y  N  
Bottles arrive Intact:  N  Y  N  
Correct bottles used:  N  Y  N  
Sufficient volume sent:  N  Y  N  
If Applicable  
VDA Zero Headpace:  N  Y  N  
Preservation Correct/Checked:  N  Y  N

Relinquished by: (Signature) <u>[Signature]</u>	Date: <u>6/20/17</u>	Time: <u>1710</u>	Received by: (Signature) <u>[Signature]</u>	Trip Blank Received: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <u>[Signature]</u> MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <u>21.0</u> °C Bottles Received: <u>4011 38</u>
Relinquished by: (Signature)	Date:	Time:	Received for Lab by: (Signature) <u>[Signature]</u>	Date: <u>6-21-17</u> Time: <u>8:55</u> Hold: _____ Condition: <u>NCF / 08</u>

## MEMORANDUM

**TO:** Project File **DATE:** July 25, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 19 and 20, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L917439

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Four (4) groundwater samples and a trip blank were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 19 and 20, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L917439. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L917439 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.1 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

Samples were analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met with the following exception:

Sample W-MW-02-061917 nitrate analysis was performed about 3 hours past the recommended 48-hour hold time. **Sample W-MW-02-061917 nitrate result is estimated and qualified (UJ).**

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for acrylonitrile, bromomethane, chloromethane, 1,2-dibromo-3-chloropropane, dibromomethane, 1,2-dichloroethane, trans-1,4-dichloro-2-butene, di-isopropyl ether, 2-Butanone (MEK), 4-methyl-2-pentanone (MIBK), methyl tert-butyl ether, naphthalene, 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, and 1,2,3-trichloropropane were identified by the laboratory for all associated samples with analytical batch WG993152 (analyzed on June 27, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for above mentioned compounds are estimated and qualified (UJ or J).**

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

#### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

#### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

#### *USEPA Method 6020:*

Laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blank at or above the RDL.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of chloride was detected in the method blank associated with analytical batch WG991373 (date of analysis is June 21, 2017) between the RDL and method detection

limit (MDL). No action was necessary as associated chloride sample results are significantly greater than the detections in the blank.

### **Trip Blank Results**

#### *USEPA Method 8260C and NWTPH-Gx:*

A trip blank was collected and submitted for gasoline and VOC analysis. The target analytes (gasoline and VOCs) were not detected in the trip blank at or above the reported detection limits (RDLs).

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDG L918687 for field duplicate results.

### **Laboratory Duplicate Analyses**

#### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

#### *NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision data.

#### *Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples and on sample W-MW-01-061917. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

#### *USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

#### *General Chemistry:*

*SM 2320B:* Laboratory duplicate samples were performed on non-client or client samples from a different SDG within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate samples were performed on non-client samples within the analytical batches. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit with the following discussion:

Nitrate and sulfate duplicate RPDs associated with analytical batch WG991373 (date of analysis is June 21, 2017) exceed acceptance criteria but no action is taken since this duplicate was performed on a non-client sample within the analytical batch and the laboratory control sample results are acceptable.

*EPA Method 9060A:* A laboratory duplicate sample was performed on a non-client sample and on sample R-MW6-062017 within the analytical batch. The primary/duplicate RPD for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

*NWTPH-Gx Method:*

The surrogate recovery results for the sample, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following exceptions:

- LCS (Batch WG993152) spike compound (acrylonitrile) percent recovery is slightly below laboratory acceptance criteria and qualified by the laboratory (J4). No action was taken on this basis as LCSD percent recovery results are within.
- LCS/LCSD (Batch WG993152) spike compound (1,2,3-trichloropropane) percent recoveries are also slightly below laboratory acceptance criteria and qualified by the laboratory (J4). **Spike compound, 1,2,3-trichloropropane, was not detected in associated samples and all associated results are estimated (UJ) due to slightly low LCS/LCSD recoveries.**

*NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*NWTPH-Gx Method:*

MS/MSD analysis was performed on sample R-MW6-062017. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*Method RSK-175:*

MS/MSD analyses were not performed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS/MSD analyses were performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analysis was performed on non-client sample within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.





Collected date/time: 06/19/17 11:10

L917439

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	520000		2710	20000	1	06/27/2017 07:38	<a href="#">WG992368</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	103000		260	5000	5	06/27/2017 20:29	<a href="#">WG993012</a>
Nitrate	U	VS Q	22.7	100	1	06/21/2017 14:15	<a href="#">WG991373</a>
Sulfate	U		77.4	5000	1	06/21/2017 14:15	<a href="#">WG991373</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	116000		1020	10000	10	06/22/2017 19:34	<a href="#">WG991744</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	33700		15.0	100	1	06/23/2017 07:04	<a href="#">WG991760</a>
Manganese	2980		0.250	5.00	1	06/23/2017 07:04	<a href="#">WG991760</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	16900		7.18	17.0	25	06/22/2017 15:09	<a href="#">WG992024</a>
Ethane	U		0.296	1.29	1	06/22/2017 12:16	<a href="#">WG991508</a>
Ethene	3.71		0.422	1.27	1	06/22/2017 12:16	<a href="#">WG991508</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	8.12	J J	1.05	25.0	1	06/27/2017 13:46	<a href="#">WG993152</a>
Acrylonitrile	U	VS JO J4	0.873	5.00	1	06/27/2017 13:46	<a href="#">WG993152</a>
Benzene	0.307	J J	0.0896	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Bromomethane	U	VS JO	0.157	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Carbon disulfide	0.386	J J	0.101	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Chloromethane	U	VS JO	0.153	1.25	1	06/27/2017 13:46	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	VS JO	0.325	2.50	1	06/27/2017 13:46	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>
Dibromomethane	U	VS JO	0.117	0.500	1	06/27/2017 13:46	<a href="#">WG993152</a>

jc 7/25/17

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 13:46	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 13:46	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 13:46	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 13:46	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 13:46	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 13:46	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 13:46	WG993152
cis-1,2-Dichloroethene	18.2		0.0933	0.500	1	06/27/2017 13:46	WG993152
trans-1,2-Dichloroethene	0.746		0.152	0.500	1	06/27/2017 13:46	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 13:46	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 13:46	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 13:46	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 13:46	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 13:46	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 13:46	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 13:46	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 13:46	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 13:46	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 13:46	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 13:46	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 13:46	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 13:46	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 13:46	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 13:46	WG993152
2-Butanone (MEK)	3.57	J JJO	1.28	5.00	1	06/27/2017 13:46	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 13:46	WG993152
4-Methyl-2-pentanone (MIBK)	0.929	XJ JJO	0.823	5.00	1	06/27/2017 13:46	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 13:46	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 13:46	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 13:46	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 13:46	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 13:46	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 13:46	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 13:46	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 13:46	WG993152
Toluene	0.970		0.412	0.500	1	06/27/2017 13:46	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 13:46	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 13:46	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 13:46	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 13:46	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 13:46	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 13:46	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 13:46	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 13:46	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 13:46	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 13:46	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 13:46	WG993152
Vinyl chloride	25.6		0.118	0.500	1	06/27/2017 13:46	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 13:46	WG993152
(S) Toluene-d8	111			80.0-120		06/27/2017 13:46	WG993152
(S) Dibromofluoromethane	99.7			76.0-123		06/27/2017 13:46	WG993152
(S) 4-Bromofluorobenzene	97.8			80.0-120		06/27/2017 13:46	WG993152

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

Jc  
7/25/17



Collected date/time: 06/19/17 13:40

L917439

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	651000		2710	20000	1	06/27/2017 07:45	WG992368

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	89700		51.9	1000	1	06/21/2017 13:31	WG991373
Nitrate	U		22.7	100	1	06/21/2017 13:31	WG991373
Sulfate	U		77.4	5000	1	06/21/2017 13:31	WG991373

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	91000		102	1000	1	06/22/2017 19:51	WG991744

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	10500		15.0	100	1	06/23/2017 07:07	WG991760
Manganese	955		0.250	5.00	1	06/23/2017 07:07	WG991760

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	7350		5.74	13.6	20	06/22/2017 15:12	WG992024
Ethane	U		0.296	1.29	1	06/22/2017 12:18	WG991508
Ethene	205		0.422	1.27	1	06/22/2017 12:18	WG991508

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	2.99	J ↓	1.05	25.0	1	06/27/2017 14:03	WG993152
Acrylonitrile	U	JS JO J4	0.873	5.00	1	06/27/2017 14:03	WG993152
Benzene	0.238	J ↓	0.0896	0.500	1	06/27/2017 14:03	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:03	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:03	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:03	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 14:03	WG993152
Bromomethane	U	JS JO	0.157	2.50	1	06/27/2017 14:03	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:03	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:03	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:03	WG993152
Carbon disulfide	0.162	J ↓	0.101	0.500	1	06/27/2017 14:03	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:03	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:03	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:03	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 14:03	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 14:03	WG993152
Chloromethane	U	JS JO	0.153	1.25	1	06/27/2017 14:03	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:03	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:03	WG993152
1,2-Dibromo-3-Chloropropane	U	JS JO	0.325	2.50	1	06/27/2017 14:03	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:03	WG993152
Dibromomethane	U	JS JO	0.117	0.500	1	06/27/2017 14:03	WG993152

JS  
7/25/17

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:03	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:03	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:03	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:03	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:03	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 14:03	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:03	WG993152
cis-1,2-Dichloroethene	7.29		0.0933	0.500	1	06/27/2017 14:03	WG993152
trans-1,2-Dichloroethene	12.6		0.152	0.500	1	06/27/2017 14:03	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:03	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:03	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:03	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:03	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:03	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 14:03	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:03	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 14:03	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:03	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:03	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:03	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:03	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:03	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:03	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:03	WG993152
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	06/27/2017 14:03	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:03	WG993152
4-Methyl-2-pentanone (MIBK)	U	VJ JO	0.823	5.00	1	06/27/2017 14:03	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 14:03	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 14:03	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:03	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:03	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:03	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 14:03	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:03	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:03	WG993152
Toluene	0.700		0.412	0.500	1	06/27/2017 14:03	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 14:03	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:03	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:03	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:03	WG993152
Trichloroethene	0.290	J J	0.153	0.500	1	06/27/2017 14:03	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:03	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 14:03	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:03	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:03	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:03	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:03	WG993152
Vinyl chloride	15.0		0.118	0.500	1	06/27/2017 14:03	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:03	WG993152
(S) Toluene-d8	111			80.0-120		06/27/2017 14:03	WG993152
(S) Dibromofluoromethane	99.6			76.0-123		06/27/2017 14:03	WG993152
(S) 4-Bromofluorobenzene	98.1			80.0-120		06/27/2017 14:03	WG993152

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

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Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	250000		2710	20000	1	06/27/2017 07:51	<a href="#">WG992368</a>

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	27600		51.9	1000	1	06/21/2017 14:00	<a href="#">WG991373</a>
Nitrate	72.7	J ↓	22.7	100	1	06/21/2017 14:00	<a href="#">WG991373</a>
Sulfate	28300		77.4	5000	1	06/21/2017 14:00	<a href="#">WG991373</a>

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	3000		102	1000	1	06/22/2017 20:04	<a href="#">WG991744</a>

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	9480		15.0	100	1	06/23/2017 07:11	<a href="#">WG991760</a>
Manganese	321		0.250	5.00	1	06/23/2017 07:11	<a href="#">WG991760</a>

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	461		0.287	0.678	1	06/22/2017 12:20	<a href="#">WG991508</a>
Ethane	U		0.296	1.29	1	06/22/2017 12:20	<a href="#">WG991508</a>
Ethene	U		0.422	1.27	1	06/22/2017 12:20	<a href="#">WG991508</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 14:20	<a href="#">WG993152</a>
Acrylonitrile	U	U5 JO J4	0.873	5.00	1	06/27/2017 14:20	<a href="#">WG993152</a>
Benzene	0.158	J ↓	0.0896	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Bromomethane	U	U5 JO	0.157	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Chloromethane	U	U5 JO	0.153	1.25	1	06/27/2017 14:20	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	U5 JO	0.325	2.50	1	06/27/2017 14:20	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>
Dibromomethane	U	U5 JO	0.117	0.500	1	06/27/2017 14:20	<a href="#">WG993152</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:20	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:20	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:20	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:20	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:20	WG993152
1,2-Dichloroethane	U	US JO	0.108	0.500	1	06/27/2017 14:20	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:20	WG993152
cis-1,2-Dichloroethene	0.320	J J	0.0933	0.500	1	06/27/2017 14:20	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 14:20	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:20	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:20	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:20	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:20	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:20	WG993152
trans-1,4-Dichloro-2-butene	U	US JO	0.257	5.00	1	06/27/2017 14:20	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:20	WG993152
Di-isopropyl ether	U	US JO	0.0924	0.500	1	06/27/2017 14:20	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:20	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:20	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:20	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:20	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:20	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:20	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:20	WG993152
2-Butanone (MEK)	U	US JO	1.28	5.00	1	06/27/2017 14:20	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:20	WG993152
4-Methyl-2-pentanone (MIBK)	U	US JO	0.823	5.00	1	06/27/2017 14:20	WG993152
Methyl tert-butyl ether	U	J JO	0.102	0.500	1	06/27/2017 14:20	WG993152
Naphthalene	U	J JO	0.174	2.50	1	06/27/2017 14:20	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:20	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:20	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:20	WG993152
1,1,2,2-Tetrachloroethane	U	US JO	0.130	0.500	1	06/27/2017 14:20	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:20	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:20	WG993152
Toluene	0.931		0.412	0.500	1	06/27/2017 14:20	WG993152
1,2,3-Trichlorobenzene	U	US JO	0.164	0.500	1	06/27/2017 14:20	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:20	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:20	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:20	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 14:20	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:20	WG993152
1,2,3-Trichloropropane	U	US JO J4	0.247	2.50	1	06/27/2017 14:20	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:20	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:20	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:20	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:20	WG993152
Vinyl chloride	1.09		0.118	0.500	1	06/27/2017 14:20	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:20	WG993152
(S) Toluene-d8	112			80.0-120		06/27/2017 14:20	WG993152
(S) Dibromofluoromethane	99.8			76.0-123		06/27/2017 14:20	WG993152
(S) 4-Bromofluorobenzene	99.0			80.0-120		06/27/2017 14:20	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	718000		2710	20000	1	06/27/2017 07:58	<a href="#">WG992368</a>

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	11100		51.9	1000	1	06/21/2017 21:13	<a href="#">WG991373</a>
Nitrate	U		22.7	100	1	06/21/2017 21:13	<a href="#">WG991373</a>
Sulfate	85700		77.4	5000	1	06/21/2017 21:13	<a href="#">WG991373</a>

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	13600		102	1000	1	06/22/2017 21:31	<a href="#">WG991744</a>

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	27000		15.0	100	1	06/23/2017 08:09	<a href="#">WG991760</a>
Manganese	8280		0.250	5.00	1	06/23/2017 08:09	<a href="#">WG991760</a>

Al

Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	38.5	J	31.6	100	1	06/22/2017 06:44	<a href="#">WG991730</a>
(S) a,a,a-Trifluorotoluene(FID) 99.1				77.0-122		06/22/2017 06:44	<a href="#">WG991730</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	6980		2.87	6.78	10	06/22/2017 15:14	<a href="#">WG992024</a>
Ethane	10.7		0.296	1.29	1	06/22/2017 12:22	<a href="#">WG991508</a>
Ethene	11.2		0.422	1.27	1	06/22/2017 12:22	<a href="#">WG991508</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	U		1.05	25.0	1	06/27/2017 14:37	<a href="#">WG993152</a>
Acrylonitrile	U	VS JO J4	0.873	5.00	1	06/27/2017 14:37	<a href="#">WG993152</a>
Benzene	0.167	J	0.0896	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Bromomethane	U	VS JO	0.157	2.50	1	06/27/2017 14:37	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:37	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:37	<a href="#">WG993152</a>

Handwritten signature and date: 7/25/17



Collected date/time: 06/20/17 09:10

L917439

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloroform	U		0.0860	0.500	1	06/27/2017 14:37	WG993152
Chloromethane	U	VJ JO	0.153	1.25	1	06/27/2017 14:37	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:37	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:37	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 14:37	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:37	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:37	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:37	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:37	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:37	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 14:37	WG993152
1,1-Dichloroethene	0.337	J J	0.188	0.500	1	06/27/2017 14:37	WG993152
cis-1,2-Dichloroethene	37.3		0.0933	0.500	1	06/27/2017 14:37	WG993152
trans-1,2-Dichloroethene	0.445	J J	0.152	0.500	1	06/27/2017 14:37	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:37	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:37	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:37	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:37	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:37	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 14:37	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:37	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 14:37	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:37	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:37	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:37	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:37	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:37	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:37	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:37	WG993152
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	06/27/2017 14:37	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:37	WG993152
4-Methyl-2-pentanone (MIBK)	U	VJ JO	0.823	5.00	1	06/27/2017 14:37	WG993152
Methyl tert-butyl ether	U	J JO	0.102	0.500	1	06/27/2017 14:37	WG993152
Naphthalene	U	J JO	0.174	2.50	1	06/27/2017 14:37	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:37	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:37	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:37	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 14:37	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:37	WG993152
Tetrachloroethene	1.19		0.199	0.500	1	06/27/2017 14:37	WG993152
Toluene	0.619		0.412	0.500	1	06/27/2017 14:37	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 14:37	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:37	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:37	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:37	WG993152
Trichloroethene	0.878		0.153	0.500	1	06/27/2017 14:37	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:37	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 14:37	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:37	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:37	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:37	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 14:37	WG993152
Vinyl chloride	43.9		0.118	0.500	1	06/27/2017 14:37	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:37	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

*JC 7/25/17*





Collected date/time: 06/20/17 09:10

L917439

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
(S) Toluene-d8	112			80.0-120		06/27/2017 14:37	<a href="#">WG993152</a>
(S) Dibromofluoromethane	99.6			76.0-123		06/27/2017 14:37	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	99.2			80.0-120		06/27/2017 14:37	<a href="#">WG993152</a>

1 Cp

2 Tc

3 Ss

4 Cn

Sr

5 Qc

7 Gl

Al

Sc

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Collected date/time: 06/20/17 00:00

SAMPLE RESULTS - 05

L917439

ONE LAB. NATIONWIDE.



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 01:33	WG991730
(S) a,a,a-Trifluorotoluene(FID) 99.0				77.0-122		06/22/2017 01:33	WG991730

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 12:54	WG993152
Acrylonitrile	U	VJ JO J4	0.873	5.00	1	06/27/2017 12:54	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 12:54	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 12:54	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 12:54	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 12:54	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 12:54	WG993152
Bromomethane	U	VJ JO	0.157	2.50	1	06/27/2017 12:54	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 12:54	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 12:54	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 12:54	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 12:54	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 12:54	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 12:54	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 12:54	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 12:54	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 12:54	WG993152
Chloromethane	U	VJ JO	0.153	1.25	1	06/27/2017 12:54	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 12:54	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 12:54	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 12:54	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 12:54	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 12:54	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 12:54	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 12:54	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 12:54	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 12:54	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 12:54	WG993152
cis-1,2-Dichloroethene	U		0.0933	0.500	1	06/27/2017 12:54	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 12:54	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 12:54	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 12:54	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 12:54	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 12:54	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 12:54	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 12:54	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 12:54	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 12:54	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 12:54	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 12:54	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 12:54	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 12:54	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 12:54	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 12:54	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 12:54	WG993152
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	06/27/2017 12:54	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 12:54	WG993152

Cp

Tc

Ss

Cn

Sr

Qc

GI

AI

Sc

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SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.



Collected date/time: 06/20/17 00:00

L917439

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
4-Methyl-2-pentanone (MIBK)	U	VJ JO	0.823	5.00	1	06/27/2017 12:54	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 12:54	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 12:54	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 12:54	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 12:54	WG993152
1,1,1-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 12:54	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 12:54	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 12:54	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 12:54	WG993152
Toluene	U		0.412	0.500	1	06/27/2017 12:54	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 12:54	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 12:54	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 12:54	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 12:54	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 12:54	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 12:54	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 12:54	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 12:54	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 12:54	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 12:54	WG993152
Vinyl acetate	U		0.645	5.00	1	06/27/2017 12:54	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 12:54	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 12:54	WG993152
(S) Toluene-d8	114			80.0-120		06/27/2017 12:54	WG993152
(S) Dibromofluoromethane	97.6			76.0-123		06/27/2017 12:54	WG993152
(S) 4-Bromofluorobenzene	97.1			80.0-120		06/27/2017 12:54	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

Sr

5 Qc

7 Gl

8 Al

9 Sc

*Handwritten signature and date: Jc 7/25/17*

## **PES Environmental, Inc.- WA**

Sample Delivery Group: L917461  
Samples Received: 06/21/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
MW121-062017 L917461-01	<b>5</b>	
MW-D-062017 L917461-02	<b>7</b>	
MW-9-062017 L917461-03	<b>9</b>	
MW131-062017 L917461-04	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>14</b>	<b>6</b> Qc
Wet Chemistry by Method 2320 B-2011	<b>14</b>	
Wet Chemistry by Method 9056A	<b>15</b>	<b>7</b> Gl
Wet Chemistry by Method 9060A	<b>18</b>	<b>8</b> Al
Metals (ICPMS) by Method 6020A	<b>19</b>	
Volatile Organic Compounds (GC) by Method NWTPHGX	<b>20</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>21</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>23</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>27</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>28</b>	
<b>Sc: Chain of Custody</b>	<b>29</b>	

# SAMPLE SUMMARY



## MW121-062017 L917461-01 GW

Collected by  
Shannon McKernan

Collected date/time  
06/20/17 11:45

Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 08:53	06/27/17 08:53	MCG
Wet Chemistry by Method 9056A	WG991594	1	06/21/17 22:15	06/21/17 22:15	DR
Wet Chemistry by Method 9056A	WG993019	100	06/28/17 19:56	06/28/17 19:56	SAM
Wet Chemistry by Method 9060A	WG992075	1	06/23/17 12:32	06/23/17 12:32	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 08:12	LAT
Metals (ICPMS) by Method 6020A	WG991760	2	06/22/17 14:01	06/23/17 10:41	LAT
Volatile Organic Compounds (GC) by Method RSK175	WG991514	1	06/22/17 14:17	06/22/17 14:17	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992024	5	06/22/17 15:22	06/22/17 15:22	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 14:54	06/27/17 14:54	ACG

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## MW-D-062017 L917461-02 GW

Collected by  
Shannon McKernan

Collected date/time  
06/20/17 12:55

Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG991811	1	06/22/17 18:33	06/22/17 18:33	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 15:11	06/27/17 15:11	ACG

## MW-9-062017 L917461-03 GW

Collected by  
Shannon McKernan

Collected date/time  
06/20/17 13:45

Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG991811	1	06/22/17 18:55	06/22/17 18:55	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 15:28	06/27/17 15:28	ACG

## MW131-062017 L917461-04 GW

Collected by  
Shannon McKernan

Collected date/time  
06/20/17 15:50

Received date/time  
06/21/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG992368	1	06/27/17 09:00	06/27/17 09:00	MCG
Wet Chemistry by Method 9056A	WG991594	1	06/21/17 22:25	06/21/17 22:25	DR
Wet Chemistry by Method 9056A	WG991594	5	06/21/17 22:35	06/21/17 22:35	DR
Wet Chemistry by Method 9060A	WG992075	1	06/23/17 13:02	06/23/17 13:02	SJM
Metals (ICPMS) by Method 6020A	WG991760	1	06/22/17 14:01	06/23/17 08:16	LAT
Volatile Organic Compounds (GC) by Method NWTPHGX	WG991811	1	06/22/17 19:17	06/22/17 19:17	LRL
Volatile Organic Compounds (GC) by Method RSK175	WG991514	1	06/22/17 14:19	06/22/17 14:19	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992024	20	06/22/17 15:29	06/22/17 15:29	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	5	06/29/17 01:29	06/29/17 01:29	JHH



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

Brian Ford  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	930000		2710	20000	1	06/27/2017 08:53	<a href="#">WG992368</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	13300		51.9	1000	1	06/21/2017 22:15	<a href="#">WG991594</a>
Nitrate	U		22.7	100	1	06/21/2017 22:15	<a href="#">WG991594</a>
Sulfate	61200	J	7740	500000	100	06/28/2017 19:56	<a href="#">WG993019</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	16500		102	1000	1	06/23/2017 12:32	<a href="#">WG992075</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	27100		15.0	100	1	06/23/2017 08:12	<a href="#">WG991760</a>
Manganese	11000		0.500	10.0	2	06/23/2017 10:41	<a href="#">WG991760</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	2140		1.44	3.39	5	06/22/2017 15:22	<a href="#">WG992024</a>
Ethane	8.88		0.296	1.29	1	06/22/2017 14:17	<a href="#">WG991514</a>
Ethene	U		0.422	1.27	1	06/22/2017 14:17	<a href="#">WG991514</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 14:54	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 14:54	<a href="#">WG993152</a>
Benzene	0.186	J	0.0896	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 14:54	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 14:54	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Chloromethane	U		0.153	1.25	1	06/27/2017 14:54	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 14:54	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 14:54	<a href="#">WG993152</a>





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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:54	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:54	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:54	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:54	WG993152
cis-1,2-Dichloroethene	1.13		0.0933	0.500	1	06/27/2017 14:54	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:54	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:54	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:54	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 14:54	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:54	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 14:54	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:54	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:54	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:54	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:54	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:54	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:54	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:54	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 14:54	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:54	WG993152
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 14:54	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 14:54	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 14:54	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:54	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:54	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:54	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:54	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:54	WG993152
Toluene	0.774		0.412	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 14:54	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:54	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:54	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 14:54	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:54	WG993152
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 14:54	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:54	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:54	WG993152
Vinyl acetate	U	JO	0.645	5.00	1	06/27/2017 14:54	WG993152
Vinyl chloride	7.68		0.118	0.500	1	06/27/2017 14:54	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:54	WG993152
(S) Toluene-d8	109			80.0-120		06/27/2017 14:54	WG993152
(S) Dibromofluoromethane	102			76.0-123		06/27/2017 14:54	WG993152
(S) 4-Bromofluorobenzene	99.5			80.0-120		06/27/2017 14:54	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:33	WG991811
(S) a,a,a-Trifluorotoluene(FID)	93.3			77.0-122		06/22/2017 18:33	WG991811

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 15:11	WG993152
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 15:11	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:11	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:11	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:11	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:11	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:11	WG993152
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 15:11	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:11	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:11	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:11	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:11	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:11	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:11	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:11	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:11	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:11	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:11	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:11	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:11	WG993152
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 15:11	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:11	WG993152
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:11	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:11	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:11	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:11	WG993152
cis-1,2-Dichloroethene	0.211	J	0.0933	0.500	1	06/27/2017 15:11	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:11	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:11	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:11	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 15:11	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:11	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 15:11	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:11	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:11	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:11	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:11	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:11	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:11	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:11	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 15:11	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:11	WG993152



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:11	<a href="#">WG993152</a>
Methyl tert-butyl ether	U	<u>JO</u>	0.102	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Naphthalene	U	<u>JO</u>	0.174	2.50	1	06/27/2017 15:11	<a href="#">WG993152</a>
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Styrene	U		0.117	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,1,2,2-Tetrachloroethane	U	<u>JO</u>	0.130	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Toluene	0.548		0.412	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,2,3-Trichlorobenzene	U	<u>JO</u>	0.164	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,2,3-Trichloropropane	U	<u>JO J4</u>	0.247	2.50	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Vinyl acetate	U	<u>JO</u>	0.645	5.00	1	06/27/2017 15:11	<a href="#">WG993152</a>
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:11	<a href="#">WG993152</a>
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:11	<a href="#">WG993152</a>
(S) Toluene-d8	110			80.0-120		06/27/2017 15:11	<a href="#">WG993152</a>
(S) Dibromofluoromethane	101			76.0-123		06/27/2017 15:11	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	99.0			80.0-120		06/27/2017 15:11	<a href="#">WG993152</a>

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



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:55	WG991811
(S) a,a,a-Trifluorotoluene(FID)	91.9			77.0-122		06/22/2017 18:55	WG991811

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	06/27/2017 15:28	WG993152
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 15:28	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:28	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:28	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:28	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:28	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 15:28	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:28	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:28	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:28	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:28	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:28	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:28	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:28	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:28	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:28	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:28	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:28	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:28	WG993152
1,2-Dibromo-3-Chloropropane	U	JO	0.325	2.50	1	06/27/2017 15:28	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:28	WG993152
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:28	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:28	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:28	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:28	WG993152
cis-1,2-Dichloroethene	0.214	J	0.0933	0.500	1	06/27/2017 15:28	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:28	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:28	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:28	WG993152
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 15:28	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:28	WG993152
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 15:28	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:28	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:28	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:28	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:28	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:28	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:28	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:28	WG993152
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 15:28	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:28	WG993152



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:28	WG993152
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 15:28	WG993152
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 15:28	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:28	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 15:28	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:28	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:28	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:28	WG993152
Toluene	0.562		0.412	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 15:28	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:28	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:28	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:28	WG993152
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 15:28	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:28	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:28	WG993152
Vinyl acetate	U	JO	0.645	5.00	1	06/27/2017 15:28	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:28	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:28	WG993152
(S) Toluene-d8	112			80.0-120		06/27/2017 15:28	WG993152
(S) Dibromofluoromethane	102			76.0-123		06/27/2017 15:28	WG993152
(S) 4-Bromofluorobenzene	100			80.0-120		06/27/2017 15:28	WG993152

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	1050000		2710	20000	1	06/27/2017 09:00	<a href="#">WG992368</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	122000		260	5000	5	06/21/2017 22:35	<a href="#">WG991594</a>
Nitrate	U		22.7	100	1	06/21/2017 22:25	<a href="#">WG991594</a>
Sulfate	724	J	77.4	5000	1	06/21/2017 22:25	<a href="#">WG991594</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	10800		102	1000	1	06/23/2017 13:02	<a href="#">WG992075</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	7420		15.0	100	1	06/23/2017 08:16	<a href="#">WG991760</a>
Manganese	1010		0.250	5.00	1	06/23/2017 08:16	<a href="#">WG991760</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 19:17	<a href="#">WG991811</a>
(S) a,a,a-Trifluorotoluene(FID) 92.7				77.0-122		06/22/2017 19:17	<a href="#">WG991811</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	10700		5.74	13.6	20	06/22/2017 15:29	<a href="#">WG992024</a>
Ethane	U		0.296	1.29	1	06/22/2017 14:19	<a href="#">WG991514</a>
Ethene	332		0.422	1.27	1	06/22/2017 14:19	<a href="#">WG991514</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		5.25	125	5	06/29/2017 01:29	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	4.36	25.0	5	06/29/2017 01:29	<a href="#">WG993152</a>
Benzene	U		0.448	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Bromobenzene	U		0.665	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Bromodichloromethane	U		0.400	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Bromochloromethane	U		0.725	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Bromoform	U		0.930	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Bromomethane	U	JO	0.785	12.5	5	06/29/2017 01:29	<a href="#">WG993152</a>
n-Butylbenzene	U		0.715	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.670	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.915	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Carbon disulfide	U		0.505	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.795	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Chlorobenzene	U		0.700	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.640	2.50	5	06/29/2017 01:29	<a href="#">WG993152</a>
Chloroethane	U		0.705	12.5	5	06/29/2017 01:29	<a href="#">WG993152</a>



Collected date/time: 06/20/17 15:50

L917461

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloroform	U		0.430	2.50	5	06/29/2017 01:29	WG993152
Chloromethane	U		0.765	6.25	5	06/29/2017 01:29	WG993152
2-Chlorotoluene	U		0.555	2.50	5	06/29/2017 01:29	WG993152
4-Chlorotoluene	U		0.486	2.50	5	06/29/2017 01:29	WG993152
1,2-Dibromo-3-Chloropropane	U	JO	1.62	12.5	5	06/29/2017 01:29	WG993152
1,2-Dibromoethane	U		0.965	2.50	5	06/29/2017 01:29	WG993152
Dibromomethane	U	JO	0.585	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichlorobenzene	U		0.505	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichlorobenzene	U		0.650	2.50	5	06/29/2017 01:29	WG993152
1,4-Dichlorobenzene	U		0.605	2.50	5	06/29/2017 01:29	WG993152
Dichlorodifluoromethane	U		0.635	12.5	5	06/29/2017 01:29	WG993152
1,1-Dichloroethane	U		0.570	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloroethane	U	JO	0.540	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloroethene	U		0.940	2.50	5	06/29/2017 01:29	WG993152
cis-1,2-Dichloroethene	2.55		0.466	2.50	5	06/29/2017 01:29	WG993152
trans-1,2-Dichloroethene	U		0.760	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloropropane	U		0.950	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloropropene	U		0.640	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichloropropane	U		0.735	5.00	5	06/29/2017 01:29	WG993152
cis-1,3-Dichloropropene	U		0.488	2.50	5	06/29/2017 01:29	WG993152
trans-1,3-Dichloropropene	U		1.11	2.50	5	06/29/2017 01:29	WG993152
trans-1,4-Dichloro-2-butene	U	JO	1.28	25.0	5	06/29/2017 01:29	WG993152
2,2-Dichloropropane	U		0.464	2.50	5	06/29/2017 01:29	WG993152
Di-isopropyl ether	U	JO	0.462	2.50	5	06/29/2017 01:29	WG993152
Ethylbenzene	U		0.790	2.50	5	06/29/2017 01:29	WG993152
Hexachloro-1,3-butadiene	U		0.785	5.00	5	06/29/2017 01:29	WG993152
2-Hexanone	U		3.78	25.0	5	06/29/2017 01:29	WG993152
n-Hexane	U		1.52	25.0	5	06/29/2017 01:29	WG993152
Iodomethane	U		1.88	50.0	5	06/29/2017 01:29	WG993152
Isopropylbenzene	U		0.630	2.50	5	06/29/2017 01:29	WG993152
p-Isopropyltoluene	U		0.690	2.50	5	06/29/2017 01:29	WG993152
2-Butanone (MEK)	U	JO	6.40	25.0	5	06/29/2017 01:29	WG993152
Methylene Chloride	U		5.35	12.5	5	06/29/2017 01:29	WG993152
4-Methyl-2-pentanone (MIBK)	U		4.12	25.0	5	06/29/2017 01:29	WG993152
Methyl tert-butyl ether	U	JO	0.510	2.50	5	06/29/2017 01:29	WG993152
Naphthalene	U	JO	0.870	12.5	5	06/29/2017 01:29	WG993152
n-Propylbenzene	U		0.810	2.50	5	06/29/2017 01:29	WG993152
Styrene	U		0.585	2.50	5	06/29/2017 01:29	WG993152
1,1,1,2-Tetrachloroethane	U		0.600	2.50	5	06/29/2017 01:29	WG993152
1,1,2,2-Tetrachloroethane	U	JO	0.650	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.820	2.50	5	06/29/2017 01:29	WG993152
Tetrachloroethene	U		0.995	2.50	5	06/29/2017 01:29	WG993152
Toluene	U		2.06	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trichlorobenzene	U	JO	0.820	2.50	5	06/29/2017 01:29	WG993152
1,2,4-Trichlorobenzene	U		1.78	2.50	5	06/29/2017 01:29	WG993152
1,1,1-Trichloroethane	U		0.470	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichloroethane	U		0.930	2.50	5	06/29/2017 01:29	WG993152
Trichloroethene	U		0.765	2.50	5	06/29/2017 01:29	WG993152
Trichlorofluoromethane	U		0.650	12.5	5	06/29/2017 01:29	WG993152
1,2,3-Trichloropropane	U	JO J4	1.24	12.5	5	06/29/2017 01:29	WG993152
1,2,4-Trimethylbenzene	U		0.615	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trimethylbenzene	U		0.370	2.50	5	06/29/2017 01:29	WG993152
1,3,5-Trimethylbenzene	U		0.620	2.50	5	06/29/2017 01:29	WG993152
Vinyl acetate	U	JO	3.22	25.0	5	06/29/2017 01:29	WG993152
Vinyl chloride	435		0.590	2.50	5	06/29/2017 01:29	WG993152
Xylenes, Total	U		1.58	7.50	5	06/29/2017 01:29	WG993152

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	111			80.0-120		06/29/2017 01:29	<a href="#">WG993152</a>
(S) Dibromofluoromethane	104			76.0-123		06/29/2017 01:29	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	101			80.0-120		06/29/2017 01:29	<a href="#">WG993152</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





Method Blank (MB)

(MB) R3228961-1 06/26/17 19:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	5320	J	2710	20000

1 Cp

2 Tc

3 Ss

L917181-09 Original Sample (OS) • Duplicate (DUP)

(OS) L917181-09 06/26/17 19:37 • (DUP) R3228961-3 06/26/17 19:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	274000	276000	1	1.00		20

4 Cn

5 Sr

L917461-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917461-04 06/27/17 09:00 • (DUP) R3228961-8 06/27/17 09:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	1050000	1050000	1	0.000		20

6 Qc

7 Gl

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

(LCS) R3228961-4 06/26/17 20:29 • (LCSD) R3228961-7 06/27/17 07:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	110000	106000	110	106	85.0-115			4.00	20

8 Al

9 Sc



Method Blank (MB)

(MB) R3227775-1 06/21/17 16:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

L917451-03 Original Sample (OS) • Duplicate (DUP)

(OS) L917451-03 06/21/17 18:52 • (DUP) R3227775-4 06/21/17 19:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	49300	49800	1	1		15
Nitrate	ND	0.000	1	0		15
Sulfate	28800	28900	1	0		15

5 Sr

6 Qc

7 Gl

L917451-07 Original Sample (OS) • Duplicate (DUP)

(OS) L917451-07 06/21/17 20:23 • (DUP) R3227775-6 06/21/17 20:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	17200	16600	1	4		15
Nitrate	ND	0.000	1	0		15

8 Al

9 Sc

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

(LCS) R3227775-2 06/21/17 16:55 • (LCSD) R3227775-3 06/21/17 17:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	38800	38900	97	97	80-120			0	15
Nitrate	8000	8000	8000	100	100	80-120			0	15
Sulfate	40000	39200	39200	98	98	80-120			0	15

L917451-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L917451-05 06/21/17 19:53 • (MS) R3227775-5 06/21/17 20:03

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	10100	58500	97	1	80-120	
Nitrate	5000	116	4880	95	1	80-120	



L917456-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917456-01 06/21/17 21:45 • (MS) R3227775-7 06/21/17 21:55 • (MSD) R3227775-8 06/21/17 22:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	3210	51300	51600	96	97	1	80-120			1	15
Nitrate	5000	ND	4830	4870	95	96	1	80-120			1	15
Sulfate	50000	44100	91200	91500	94	95	1	80-120			0	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229722-1 06/28/17 00:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L917515-02 Original Sample (OS) • Duplicate (DUP)

(OS) L917515-02 06/28/17 12:14 • (DUP) R3229722-6 06/28/17 12:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	2510	2380	1	5	J	15

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

(LCS) R3229722-2 06/28/17 00:17 • (LCSD) R3229722-3 06/28/17 00:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	40300	40400	101	101	80-120			0	15

<sup>7</sup> Gl

<sup>8</sup> Al

L917506-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L917506-02 06/28/17 11:44 • (MS) R3229722-5 06/28/17 11:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	17300	72600	110	1	80-120	

<sup>9</sup> Sc

L917515-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917515-14 06/28/17 18:56 • (MS) R3229722-7 06/28/17 19:06 • (MSD) R3229722-8 06/28/17 19:16

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	8900	ND	67200	0	117	1	80-120	J6	J3	200	15



Method Blank (MB)

(MB) R3228589-1 06/23/17 10:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	105	J	102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L917461-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917461-01 06/23/17 12:32 • (DUP) R3228589-3 06/23/17 12:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	16500	16600	1	0		20

L917515-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917515-04 06/23/17 20:03 • (DUP) R3228589-7 06/23/17 20:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	423	323	1	27	J P1	20

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

(LCS) R3228589-2 06/23/17 12:16 • (LCSD) R3228589-6 06/23/17 14:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	70100	73000	93	97	85-115			4	20

L917496-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917496-01 06/23/17 13:19 • (MS) R3228589-4 06/23/17 13:37 • (MSD) R3228589-5 06/23/17 13:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	ND	46600	45700	92	91	1	80-120			2	20



Method Blank (MB)

(MB) R3228105-1 06/23/17 05:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3228105-2 06/23/17 05:49 • (LCSD) R3228105-3 06/23/17 05:53

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Iron	5000	5230	5030	105	101	80-120			4	20
Manganese	50.0	47.7	47.0	95	94	80-120			1	20

5 Sr

6 Qc

L916811-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916811-01 06/23/17 05:57 • (MS) R3228105-5 06/23/17 06:04 • (MSD) R3228105-6 06/23/17 06:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron	5000	17.7	5100	5040	102	100	1	75-125			1	20
Manganese	50.0	0.641	47.3	46.6	93	92	1	75-125			1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3228107-5 06/22/17 11:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)				77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3228107-3 06/22/17 10:18 • (LCSD) R3228107-4 06/22/17 10:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	6140	5860	112	107	72.0-134			4.68	20
(S) a,a,a-Trifluorotoluene(FID)				109	108	77.0-122				

5 Sr

6 Qc

7 Gl

L916945-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L916945-01 06/22/17 12:59 • (MS) R3228107-8 06/22/17 20:24 • (MSD) R3228107-9 06/22/17 20:46

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	ND	5480	5990	99.6	109	1	23.0-159			8.92	20
(S) a,a,a-Trifluorotoluene(FID)					98.8	97.9		77.0-122				

8 Al

9 Sc



Method Blank (MB)

(MB) R3227889-1 06/22/17 13:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

L917447-12 Original Sample (OS) • Duplicate (DUP)

(OS) L917447-12 06/22/17 13:49 • (DUP) R3227889-2 06/22/17 13:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

4 Cn

5 Sr

6 Qc

L917602-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917602-04 06/22/17 14:30 • (DUP) R3227889-3 06/22/17 14:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

7 Gl

8 Al

9 Sc

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

(LCS) R3227889-4 06/22/17 14:36 • (LCSD) R3227889-5 06/22/17 14:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethane	129	121	119	93.9	92.4	70.0-130			1.61	20
Ethene	127	116	114	91.0	89.6	70.0-130			1.57	20





Method Blank (MB)

(MB) R3227931-1 06/22/17 15:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

L917449-10 Original Sample (OS) • Duplicate (DUP)

(OS) L917449-10 06/22/17 15:20 • (DUP) R3227931-2 06/22/17 15:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	2360	2260	5	4.43		20

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3227931-3 06/22/17 15:34 • (LCSD) R3227931-4 06/22/17 15:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	70.1	77.4	103	114	70.0-130			9.99	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	112			80.0-120
(S) Dibromofluoromethane	99.5			76.0-123
(S) 4-Bromofluorobenzene	98.0			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	104	103	83.6	82.1	10.0-160			1.74	23
Acrylonitrile	125	80.1	73.8	64.1	59.1	60.0-142	J4	J4	8.18	20
Benzene	25.0	22.8	23.3	91.2	93.1	69.0-123			2.11	20
Bromobenzene	25.0	23.5	23.3	94.0	93.2	79.0-120			0.800	20
Bromodichloromethane	25.0	21.2	21.9	84.8	87.5	76.0-120			3.17	20
Bromochloromethane	25.0	22.1	21.9	88.4	87.8	76.0-122			0.740	20
Bromoform	25.0	20.5	19.8	82.0	79.2	67.0-132			3.48	20
Bromomethane	25.0	16.6	18.9	66.4	75.6	18.0-160			13.0	20
n-Butylbenzene	25.0	25.3	26.0	101	104	72.0-126			2.75	20
sec-Butylbenzene	25.0	24.9	25.2	99.6	101	74.0-121			1.15	20
tert-Butylbenzene	25.0	24.6	24.9	98.3	99.6	75.0-122			1.24	20
Carbon disulfide	25.0	25.1	26.0	101	104	55.0-127			3.48	20
Carbon tetrachloride	25.0	20.4	21.6	81.7	86.4	63.0-122			5.61	20
Chlorobenzene	25.0	25.7	26.0	103	104	79.0-121			1.14	20
Chlorodibromomethane	25.0	23.5	22.8	94.1	91.1	75.0-125			3.28	20
Chloroethane	25.0	21.6	23.0	86.4	91.9	47.0-152			6.13	20
Chloroform	25.0	20.9	21.3	83.7	85.3	72.0-121			1.97	20
Chloromethane	25.0	19.9	20.9	79.6	83.5	48.0-139			4.73	20
2-Chlorotoluene	25.0	24.4	24.8	97.7	99.3	74.0-122			1.55	20
4-Chlorotoluene	25.0	25.1	24.9	100	99.6	79.0-120			0.800	20
1,2-Dibromo-3-Chloropropane	25.0	16.8	16.0	67.3	64.1	64.0-127			4.86	20
1,2-Dibromoethane	25.0	21.6	21.4	86.5	85.7	77.0-123			0.980	20
Dibromomethane	25.0	19.9	20.4	79.4	81.8	78.0-120			2.93	20
1,2-Dichlorobenzene	25.0	25.2	25.3	101	101	80.0-120			0.450	20
1,3-Dichlorobenzene	25.0	25.6	25.2	103	101	72.0-123			1.55	20
1,4-Dichlorobenzene	25.0	25.3	25.2	101	101	77.0-120			0.310	20
Dichlorodifluoromethane	25.0	21.2	22.1	84.7	88.5	49.0-155			4.50	20
1,1-Dichloroethane	25.0	21.7	22.1	86.9	88.5	70.0-126			1.73	20
1,2-Dichloroethane	25.0	19.3	19.3	77.2	77.3	67.0-126			0.110	20
1,1-Dichloroethene	25.0	24.9	26.5	99.5	106	64.0-129			6.29	20
cis-1,2-Dichloroethene	25.0	22.1	22.6	88.5	90.4	73.0-120			2.17	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.2	71.0-121			2.89	20
1,2-Dichloropropane	25.0	22.4	22.8	89.6	91.2	75.0-125			1.76	20
1,1-Dichloropropene	25.0	22.3	22.9	89.3	91.7	71.0-129			2.67	20
1,3-Dichloropropane	25.0	22.0	21.8	87.8	87.3	80.0-121			0.540	20
cis-1,3-Dichloropropene	25.0	23.5	23.6	93.9	94.3	79.0-123			0.440	20
trans-1,3-Dichloropropene	25.0	22.1	21.8	88.6	87.4	74.0-127			1.35	20
trans-1,4-Dichloro-2-butene	25.0	15.3	13.9	61.3	55.5	55.0-134			9.91	20
2,2-Dichloropropane	25.0	20.7	22.1	82.9	88.3	60.0-125			6.28	20
Di-isopropyl ether	25.0	19.3	19.4	77.3	77.4	59.0-133			0.190	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	26.3	27.0	105	108	77.0-120			2.44	20
Hexachloro-1,3-butadiene	25.0	21.8	23.7	87.3	94.9	64.0-131			8.38	20
2-Hexanone	125	106	106	84.5	84.8	58.0-147			0.330	20
n-Hexane	25.0	21.7	22.9	86.6	91.7	56.0-124			5.72	20
Iodomethane	125	112	119	89.7	95.0	57.0-140			5.82	20
Isopropylbenzene	25.0	24.9	25.3	99.6	101	75.0-120			1.78	20
p-Isopropyltoluene	25.0	24.9	25.4	99.6	102	74.0-126			1.93	20
2-Butanone (MEK)	125	80.7	79.5	64.5	63.6	37.0-158			1.44	20
Methylene Chloride	25.0	22.8	22.9	91.1	91.8	66.0-121			0.710	20
4-Methyl-2-pentanone (MIBK)	125	83.9	81.4	67.1	65.1	59.0-143			2.94	20
Methyl tert-butyl ether	25.0	18.2	17.9	72.7	71.5	64.0-123			1.68	20
Naphthalene	25.0	16.8	16.2	67.2	65.0	62.0-128			3.40	20
n-Propylbenzene	25.0	25.0	25.3	100	101	79.0-120			1.10	20
Styrene	25.0	25.4	25.5	102	102	78.0-124			0.340	20
1,1,1,2-Tetrachloroethane	25.0	23.9	24.1	95.5	96.4	75.0-122			0.940	20
1,1,2,2-Tetrachloroethane	25.0	19.3	18.1	77.1	72.3	71.0-122			6.51	20
1,1,2-Trichlorotrifluoroethane	25.0	24.6	25.7	98.2	103	61.0-136			4.46	20
Tetrachloroethene	25.0	26.8	27.3	107	109	70.0-127			1.89	20
Toluene	25.0	25.8	26.5	103	106	77.0-120			2.79	20
1,2,3-Trichlorobenzene	25.0	19.2	18.8	76.9	75.0	61.0-133			2.43	20
1,2,4-Trichlorobenzene	25.0	23.2	23.2	93.0	92.8	69.0-129			0.220	20
1,1,1-Trichloroethane	25.0	22.4	22.8	89.5	91.1	68.0-122			1.71	20
1,1,2-Trichloroethane	25.0	22.2	21.9	88.7	87.4	78.0-120			1.45	20
Trichloroethene	25.0	23.5	24.2	94.0	96.8	78.0-120			3.01	20
Trichlorofluoromethane	25.0	22.3	23.4	89.4	93.8	56.0-137			4.82	20
1,2,3-Trichloropropane	25.0	17.6	17.1	70.4	68.4	72.0-124	J4	J4	2.92	20
1,2,4-Trimethylbenzene	25.0	24.9	25.2	99.6	101	75.0-120			1.22	20
1,2,3-Trimethylbenzene	25.0	25.4	25.2	102	101	75.0-120			0.700	20
1,3,5-Trimethylbenzene	25.0	24.7	25.1	98.6	101	75.0-120			1.93	20
Vinyl acetate	125	84.3	80.9	67.4	64.7	46.0-160			4.15	20
Vinyl chloride	25.0	21.5	23.2	86.2	92.7	64.0-133			7.26	20
Xylenes, Total	75.0	76.8	79.3	102	106	77.0-120			3.20	20
(S) Toluene-d8				113	114	80.0-120				
(S) Dibromofluoromethane				94.6	95.2	76.0-123				
(S) 4-Bromofluorobenzene				99.1	98.3	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

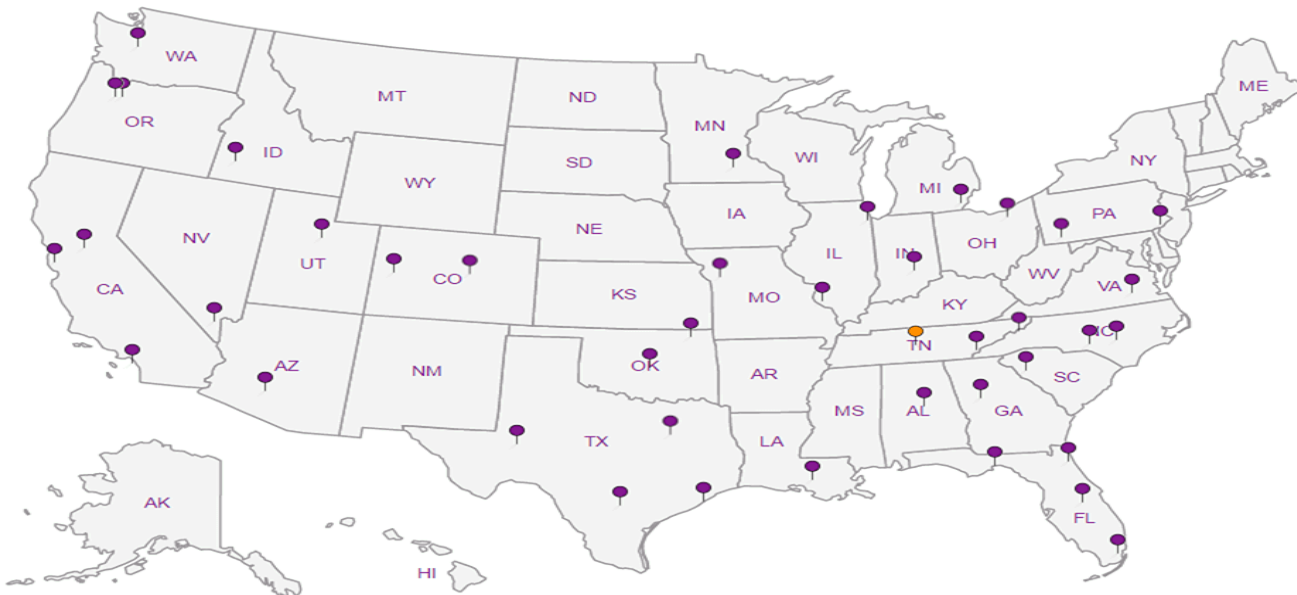
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Report to:  
**Bill Haldeman**

Email To: bhaldean@pesenv.com

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: 206-529-3980  
Fax: 206-529-3985

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Immediately

Same Day Five Day  
Next Day 5 Day (Rad Only)  
Two Day 10 Day (Rad Only)  
Three Day

Date Results Needed

Packed on Ice: N  Y  X

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

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



L# **917455** 917460

**G142**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202** ~~P60694~~

TSR: **110 - Brian Ford**

PB: **5-31-17**

Shipped Via: **FedEx Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	* Alk, Cl, NO3, SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb-HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
MW121-062017	GRAB	GW	20	6/20/17	1145	9	X	X	X	X	X	X
MWD-062017 MW-D-062017	↓	GW	20	↓	1255	6	X	X	X	X	X	X
MW-9-062017	↓	GW	21.5	↓	1345	6	X	X	X	X	X	X
MW131-062017	↓	GW	48.8	↓	1550	11	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

Remarks	Sample # (lab only)
-01	-01-118
-02	-02-119
-03	-03-121
-04	-04-122

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - Waste Water  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7372 1955 0649**

Sample Receipt Checklist:  
COC Seal Present/Intact:  NP  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  
*[Signature]*

Date: **6/20/17**  
Time: **1710**

Received by: (Signature)

Trip Blank Received: Yes (No)  
HCl/MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: **7.1°C** Bottles Received: **7011 32**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)

Date: **06-21-2017** Time: **0845**

Hold: \_\_\_\_\_  
Condition: **NCF**



**PES Environmental, Inc. - WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information

Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

12265 Lebonce Rd  
MADISON, TN 37122  
Phone: 615-758-5858  
Phone: 800-767-5859  
Fax: 615-758-5859



LN 917455 917461  
**G142**

Acctnum: PESENVSWA  
Template: T124201  
Prelogin: P603202 ~~P6046~~  
TSR: 110 - Brian Ford  
PB: 5-31-17  
Shipped Via: **FedEX Ground**

Report to  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

Rush? (Lab MUST Be Notified)

\_\_\_ Same Day \_\_\_ Five Day  
\_\_\_ Next Day \_\_\_ 5 Day (Rad Only)  
\_\_\_ Two Day \_\_\_ 10 Day (Rad Only)  
\_\_\_ Three Day

Quote #

Date Results Needed

Immediately

Packed on Ice: N \_\_\_ Y X

No  
of  
Entrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Entrs	*Alk,Cl,NO3,SO4 250mlHDPE-NoPres	NWTPH GX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
MW12-062017	GRAB	GW	20	6/10/17	1145	9	X	X	X	X	X	X
MW14-062017	↓	GW	20	↓	1255	6	X	X	X	X	X	X
MW19-062017	↓	GW	21.5	↓	1345	6	X	X	X	X	X	X
MW131-062017	↓	GW	48.81	↓	1550	11	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

Remarks	Sample # (lab only)
-01	+01-119
-02	-02-119
-03	-03-125
-04	-04-125

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
\_\_\_ UPS \_\_\_ FedEx \_\_\_ Courier

Tracking # **7372 1955 UG49**

Sample Receipt Checklist  
 COC Seal Present/Intact: \_\_\_ Y \_\_\_ N  
 COC Signed/Accurate: \_\_\_ Y \_\_\_ N  
 Bottles sealed/Intact: \_\_\_ Y \_\_\_ N  
 Correct bottles used: \_\_\_ Y \_\_\_ N  
 Sufficient volume sent: \_\_\_ Y \_\_\_ N  
 If Applicable  
 VOA Zero Headspace: \_\_\_ Y \_\_\_ N  
 Preservation Correct/Checked: \_\_\_ Y \_\_\_ N

Relinquished by: (Signature)

Date: **6/20/17**  
Time: **17:10**

Received by: (Signature)

Trip Blank Received: Yes (No)  
HCL/MeOH  
TBK

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: \_\_\_\_\_ °C  
Bottles Received: **2.1c + 111 32**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)

Date: **06-21-2017**  
Time: **0845**

Hold: \_\_\_\_\_  
Condition: **NCF 10**

## MEMORANDUM

**TO:** Project File **DATE:** July 25, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 20, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L917461

---

Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 20, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L917461. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L917461 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.1 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

Samples were analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

## Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for acrylonitrile, bromomethane, chloromethane, 1,2-dibromo-3-chloropropane, dibromomethane, 1,2-dichloroethane, trans-1,4-dichloro-2-butene, di-isopropyl ether, 2-Butanone (MEK), 4-methyl-2-pentanone (MIBK), methyl tert-butyl ether, naphthalene, 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, and vinyl acetate were identified by the laboratory for all associated samples with analytical batch WG993152 (analyzed on June 27, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for above mentioned compounds are estimated and qualified (UJ or J).**

## Method Blank Results

### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

### *USEPA Method 6020:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blank at or above the RDL.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of alkalinity was measured in the method blank associated with analytical batch WG992368 (date of analysis is June 26, 2017) between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity sample results are significantly greater than the detection in the blank.
- A low level of TOC was detected in the method blank associated with analytical batch WG992075 (date of analysis is June 23, 2017) between the RDL and MDL. No action

was necessary as associated alkalinity sample results are significantly greater than the detection in the blank.

### **Trip Blank Results**

*USEPA Method 8260C and NWTPH-Gx:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate samples were performed on a non-client sample and on sample MW131-062017 within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate samples were performed on non-client sample and sample within the analytical batches. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on a non-client sample and on sample MW121-062017 within the analytical batch. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

#### *USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

#### *NWTPH-Gx Method:*

The surrogate recovery results for the sample, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

#### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following exceptions:

- LCSD (Batch WG993152) spike compound (acrylonitrile) percent recovery is slightly below laboratory acceptance criteria and qualified by the laboratory (J4). No action was taken on this basis as LCS percent recovery results are within.
- LCS/LCSD (Batch WG993152) spike compound (1,2,3-trichloropropane) percent recoveries are also slightly below laboratory acceptance criteria and qualified by the laboratory (J4). **Spike compound, 1,2,3-trichloropropane, was not detected in associated samples and all associated results are estimated (UJ) due to slightly low LCS/LCSD recoveries.**

#### *NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

#### *Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

#### *USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water.

#### *General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

### **Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*NWTPH-Gx Method:*

MS/MSD analysis analyses were not performed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analyses were not performed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on a non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS/MSD analyses were performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water with the following discussion:

- MS/MSD sulfate percent recoveries and RPD result associated with Batch WG993019 are outside of laboratory acceptance criteria. No action was taken as the matrix spike was performed on a non-client sample and LCS/LCSD results are within acceptance criteria.

*EPA Method 9060A:* MS/MSD analysis was performed on sample MW121-062017 within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.





Collected date/time: 06/20/17 11:45

L917461

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	930000		2710	20000	1	06/27/2017 08:53	WG992368

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	13300		51.9	1000	1	06/21/2017 22:15	WG991594
Nitrate	U		22.7	100	1	06/21/2017 22:15	WG991594
Sulfate	61200	J ↓	7740	500000	100	06/28/2017 19:56	WG993019

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	16500		102	1000	1	06/23/2017 12:32	WG992075

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	27100		15.0	100	1	06/23/2017 08:12	WG991760
Manganese	11000		0.500	10.0	2	06/23/2017 10:41	WG991760

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	2140		1.44	3.39	5	06/22/2017 15:22	WG992024
Ethane	8.88		0.296	1.29	1	06/22/2017 14:17	WG991514
Ethene	U		0.422	1.27	1	06/22/2017 14:17	WG991514

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 14:54	WG993152
Acrylonitrile	U	VJ JO J4	0.873	5.00	1	06/27/2017 14:54	WG993152
Benzene	0.186	J ↓	0.0896	0.500	1	06/27/2017 14:54	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:54	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:54	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:54	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 14:54	WG993152
Bromomethane	U	VJ JO	0.157	2.50	1	06/27/2017 14:54	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:54	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:54	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:54	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:54	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:54	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:54	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:54	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 14:54	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 14:54	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 14:54	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:54	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:54	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 14:54	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:54	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 14:54	WG993152

OC 7/25/17



Collected date/time: 06/20/17 11:45

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:54	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:54	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:54	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloroethane	U	US JO	0.108	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:54	WG993152
cis-1,2-Dichloroethene	1.13		0.0933	0.500	1	06/27/2017 14:54	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:54	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:54	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:54	WG993152
trans-1,4-Dichloro-2-butene	U	US JO	0.257	5.00	1	06/27/2017 14:54	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:54	WG993152
Di-isopropyl ether	U	US JO	0.0924	0.500	1	06/27/2017 14:54	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:54	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:54	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:54	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:54	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:54	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:54	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:54	WG993152
2-Butanone (MEK)	U	US JO	1.28	5.00	1	06/27/2017 14:54	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:54	WG993152
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 14:54	WG993152
Methyl tert-butyl ether	U	US JO	0.102	0.500	1	06/27/2017 14:54	WG993152
Naphthalene	U	US JO	0.174	2.50	1	06/27/2017 14:54	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:54	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:54	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:54	WG993152
1,1,2,2-Tetrachloroethane	U	US JO	0.130	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:54	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:54	WG993152
Toluene	0.774		0.412	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trichlorobenzene	U	US JO	0.164	0.500	1	06/27/2017 14:54	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:54	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:54	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 14:54	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:54	WG993152
1,2,3-Trichloropropane	U	US JO J4	0.247	2.50	1	06/27/2017 14:54	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:54	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:54	WG993152
Vinyl acetate	U	US JO	0.645	5.00	1	06/27/2017 14:54	WG993152
Vinyl chloride	7.68		0.118	0.500	1	06/27/2017 14:54	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:54	WG993152
(S) Toluene-d8	109	✓		80.0-120		06/27/2017 14:54	WG993152
(S) Dibromofluoromethane	102			76.0-123		06/27/2017 14:54	WG993152
(S) 4-Bromofluorobenzene	99.5	✓		80.0-120		06/27/2017 14:54	WG993152

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

Sc 7/12/17

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:33	WG991811
(S) o,o,a-Trifluorotoluene(FID)	93.3			77.0-122		06/22/2017 18:33	WG991811

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 15:11	WG993152
Acrylonitrile	U	UJ	0.873	5.00	1	06/27/2017 15:11	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:11	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:11	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:11	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:11	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:11	WG993152
Bromomethane	U	UJ	0.157	2.50	1	06/27/2017 15:11	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:11	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:11	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:11	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:11	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:11	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:11	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:11	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:11	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:11	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:11	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:11	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:11	WG993152
1,2-Dibromo-3-Chloropropane	U	UJ	0.325	2.50	1	06/27/2017 15:11	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:11	WG993152
Dibromomethane	U	UJ	0.117	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:11	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:11	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:11	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloroethane	U	UJ	0.108	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:11	WG993152
cis-1,2-Dichloroethene	0.211	J	0.0933	0.500	1	06/27/2017 15:11	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:11	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:11	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:11	WG993152
trans-1,4-Dichloro-2-butene	U	UJ	0.257	5.00	1	06/27/2017 15:11	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:11	WG993152
Di-isopropyl ether	U	UJ	0.0924	0.500	1	06/27/2017 15:11	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:11	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:11	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:11	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:11	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:11	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:11	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:11	WG993152
2-Butanone (MEK)	U	UJ	1.28	5.00	1	06/27/2017 15:11	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:11	WG993152

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

Ac 9/12/5/17



Collected date/time: 06/20/17 12:55

L917461

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:11	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 15:11	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 15:11	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:11	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 15:11	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:11	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 15:11	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:11	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:11	WG993152
Toluene	0.548		0.412	0.500	1	06/27/2017 15:11	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 15:11	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:11	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:11	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:11	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:11	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:11	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 15:11	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:11	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:11	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:11	WG993152
Vinyl acetate	U	VJ JO	0.645	5.00	1	06/27/2017 15:11	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:11	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:11	WG993152
(S) Toluene-d8	110	/		80.0-120		06/27/2017 15:11	WG993152
(S) Dibromofluoromethane	101	/		76.0-123		06/27/2017 15:11	WG993152
(S) 4-Bromofluorobenzene	99.0	/		80.0-120		06/27/2017 15:11	WG993152

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

JC  
7/25/17



Collected date/time: 06/20/17 13:45

L917461

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:55	WG991811
(S) o,o,a-Trifluorotoluene(FID)	91.9			77.0-122		06/22/2017 18:55	WG991811

Cp

Tc

Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 15:28	WG993152
Acrylonitrile	U	VJ JO J4	0.873	5.00	1	06/27/2017 15:28	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:28	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:28	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:28	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:28	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Bromomethane	U	VJ JO	0.157	2.50	1	06/27/2017 15:28	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:28	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:28	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:28	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:28	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:28	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:28	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:28	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:28	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:28	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:28	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:28	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:28	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 15:28	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:28	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:28	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:28	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:28	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:28	WG993152
cis-1,2-Dichloroethene	0.214	J J	0.0933	0.500	1	06/27/2017 15:28	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:28	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:28	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:28	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 15:28	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:28	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 15:28	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:28	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:28	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:28	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:28	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:28	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:28	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:28	WG993152
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	06/27/2017 15:28	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:28	WG993152

Cn

Si

Qc

Gl

Al

Sc

*Je Atlas 11/7*

MW-9-062017

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/20/17 13:45

L917461

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:28	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 15:28	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 15:28	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:28	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 15:28	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:28	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:28	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:28	WG993152
Toluene	0.562		0.412	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 15:28	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:28	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:28	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:28	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 15:28	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:28	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:28	WG993152
Vinyl acetate	U	VJ JO	0.645	5.00	1	06/27/2017 15:28	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:28	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:28	WG993152
(S) Toluene-d8	112	/		80.0-120		06/27/2017 15:28	WG993152
(S) Dibromofluoromethane	102	/		76.0-123		06/27/2017 15:28	WG993152
(S) 4-Bromofluorobenzene	100	/		80.0-120		06/27/2017 15:28	WG993152

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

*Jc 7/25/17*



Collected date/time: 06/20/17 15:50

L917461

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	1050000		2710	20000	1	06/27/2017 09:00	WG992368

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	122000		260	5000	5	06/21/2017 22:35	WG991594
Nitrate	U		22.7	100	1	06/21/2017 22:25	WG991594
Sulfate	724	J	77.4	5000	1	06/21/2017 22:25	WG991594

<sup>3</sup> Ss

<sup>4</sup> Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	10800		102	1000	1	06/23/2017 13:02	WG992075

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	7420		15.0	100	1	06/23/2017 08:16	WG991760
Manganese	1010		0.250	5.00	1	06/23/2017 08:16	WG991760

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 19:17	WG991811
(S) o,a,a-Trifluorotoluene(FID)	92.7			77.0-122		06/22/2017 19:17	WG991811

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	10700		5.74	13.6	20	06/22/2017 15:29	WG992024
Ethane	U		0.296	1.29	1	06/22/2017 14:19	WG991514
Ethene	332		0.422	1.27	1	06/22/2017 14:19	WG991514

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		5.25	125	5	06/29/2017 01:29	WG993152
Acrylonitrile	U	VS JO J4	4.36	25.0	5	06/29/2017 01:29	WG993152
Benzene	U		0.448	2.50	5	06/29/2017 01:29	WG993152
Bromobenzene	U		0.665	2.50	5	06/29/2017 01:29	WG993152
Bromodichloromethane	U		0.400	2.50	5	06/29/2017 01:29	WG993152
Bromochloromethane	U		0.725	2.50	5	06/29/2017 01:29	WG993152
Bromoform	U		0.930	2.50	5	06/29/2017 01:29	WG993152
Bromomethane	U	VS JO	0.785	12.5	5	06/29/2017 01:29	WG993152
n-Butylbenzene	U		0.715	2.50	5	06/29/2017 01:29	WG993152
sec-Butylbenzene	U		0.670	2.50	5	06/29/2017 01:29	WG993152
tert-Butylbenzene	U		0.915	2.50	5	06/29/2017 01:29	WG993152
Carbon disulfide	U		0.505	2.50	5	06/29/2017 01:29	WG993152
Carbon tetrachloride	U		0.795	2.50	5	06/29/2017 01:29	WG993152
Chlorobenzene	U		0.700	2.50	5	06/29/2017 01:29	WG993152
Chlorodibromomethane	U		0.640	2.50	5	06/29/2017 01:29	WG993152
Chloroethane	U		0.705	12.5	5	06/29/2017 01:29	WG993152

QC 7/25/17



Collected date/time: 06/20/17 15:50

L917461

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloroform	U		0.430	2.50	5	06/29/2017 01:29	WG993152
Chloromethane	U		0.765	6.25	5	06/29/2017 01:29	WG993152
2-Chlorotoluene	U		0.555	2.50	5	06/29/2017 01:29	WG993152
4-Chlorotoluene	U		0.486	2.50	5	06/29/2017 01:29	WG993152
1,2-Dibromo-3-Chloropropane	U	<i>UJ</i> <u>JO</u>	1.62	12.5	5	06/29/2017 01:29	WG993152
1,2-Dibromoethane	U		0.965	2.50	5	06/29/2017 01:29	WG993152
Dibromomethane	U	<i>UJ</i> <u>JO</u>	0.585	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichlorobenzene	U		0.505	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichlorobenzene	U		0.650	2.50	5	06/29/2017 01:29	WG993152
1,4-Dichlorobenzene	U		0.605	2.50	5	06/29/2017 01:29	WG993152
Dichlorodifluoromethane	U		0.635	12.5	5	06/29/2017 01:29	WG993152
1,1-Dichloroethane	U		0.570	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloroethane	U	<i>UJ</i> <u>JO</u>	0.540	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloroethene	U		0.940	2.50	5	06/29/2017 01:29	WG993152
cis-1,2-Dichloroethene	2.55		0.466	2.50	5	06/29/2017 01:29	WG993152
trans-1,2-Dichloroethene	U		0.760	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloropropane	U		0.950	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloropropene	U		0.640	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichloropropane	U		0.735	5.00	5	06/29/2017 01:29	WG993152
cis-1,3-Dichloropropene	U		0.488	2.50	5	06/29/2017 01:29	WG993152
trans-1,3-Dichloropropene	U		1.11	2.50	5	06/29/2017 01:29	WG993152
trans-1,4-Dichloro-2-butene	U	<i>UJ</i> <u>JO</u>	1.28	25.0	5	06/29/2017 01:29	WG993152
2,2-Dichloropropane	U		0.464	2.50	5	06/29/2017 01:29	WG993152
Di-isopropyl ether	U	<i>UJ</i> <u>JO</u>	0.462	2.50	5	06/29/2017 01:29	WG993152
Ethylbenzene	U		0.790	2.50	5	06/29/2017 01:29	WG993152
Hexachloro-1,3-butadiene	U		0.785	5.00	5	06/29/2017 01:29	WG993152
2-Hexanone	U		3.78	25.0	5	06/29/2017 01:29	WG993152
n-Hexane	U		1.52	25.0	5	06/29/2017 01:29	WG993152
Iodomethane	U		1.88	50.0	5	06/29/2017 01:29	WG993152
Isopropylbenzene	U		0.630	2.50	5	06/29/2017 01:29	WG993152
p-Isopropyltoluene	U		0.690	2.50	5	06/29/2017 01:29	WG993152
2-Butanone (MEK)	U	<i>UJ</i> <u>JO</u>	6.40	25.0	5	06/29/2017 01:29	WG993152
Methylene Chloride	U		5.35	12.5	5	06/29/2017 01:29	WG993152
4-Methyl-2-pentanone (MIBK)	U		4.12	25.0	5	06/29/2017 01:29	WG993152
Methyl tert-butyl ether	U	<i>UJ</i> <u>JO</u>	0.510	2.50	5	06/29/2017 01:29	WG993152
Naphthalene	U	<i>UJ</i> <u>JO</u>	0.870	12.5	5	06/29/2017 01:29	WG993152
n-Propylbenzene	U		0.810	2.50	5	06/29/2017 01:29	WG993152
Styrene	U		0.585	2.50	5	06/29/2017 01:29	WG993152
1,1,1,2-Tetrachloroethane	U		0.600	2.50	5	06/29/2017 01:29	WG993152
1,1,2,2-Tetrachloroethane	U	<i>UJ</i> <u>JO</u>	0.650	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.820	2.50	5	06/29/2017 01:29	WG993152
Tetrachloroethene	U		0.995	2.50	5	06/29/2017 01:29	WG993152
Toluene	U		2.06	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trichlorobenzene	U	<i>UJ</i> <u>JO</u>	0.820	2.50	5	06/29/2017 01:29	WG993152
1,2,4-Trichlorobenzene	U		1.78	2.50	5	06/29/2017 01:29	WG993152
1,1,1-Trichloroethane	U		0.470	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichloroethane	U		0.930	2.50	5	06/29/2017 01:29	WG993152
Trichloroethene	U		0.765	2.50	5	06/29/2017 01:29	WG993152
Trichlorofluoromethane	U		0.650	12.5	5	06/29/2017 01:29	WG993152
1,2,3-Trichloropropane	U	<i>UJ</i> <u>JO J4</u>	1.24	12.5	5	06/29/2017 01:29	WG993152
1,2,4-Trimethylbenzene	U		0.615	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trimethylbenzene	U		0.370	2.50	5	06/29/2017 01:29	WG993152
1,3,5-Trimethylbenzene	U		0.620	2.50	5	06/29/2017 01:29	WG993152
Vinyl acetate	U	<i>UJ</i> <u>JO</u>	3.22	25.0	5	06/29/2017 01:29	WG993152
Vinyl chloride	435		0.590	2.50	5	06/29/2017 01:29	WG993152
Xylenes, Total	U		1.58	7.50	5	06/29/2017 01:29	WG993152

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*dc 7/25/17*





Collected date/time: 06/20/17 15:50

L917461

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	111 ✓			80.0-120		06/29/2017 01:29 ✓	<a href="#">WG993152</a>
(S) Dibromofluoromethane	104 ✓			76.0-123		06/29/2017 01:29	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	101 ✓			80.0-120		06/29/2017 01:29	<a href="#">WG993152</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

*Jc*  
*9/25/17*



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	930000		2710	20000	1	06/27/2017 08:53	WG992368

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	13300		51.9	1000	1	06/21/2017 22:15	WG991594
Nitrate	U		22.7	100	1	06/21/2017 22:15	WG991594
Sulfate	61200	J ↓	7740	500000	100	06/28/2017 19:56	WG993019

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	16500		102	1000	1	06/23/2017 12:32	WG992075

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	27100		15.0	100	1	06/23/2017 08:12	WG991760
Manganese	11000		0.500	10.0	2	06/23/2017 10:41	WG991760

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	2140		1.44	3.39	5	06/22/2017 15:22	WG992024
Ethane	8.88		0.296	1.29	1	06/22/2017 14:17	WG991514
Ethene	U		0.422	1.27	1	06/22/2017 14:17	WG991514

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 14:54	WG993152
Acrylonitrile	U	VJ JO J4	0.873	5.00	1	06/27/2017 14:54	WG993152
Benzene	0.186	J ↓	0.0896	0.500	1	06/27/2017 14:54	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 14:54	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 14:54	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 14:54	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 14:54	WG993152
Bromomethane	U	VJ JO	0.157	2.50	1	06/27/2017 14:54	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 14:54	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 14:54	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 14:54	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 14:54	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 14:54	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 14:54	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 14:54	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 14:54	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 14:54	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 14:54	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 14:54	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 14:54	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 14:54	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 14:54	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 14:54	WG993152

OC 7/25/17



Collected date/time: 06/20/17 11:45

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 14:54	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 14:54	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 14:54	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloroethane	U	US JO	0.108	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 14:54	WG993152
cis-1,2-Dichloroethene	1.13		0.0933	0.500	1	06/27/2017 14:54	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 14:54	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 14:54	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 14:54	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 14:54	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 14:54	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 14:54	WG993152
trans-1,4-Dichloro-2-butene	U	US JO	0.257	5.00	1	06/27/2017 14:54	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 14:54	WG993152
Di-isopropyl ether	U	US JO	0.0924	0.500	1	06/27/2017 14:54	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 14:54	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 14:54	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 14:54	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 14:54	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 14:54	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 14:54	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 14:54	WG993152
2-Butanone (MEK)	U	US JO	1.28	5.00	1	06/27/2017 14:54	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 14:54	WG993152
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 14:54	WG993152
Methyl tert-butyl ether	U	US JO	0.102	0.500	1	06/27/2017 14:54	WG993152
Naphthalene	U	US JO	0.174	2.50	1	06/27/2017 14:54	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 14:54	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 14:54	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 14:54	WG993152
1,1,2,2-Tetrachloroethane	U	US JO	0.130	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 14:54	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 14:54	WG993152
Toluene	0.774		0.412	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trichlorobenzene	U	US JO	0.164	0.500	1	06/27/2017 14:54	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 14:54	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 14:54	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 14:54	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 14:54	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 14:54	WG993152
1,2,3-Trichloropropane	U	US JO J4	0.247	2.50	1	06/27/2017 14:54	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 14:54	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 14:54	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 14:54	WG993152
Vinyl acetate	U	US JO	0.645	5.00	1	06/27/2017 14:54	WG993152
Vinyl chloride	7.68		0.118	0.500	1	06/27/2017 14:54	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 14:54	WG993152
(S) Toluene-d8	109	✓		80.0-120		06/27/2017 14:54	WG993152
(S) Dibromofluoromethane	102			76.0-123		06/27/2017 14:54	WG993152
(S) 4-Bromofluorobenzene	99.5	✓		80.0-120		06/27/2017 14:54	WG993152

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

Sc 7/12/17



Collected date/time: 06/20/17 12:55

L917461

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:33	WG991811
(S) o,a,a-Trifluorotoluene(FID)	93.3			77.0-122		06/22/2017 18:33	WG991811

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 15:11	WG993152
Acrylonitrile	U	UJ	0.873	5.00	1	06/27/2017 15:11	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:11	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:11	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:11	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:11	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:11	WG993152
Bromomethane	U	UJ	0.157	2.50	1	06/27/2017 15:11	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:11	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:11	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:11	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:11	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:11	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:11	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:11	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:11	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:11	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:11	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:11	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:11	WG993152
1,2-Dibromo-3-Chloropropane	U	UJ	0.325	2.50	1	06/27/2017 15:11	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:11	WG993152
Dibromomethane	U	UJ	0.117	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:11	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:11	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:11	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloroethane	U	UJ	0.108	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:11	WG993152
cis-1,2-Dichloroethene	0.211	J	0.0933	0.500	1	06/27/2017 15:11	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:11	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:11	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:11	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:11	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:11	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:11	WG993152
trans-1,4-Dichloro-2-butene	U	UJ	0.257	5.00	1	06/27/2017 15:11	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:11	WG993152
Di-isopropyl ether	U	UJ	0.0924	0.500	1	06/27/2017 15:11	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:11	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:11	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:11	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:11	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:11	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:11	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:11	WG993152
2-Butanone (MEK)	U	UJ	1.28	5.00	1	06/27/2017 15:11	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:11	WG993152

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

Ac 9/12/5/17



Collected date/time: 06/20/17 12:55

L917461

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:11	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 15:11	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 15:11	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:11	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 15:11	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:11	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 15:11	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:11	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:11	WG993152
Toluene	0.548		0.412	0.500	1	06/27/2017 15:11	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 15:11	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:11	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:11	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:11	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:11	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:11	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 15:11	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:11	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:11	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:11	WG993152
Vinyl acetate	U	VJ JO	0.645	5.00	1	06/27/2017 15:11	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:11	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:11	WG993152
(S) Toluene-d8	110	/		80.0-120		06/27/2017 15:11	WG993152
(S) Dibromofluoromethane	101	/		76.0-123		06/27/2017 15:11	WG993152
(S) 4-Bromofluorobenzene	99.0	/		80.0-120		06/27/2017 15:11	WG993152

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

Je  
7/25/17



Collected date/time: 06/20/17 13:45

L917461

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 18:55	WG991811
(S) o,o,a-Trifluorotoluene(FID)	91.9			77.0-122		06/22/2017 18:55	WG991811

Cp

Tc

Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	06/27/2017 15:28	WG993152
Acrylonitrile	U	VJ JO J4	0.873	5.00	1	06/27/2017 15:28	WG993152
Benzene	U		0.0896	0.500	1	06/27/2017 15:28	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 15:28	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 15:28	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 15:28	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Bromomethane	U	VJ JO	0.157	2.50	1	06/27/2017 15:28	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 15:28	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 15:28	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 15:28	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 15:28	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 15:28	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 15:28	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 15:28	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 15:28	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 15:28	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 15:28	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 15:28	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 15:28	WG993152
1,2-Dibromo-3-Chloropropane	U	VJ JO	0.325	2.50	1	06/27/2017 15:28	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 15:28	WG993152
Dibromomethane	U	VJ JO	0.117	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 15:28	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 15:28	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 15:28	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloroethane	U	VJ JO	0.108	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 15:28	WG993152
cis-1,2-Dichloroethene	0.214	J J	0.0933	0.500	1	06/27/2017 15:28	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 15:28	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 15:28	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 15:28	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 15:28	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 15:28	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 15:28	WG993152
trans-1,4-Dichloro-2-butene	U	VJ JO	0.257	5.00	1	06/27/2017 15:28	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 15:28	WG993152
Di-isopropyl ether	U	VJ JO	0.0924	0.500	1	06/27/2017 15:28	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 15:28	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 15:28	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 15:28	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 15:28	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 15:28	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 15:28	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 15:28	WG993152
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	06/27/2017 15:28	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 15:28	WG993152

Cn

Si

Qc

Gl

Al

Sc

*Je Atlas 11/7*

MW-9-062017

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/20/17 13:45

L917461

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 15:28	WG993152
Methyl tert-butyl ether	U	VJ JO	0.102	0.500	1	06/27/2017 15:28	WG993152
Naphthalene	U	VJ JO	0.174	2.50	1	06/27/2017 15:28	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 15:28	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 15:28	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 15:28	WG993152
1,1,2,2-Tetrachloroethane	U	VJ JO	0.130	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 15:28	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 15:28	WG993152
Toluene	0.562		0.412	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trichlorobenzene	U	VJ JO	0.164	0.500	1	06/27/2017 15:28	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 15:28	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 15:28	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 15:28	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 15:28	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 15:28	WG993152
1,2,3-Trichloropropane	U	VJ JO J4	0.247	2.50	1	06/27/2017 15:28	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 15:28	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 15:28	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 15:28	WG993152
Vinyl acetate	U	VJ JO	0.645	5.00	1	06/27/2017 15:28	WG993152
Vinyl chloride	U		0.118	0.500	1	06/27/2017 15:28	WG993152
Xylenes, Total	U		0.316	1.50	1	06/27/2017 15:28	WG993152
(S) Toluene-d8	112	/		80.0-120		06/27/2017 15:28	WG993152
(S) Dibromofluoromethane	102	/		76.0-123		06/27/2017 15:28	WG993152
(S) 4-Bromofluorobenzene	100	/		80.0-120		06/27/2017 15:28	WG993152

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

*Jc 7/25/17*



Collected date/time: 06/20/17 15:50

L917461

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	1050000		2710	20000	1	06/27/2017 09:00	WG992368

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	122000		260	5000	5	06/21/2017 22:35	WG991594
Nitrate	U		22.7	100	1	06/21/2017 22:25	WG991594
Sulfate	724	J	77.4	5000	1	06/21/2017 22:25	WG991594

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	10800		102	1000	1	06/23/2017 13:02	WG992075

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	7420		15.0	100	1	06/23/2017 08:16	WG991760
Manganese	1010		0.250	5.00	1	06/23/2017 08:16	WG991760

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/22/2017 19:17	WG991811
(S) o,a,a-Trifluorotoluene(FID)	92.7			77.0-122		06/22/2017 19:17	WG991811

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	10700		5.74	13.6	20	06/22/2017 15:29	WG992024
Ethane	U		0.296	1.29	1	06/22/2017 14:19	WG991514
Ethene	332		0.422	1.27	1	06/22/2017 14:19	WG991514

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		5.25	125	5	06/29/2017 01:29	WG993152
Acrylonitrile	U	VS JO J4	4.36	25.0	5	06/29/2017 01:29	WG993152
Benzene	U		0.448	2.50	5	06/29/2017 01:29	WG993152
Bromobenzene	U		0.665	2.50	5	06/29/2017 01:29	WG993152
Bromodichloromethane	U		0.400	2.50	5	06/29/2017 01:29	WG993152
Bromochloromethane	U		0.725	2.50	5	06/29/2017 01:29	WG993152
Bromoform	U		0.930	2.50	5	06/29/2017 01:29	WG993152
Bromomethane	U	VS JO	0.785	12.5	5	06/29/2017 01:29	WG993152
n-Butylbenzene	U		0.715	2.50	5	06/29/2017 01:29	WG993152
sec-Butylbenzene	U		0.670	2.50	5	06/29/2017 01:29	WG993152
tert-Butylbenzene	U		0.915	2.50	5	06/29/2017 01:29	WG993152
Carbon disulfide	U		0.505	2.50	5	06/29/2017 01:29	WG993152
Carbon tetrachloride	U		0.795	2.50	5	06/29/2017 01:29	WG993152
Chlorobenzene	U		0.700	2.50	5	06/29/2017 01:29	WG993152
Chlorodibromomethane	U		0.640	2.50	5	06/29/2017 01:29	WG993152
Chloroethane	U		0.705	12.5	5	06/29/2017 01:29	WG993152

JC 7/25/17





Collected date/time: 06/20/17 15:50

L917461

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloroform	U		0.430	2.50	5	06/29/2017 01:29	WG993152
Chloromethane	U		0.765	6.25	5	06/29/2017 01:29	WG993152
2-Chlorotoluene	U		0.555	2.50	5	06/29/2017 01:29	WG993152
4-Chlorotoluene	U		0.486	2.50	5	06/29/2017 01:29	WG993152
1,2-Dibromo-3-Chloropropane	U	<i>UJ</i> <u>JO</u>	1.62	12.5	5	06/29/2017 01:29	WG993152
1,2-Dibromoethane	U		0.965	2.50	5	06/29/2017 01:29	WG993152
Dibromomethane	U	<i>UJ</i> <u>JO</u>	0.585	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichlorobenzene	U		0.505	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichlorobenzene	U		0.650	2.50	5	06/29/2017 01:29	WG993152
1,4-Dichlorobenzene	U		0.605	2.50	5	06/29/2017 01:29	WG993152
Dichlorodifluoromethane	U		0.635	12.5	5	06/29/2017 01:29	WG993152
1,1-Dichloroethane	U		0.570	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloroethane	U	<i>UJ</i> <u>JO</u>	0.540	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloroethene	U		0.940	2.50	5	06/29/2017 01:29	WG993152
cis-1,2-Dichloroethene	2.55		0.466	2.50	5	06/29/2017 01:29	WG993152
trans-1,2-Dichloroethene	U		0.760	2.50	5	06/29/2017 01:29	WG993152
1,2-Dichloropropane	U		0.950	2.50	5	06/29/2017 01:29	WG993152
1,1-Dichloropropene	U		0.640	2.50	5	06/29/2017 01:29	WG993152
1,3-Dichloropropane	U		0.735	5.00	5	06/29/2017 01:29	WG993152
cis-1,3-Dichloropropene	U		0.488	2.50	5	06/29/2017 01:29	WG993152
trans-1,3-Dichloropropene	U		1.11	2.50	5	06/29/2017 01:29	WG993152
trans-1,4-Dichloro-2-butene	U	<i>UJ</i> <u>JO</u>	1.28	25.0	5	06/29/2017 01:29	WG993152
2,2-Dichloropropane	U		0.464	2.50	5	06/29/2017 01:29	WG993152
Di-isopropyl ether	U	<i>UJ</i> <u>JO</u>	0.462	2.50	5	06/29/2017 01:29	WG993152
Ethylbenzene	U		0.790	2.50	5	06/29/2017 01:29	WG993152
Hexachloro-1,3-butadiene	U		0.785	5.00	5	06/29/2017 01:29	WG993152
2-Hexanone	U		3.78	25.0	5	06/29/2017 01:29	WG993152
n-Hexane	U		1.52	25.0	5	06/29/2017 01:29	WG993152
Iodomethane	U		1.88	50.0	5	06/29/2017 01:29	WG993152
Isopropylbenzene	U		0.630	2.50	5	06/29/2017 01:29	WG993152
p-Isopropyltoluene	U		0.690	2.50	5	06/29/2017 01:29	WG993152
2-Butanone (MEK)	U	<i>UJ</i> <u>JO</u>	6.40	25.0	5	06/29/2017 01:29	WG993152
Methylene Chloride	U		5.35	12.5	5	06/29/2017 01:29	WG993152
4-Methyl-2-pentanone (MIBK)	U		4.12	25.0	5	06/29/2017 01:29	WG993152
Methyl tert-butyl ether	U	<i>UJ</i> <u>JO</u>	0.510	2.50	5	06/29/2017 01:29	WG993152
Naphthalene	U	<i>UJ</i> <u>JO</u>	0.870	12.5	5	06/29/2017 01:29	WG993152
n-Propylbenzene	U		0.810	2.50	5	06/29/2017 01:29	WG993152
Styrene	U		0.585	2.50	5	06/29/2017 01:29	WG993152
1,1,1,2-Tetrachloroethane	U		0.600	2.50	5	06/29/2017 01:29	WG993152
1,1,2,2-Tetrachloroethane	U	<i>UJ</i> <u>JO</u>	0.650	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.820	2.50	5	06/29/2017 01:29	WG993152
Tetrachloroethene	U		0.995	2.50	5	06/29/2017 01:29	WG993152
Toluene	U		2.06	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trichlorobenzene	U	<i>UJ</i> <u>JO</u>	0.820	2.50	5	06/29/2017 01:29	WG993152
1,2,4-Trichlorobenzene	U		1.78	2.50	5	06/29/2017 01:29	WG993152
1,1,1-Trichloroethane	U		0.470	2.50	5	06/29/2017 01:29	WG993152
1,1,2-Trichloroethane	U		0.930	2.50	5	06/29/2017 01:29	WG993152
Trichloroethene	U		0.765	2.50	5	06/29/2017 01:29	WG993152
Trichlorofluoromethane	U		0.650	12.5	5	06/29/2017 01:29	WG993152
1,2,3-Trichloropropane	U	<i>UJ</i> <u>JO J4</u>	1.24	12.5	5	06/29/2017 01:29	WG993152
1,2,4-Trimethylbenzene	U		0.615	2.50	5	06/29/2017 01:29	WG993152
1,2,3-Trimethylbenzene	U		0.370	2.50	5	06/29/2017 01:29	WG993152
1,3,5-Trimethylbenzene	U		0.620	2.50	5	06/29/2017 01:29	WG993152
Vinyl acetate	U	<i>UJ</i> <u>JO</u>	3.22	25.0	5	06/29/2017 01:29	WG993152
Vinyl chloride	435		0.590	2.50	5	06/29/2017 01:29	WG993152
Xylenes, Total	U		1.58	7.50	5	06/29/2017 01:29	WG993152

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*dc 7/25/17*



Collected date/time: 06/20/17 15:50

L917461

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	111 ✓			80.0-120		06/29/2017 01:29 ✓	<a href="#">WG993152</a>
(S) Dibromofluoromethane	104 ✓			76.0-123		06/29/2017 01:29	<a href="#">WG993152</a>
(S) 4-Bromofluorobenzene	101 ✓			80.0-120		06/29/2017 01:29	<a href="#">WG993152</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

*Jc*  
*9/25/17*

## PES Environmental, Inc.- WA

Sample Delivery Group: L917742  
Samples Received: 06/22/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
MW128-062117 L917742-01	<b>5</b>	
SMW-3-062117 L917742-04	<b>7</b>	
<b>Qc: Quality Control Summary</b>	<b>9</b>	<b>5</b> Sr
Wet Chemistry by Method 2320 B-2011	<b>9</b>	
Wet Chemistry by Method 9056A	<b>10</b>	<b>6</b> Qc
Wet Chemistry by Method 9060A	<b>12</b>	
Metals (ICPMS) by Method 6020A	<b>13</b>	<b>7</b> Gl
Volatile Organic Compounds (GC) by Method RSK175	<b>14</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>16</b>	<b>8</b> Al
<b>Gl: Glossary of Terms</b>	<b>24</b>	<b>9</b> Sc
<b>Al: Accreditations &amp; Locations</b>	<b>25</b>	
<b>Sc: Chain of Custody</b>	<b>26</b>	

# SAMPLE SUMMARY



## MW128-062117 L917742-01 GW

Collected by Shannon McKernan  
 Collected date/time 06/21/17 12:25  
 Received date/time 06/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG993343	1	06/28/17 19:21	06/28/17 19:21	MCG
Wet Chemistry by Method 9056A	WG991886	1	06/22/17 21:06	06/22/17 21:06	DR
Wet Chemistry by Method 9060A	WG992872	1	06/26/17 19:04	06/26/17 19:04	SJM
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:12	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG992015	1	06/23/17 12:17	06/23/17 12:17	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG992377	25	06/23/17 14:24	06/23/17 14:24	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/27/17 16:36	06/27/17 16:36	ACG
Volatile Organic Compounds (GC/MS) by Method 8260C	WG993152	1	06/29/17 01:12	06/29/17 01:12	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## SMW-3-062117 L917742-04 GW

Collected by Shannon McKernan  
 Collected date/time 06/21/17 14:55  
 Received date/time 06/22/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	1	07/04/17 07:58	07/04/17 07:58	JHH



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

Brian Ford  
Technical Service Representative

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



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	1050000		2710	20000	1	06/28/2017 19:21	<a href="#">WG993343</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	24600		51.9	1000	1	06/22/2017 21:06	<a href="#">WG991886</a>
Nitrate	U		22.7	100	1	06/22/2017 21:06	<a href="#">WG991886</a>
Sulfate	U		77.4	5000	1	06/22/2017 21:06	<a href="#">WG991886</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	7810		102	1000	1	06/26/2017 19:04	<a href="#">WG992872</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	23000		15.0	100	1	06/28/2017 13:12	<a href="#">WG993124</a>
Manganese	704		0.250	5.00	1	06/28/2017 13:12	<a href="#">WG993124</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	19600		7.18	17.0	25	06/23/2017 14:24	<a href="#">WG992377</a>
Ethane	33.4		0.296	1.29	1	06/23/2017 12:17	<a href="#">WG992015</a>
Ethene	45.1		0.422	1.27	1	06/23/2017 12:17	<a href="#">WG992015</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.07	J	1.05	25.0	1	06/27/2017 16:36	<a href="#">WG993152</a>
Acrylonitrile	U	JO J4	0.873	5.00	1	06/27/2017 16:36	<a href="#">WG993152</a>
Benzene	3.84		0.0896	0.500	1	06/29/2017 01:12	<a href="#">WG993152</a>
Bromobenzene	U		0.133	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Bromochloromethane	U		0.145	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Bromoform	U		0.186	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Bromomethane	U	JO	0.157	2.50	1	06/27/2017 16:36	<a href="#">WG993152</a>
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Carbon disulfide	U		0.101	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Chlorobenzene	U		0.140	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Chloroethane	U		0.141	2.50	1	06/27/2017 16:36	<a href="#">WG993152</a>
Chloroform	U		0.0860	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Chloromethane	U		0.153	1.25	1	06/27/2017 16:36	<a href="#">WG993152</a>
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
1,2-Dibromo-3-Chloropropane	U	JO	1.325	2.50	1	06/27/2017 16:36	<a href="#">WG993152</a>
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>
Dibromomethane	U	JO	0.117	0.500	1	06/27/2017 16:36	<a href="#">WG993152</a>



Collected date/time: 06/21/17 12:25

L917742

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
	ug/l		ug/l	ug/l		date / time		
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 16:36	WG993152	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 16:36	WG993152	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 16:36	WG993152	
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 16:36	WG993152	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 16:36	WG993152	
1,2-Dichloroethane	U	JO	0.108	0.500	1	06/27/2017 16:36	WG993152	4 Cn
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 16:36	WG993152	
cis-1,2-Dichloroethene	109		0.0933	0.500	1	06/27/2017 16:36	WG993152	
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 16:36	WG993152	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 16:36	WG993152	
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 16:36	WG993152	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 16:36	WG993152	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 16:36	WG993152	
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 16:36	WG993152	7 Gl
trans-1,4-Dichloro-2-butene	U	JO	0.257	5.00	1	06/27/2017 16:36	WG993152	
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 16:36	WG993152	8 Al
Di-isopropyl ether	U	JO	0.0924	0.500	1	06/27/2017 16:36	WG993152	
Ethylbenzene	U		0.158	0.500	1	06/27/2017 16:36	WG993152	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 16:36	WG993152	9 Sc
2-Hexanone	U		0.757	5.00	1	06/27/2017 16:36	WG993152	
n-Hexane	U		0.305	5.00	1	06/27/2017 16:36	WG993152	
Iodomethane	U		0.377	10.0	1	06/27/2017 16:36	WG993152	
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 16:36	WG993152	
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 16:36	WG993152	
2-Butanone (MEK)	U	JO	1.28	5.00	1	06/27/2017 16:36	WG993152	
Methylene Chloride	U		1.07	2.50	1	06/27/2017 16:36	WG993152	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 16:36	WG993152	
Methyl tert-butyl ether	U	JO	0.102	0.500	1	06/27/2017 16:36	WG993152	
Naphthalene	U	JO	0.174	2.50	1	06/27/2017 16:36	WG993152	
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 16:36	WG993152	
Styrene	U		0.117	0.500	1	06/27/2017 16:36	WG993152	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 16:36	WG993152	
1,1,2,2-Tetrachloroethane	U	JO	0.130	0.500	1	06/27/2017 16:36	WG993152	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 16:36	WG993152	
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 16:36	WG993152	
Toluene	0.541		0.412	0.500	1	06/29/2017 01:12	WG993152	
1,2,3-Trichlorobenzene	U	JO	0.164	0.500	1	06/27/2017 16:36	WG993152	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 16:36	WG993152	
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 16:36	WG993152	
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 16:36	WG993152	
Trichloroethene	U		0.153	0.500	1	06/27/2017 16:36	WG993152	
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 16:36	WG993152	
1,2,3-Trichloropropane	U	JO J4	0.247	2.50	1	06/27/2017 16:36	WG993152	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 16:36	WG993152	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 16:36	WG993152	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 16:36	WG993152	
Vinyl acetate	U	JO	0.645	5.00	1	06/27/2017 16:36	WG993152	
Vinyl chloride	195		0.118	0.500	1	06/27/2017 16:36	WG993152	
Xylenes, Total	U		0.316	1.50	1	06/29/2017 01:12	WG993152	
(S) Toluene-d8	111			80.0-120		06/27/2017 16:36	WG993152	
(S) Toluene-d8	110			80.0-120		06/29/2017 01:12	WG993152	
(S) Dibromofluoromethane	99.8			76.0-123		06/27/2017 16:36	WG993152	
(S) Dibromofluoromethane	103			76.0-123		06/29/2017 01:12	WG993152	
(S) 4-Bromofluorobenzene	104			80.0-120		06/29/2017 01:12	WG993152	
(S) 4-Bromofluorobenzene	99.3			80.0-120		06/27/2017 16:36	WG993152	





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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/04/2017 07:58	WG995407
Acrylonitrile	U		0.873	5.00	1	07/04/2017 07:58	WG995407
Benzene	U		0.0896	0.500	1	07/04/2017 07:58	WG995407
Bromobenzene	U		0.133	0.500	1	07/04/2017 07:58	WG995407
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 07:58	WG995407
Bromochloromethane	U		0.145	0.500	1	07/04/2017 07:58	WG995407
Bromoform	U		0.186	0.500	1	07/04/2017 07:58	WG995407
Bromomethane	U		0.157	2.50	1	07/04/2017 07:58	WG995407
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 07:58	WG995407
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 07:58	WG995407
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 07:58	WG995407
Carbon disulfide	U		0.101	0.500	1	07/04/2017 07:58	WG995407
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 07:58	WG995407
Chlorobenzene	U		0.140	0.500	1	07/04/2017 07:58	WG995407
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 07:58	WG995407
Chloroethane	U		0.141	2.50	1	07/04/2017 07:58	WG995407
Chloroform	U		0.0860	0.500	1	07/04/2017 07:58	WG995407
Chloromethane	U		0.153	1.25	1	07/04/2017 07:58	WG995407
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 07:58	WG995407
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 07:58	WG995407
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 07:58	WG995407
1,2-Dibromoethane	U	JO J4	0.193	0.500	1	07/04/2017 07:58	WG995407
Dibromomethane	U		0.117	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 07:58	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 07:58	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 07:58	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 07:58	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 07:58	WG995407
1,1-Dichloroethene	U		0.188	0.500	1	07/04/2017 07:58	WG995407
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/04/2017 07:58	WG995407
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 07:58	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 07:58	WG995407
1,3-Dichloropropane	U	JO J4	0.147	1.00	1	07/04/2017 07:58	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 07:58	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 07:58	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 07:58	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 07:58	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 07:58	WG995407
Ethylbenzene	U	JO J4	0.158	0.500	1	07/04/2017 07:58	WG995407
Hexachloro-1,3-butadiene	U	JO	0.157	1.00	1	07/04/2017 07:58	WG995407
2-Hexanone	U	JO	0.757	5.00	1	07/04/2017 07:58	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 07:58	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 07:58	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 07:58	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 07:58	WG995407
2-Butanone (MEK)	U	JO	1.28	5.00	1	07/04/2017 07:58	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 07:58	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 07:58	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 07:58	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 07:58	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 07:58	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 07:58	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 07:58	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 07:58	WG995407

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Tetrachloroethene	U	<u>JO</u>	0.199	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Toluene	U		0.412	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,2,4-Trichlorobenzene	U	<u>JO</u>	0.355	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Trichloroethene	U		0.153	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Vinyl acetate	U	<u>JO J4</u>	0.645	5.00	1	07/04/2017 07:58	<a href="#">WG995407</a>
Vinyl chloride	U		0.118	0.500	1	07/04/2017 07:58	<a href="#">WG995407</a>
Xylenes, Total	U		0.316	1.50	1	07/04/2017 07:58	<a href="#">WG995407</a>
(S) Toluene-d8	102			80.0-120		07/04/2017 07:58	<a href="#">WG995407</a>
(S) Dibromofluoromethane	114			76.0-123		07/04/2017 07:58	<a href="#">WG995407</a>
(S) 4-Bromofluorobenzene	110			80.0-120		07/04/2017 07:58	<a href="#">WG995407</a>

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



Method Blank (MB)

(MB) R3229683-3 06/28/17 17:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Alkalinity	3500	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L917713-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917713-01 06/29/17 07:47 • (DUP) R3229683-7 06/29/17 07:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	89100	85000	1	5.00		20

L917760-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917760-01 06/28/17 20:22 • (DUP) R3229683-6 06/28/17 20:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	264000	265000	1	0.000		20

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

(LCS) R3229683-4 06/28/17 18:52 • (LCSD) R3229683-5 06/28/17 20:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	105000	108000	105	108	85.0-115			3.00	20



Method Blank (MB)

(MB) R3228120-1 06/22/17 06:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	67.1	J	51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L917718-02 Original Sample (OS) • Duplicate (DUP)

(OS) L917718-02 06/22/17 13:39 • (DUP) R3228120-4 06/22/17 13:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	8700	8600	1	1		15
Nitrate	1680	1720	1	3		15
Sulfate	79300	79300	1	0		15

L917757-02 Original Sample (OS) • Duplicate (DUP)

(OS) L917757-02 06/22/17 16:53 • (DUP) R3228120-6 06/22/17 17:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	16400	16400	1	1		15
Nitrate	ND	0.000	1	0		15
Sulfate	36700	36700	1	0		15

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

(LCS) R3228120-2 06/22/17 06:40 • (LCSD) R3228120-3 06/22/17 06:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39300	39300	98	98	80-120			0	15
Nitrate	8000	8060	8050	101	101	80-120			0	15
Sulfate	40000	39400	39400	99	98	80-120			0	15

L917718-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L917718-04 06/22/17 14:24 • (MS) R3228120-5 06/22/17 14:39

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	6280	54600	97	1	80-120	
Nitrate	5000	237	5000	95	1	80-120	



L917766-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917766-05 06/22/17 18:52 • (MS) R3228120-7 06/22/17 19:07 • (MSD) R3228120-8 06/22/17 19:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	2830	51800	52000	98	98	1	80-120			0	15
Nitrate	5000	U	4840	4850	97	97	1	80-120			0	15
Sulfate	50000	30100	77700	77900	95	96	1	80-120			0	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3228925-1 06/26/17 10:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L917515-07 Original Sample (OS) • Duplicate (DUP)

(OS) L917515-07 06/26/17 11:54 • (DUP) R3228925-3 06/26/17 12:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	458	460	1	0	J	20

L917766-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917766-04 06/26/17 20:17 • (DUP) R3228925-7 06/26/17 20:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	863	869	1	1	J	20

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

(LCS) R3228925-2 06/26/17 11:38 • (LCSD) R3228925-4 06/26/17 13:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	70500	72800	94	97	85-115			3	20



Method Blank (MB)

(MB) R3229499-1 06/28/17 11:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3229499-2 06/28/17 12:03 • (LCSD) R3229499-3 06/28/17 12:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Iron	5000	5100	5150	102	103	80-120			1	20
Manganese	50.0	46.0	46.4	92	93	80-120			1	20

5 Sr

6 Qc

L917294-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917294-12 06/28/17 12:10 • (MS) R3229499-5 06/28/17 12:17 • (MSD) R3229499-6 06/28/17 12:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron	5000	57.6	5120	5080	101	100	1	75-125			1	20
Manganese	50.0	3010	3060	3040	118	67	1	75-125		V	1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3228217-1 06/23/17 11:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

L917718-06 Original Sample (OS) • Duplicate (DUP)

(OS) L917718-06 06/23/17 12:15 • (DUP) R3228217-2 06/23/17 12:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

5 Sr

6 Qc

L917785-11 Original Sample (OS) • Duplicate (DUP)

(OS) L917785-11 06/23/17 12:30 • (DUP) R3228217-3 06/23/17 12:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

7 Gl

8 Al

9 Sc

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

(LCS) R3228217-4 06/23/17 12:59 • (LCSD) R3228217-5 06/23/17 13:03

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethane	129	123	122	95.1	95.0	70.0-130			0.130	20
Ethene	127	117	116	92.3	91.6	70.0-130			0.670	20





Method Blank (MB)

(MB) R3228294-1 06/23/17 14:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methane	1.77		0.287	0.678

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L917851-02 Original Sample (OS) • Duplicate (DUP)

(OS) L917851-02 06/23/17 14:35 • (DUP) R3228294-2 06/23/17 15:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	3570	3460	5	2.85		20

7 Gl

8 Al

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

(LCS) R3228294-3 06/23/17 15:11 • (LCSD) R3228294-4 06/23/17 15:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	67.8	74.3	68.0	110	100	70.0-130			8.91	20

9 Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3229094-3 06/27/17 12:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	112			80.0-120
(S) Dibromofluoromethane	99.5			76.0-123
(S) 4-Bromofluorobenzene	98.0			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	104	103	83.6	82.1	10.0-160			1.74	23
Acrylonitrile	125	80.1	73.8	64.1	59.1	60.0-142	J4	J4	8.18	20
Benzene	25.0	22.8	23.3	91.2	93.1	69.0-123			2.11	20
Bromobenzene	25.0	23.5	23.3	94.0	93.2	79.0-120			0.800	20
Bromodichloromethane	25.0	21.2	21.9	84.8	87.5	76.0-120			3.17	20
Bromochloromethane	25.0	22.1	21.9	88.4	87.8	76.0-122			0.740	20
Bromoform	25.0	20.5	19.8	82.0	79.2	67.0-132			3.48	20
Bromomethane	25.0	16.6	18.9	66.4	75.6	18.0-160			13.0	20
n-Butylbenzene	25.0	25.3	26.0	101	104	72.0-126			2.75	20
sec-Butylbenzene	25.0	24.9	25.2	99.6	101	74.0-121			1.15	20
tert-Butylbenzene	25.0	24.6	24.9	98.3	99.6	75.0-122			1.24	20
Carbon disulfide	25.0	25.1	26.0	101	104	55.0-127			3.48	20
Carbon tetrachloride	25.0	20.4	21.6	81.7	86.4	63.0-122			5.61	20
Chlorobenzene	25.0	25.7	26.0	103	104	79.0-121			1.14	20
Chlorodibromomethane	25.0	23.5	22.8	94.1	91.1	75.0-125			3.28	20
Chloroethane	25.0	21.6	23.0	86.4	91.9	47.0-152			6.13	20
Chloroform	25.0	20.9	21.3	83.7	85.3	72.0-121			1.97	20
Chloromethane	25.0	19.9	20.9	79.6	83.5	48.0-139			4.73	20
2-Chlorotoluene	25.0	24.4	24.8	97.7	99.3	74.0-122			1.55	20
4-Chlorotoluene	25.0	25.1	24.9	100	99.6	79.0-120			0.800	20
1,2-Dibromo-3-Chloropropane	25.0	16.8	16.0	67.3	64.1	64.0-127			4.86	20
1,2-Dibromoethane	25.0	21.6	21.4	86.5	85.7	77.0-123			0.980	20
Dibromomethane	25.0	19.9	20.4	79.4	81.8	78.0-120			2.93	20
1,2-Dichlorobenzene	25.0	25.2	25.3	101	101	80.0-120			0.450	20
1,3-Dichlorobenzene	25.0	25.6	25.2	103	101	72.0-123			1.55	20
1,4-Dichlorobenzene	25.0	25.3	25.2	101	101	77.0-120			0.310	20
Dichlorodifluoromethane	25.0	21.2	22.1	84.7	88.5	49.0-155			4.50	20
1,1-Dichloroethane	25.0	21.7	22.1	86.9	88.5	70.0-126			1.73	20
1,2-Dichloroethane	25.0	19.3	19.3	77.2	77.3	67.0-126			0.110	20
1,1-Dichloroethene	25.0	24.9	26.5	99.5	106	64.0-129			6.29	20
cis-1,2-Dichloroethene	25.0	22.1	22.6	88.5	90.4	73.0-120			2.17	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.2	71.0-121			2.89	20
1,2-Dichloropropane	25.0	22.4	22.8	89.6	91.2	75.0-125			1.76	20
1,1-Dichloropropene	25.0	22.3	22.9	89.3	91.7	71.0-129			2.67	20
1,3-Dichloropropane	25.0	22.0	21.8	87.8	87.3	80.0-121			0.540	20
cis-1,3-Dichloropropene	25.0	23.5	23.6	93.9	94.3	79.0-123			0.440	20
trans-1,3-Dichloropropene	25.0	22.1	21.8	88.6	87.4	74.0-127			1.35	20
trans-1,4-Dichloro-2-butene	25.0	15.3	13.9	61.3	55.5	55.0-134			9.91	20
2,2-Dichloropropane	25.0	20.7	22.1	82.9	88.3	60.0-125			6.28	20
Di-isopropyl ether	25.0	19.3	19.4	77.3	77.4	59.0-133			0.190	20

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



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

(LCS) R3229094-1 06/27/17 10:55 • (LCSD) R3229094-2 06/27/17 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	26.3	27.0	105	108	77.0-120			2.44	20
Hexachloro-1,3-butadiene	25.0	21.8	23.7	87.3	94.9	64.0-131			8.38	20
2-Hexanone	125	106	106	84.5	84.8	58.0-147			0.330	20
n-Hexane	25.0	21.7	22.9	86.6	91.7	56.0-124			5.72	20
Iodomethane	125	112	119	89.7	95.0	57.0-140			5.82	20
Isopropylbenzene	25.0	24.9	25.3	99.6	101	75.0-120			1.78	20
p-Isopropyltoluene	25.0	24.9	25.4	99.6	102	74.0-126			1.93	20
2-Butanone (MEK)	125	80.7	79.5	64.5	63.6	37.0-158			1.44	20
Methylene Chloride	25.0	22.8	22.9	91.1	91.8	66.0-121			0.710	20
4-Methyl-2-pentanone (MIBK)	125	83.9	81.4	67.1	65.1	59.0-143			2.94	20
Methyl tert-butyl ether	25.0	18.2	17.9	72.7	71.5	64.0-123			1.68	20
Naphthalene	25.0	16.8	16.2	67.2	65.0	62.0-128			3.40	20
n-Propylbenzene	25.0	25.0	25.3	100	101	79.0-120			1.10	20
Styrene	25.0	25.4	25.5	102	102	78.0-124			0.340	20
1,1,1,2-Tetrachloroethane	25.0	23.9	24.1	95.5	96.4	75.0-122			0.940	20
1,1,2,2-Tetrachloroethane	25.0	19.3	18.1	77.1	72.3	71.0-122			6.51	20
1,1,2-Trichlorotrifluoroethane	25.0	24.6	25.7	98.2	103	61.0-136			4.46	20
Tetrachloroethene	25.0	26.8	27.3	107	109	70.0-127			1.89	20
Toluene	25.0	25.8	26.5	103	106	77.0-120			2.79	20
1,2,3-Trichlorobenzene	25.0	19.2	18.8	76.9	75.0	61.0-133			2.43	20
1,2,4-Trichlorobenzene	25.0	23.2	23.2	93.0	92.8	69.0-129			0.220	20
1,1,1-Trichloroethane	25.0	22.4	22.8	89.5	91.1	68.0-122			1.71	20
1,1,2-Trichloroethane	25.0	22.2	21.9	88.7	87.4	78.0-120			1.45	20
Trichloroethene	25.0	23.5	24.2	94.0	96.8	78.0-120			3.01	20
Trichlorofluoromethane	25.0	22.3	23.4	89.4	93.8	56.0-137			4.82	20
1,2,3-Trichloropropane	25.0	17.6	17.1	70.4	68.4	72.0-124	<u>J4</u>	<u>J4</u>	2.92	20
1,2,4-Trimethylbenzene	25.0	24.9	25.2	99.6	101	75.0-120			1.22	20
1,2,3-Trimethylbenzene	25.0	25.4	25.2	102	101	75.0-120			0.700	20
1,3,5-Trimethylbenzene	25.0	24.7	25.1	98.6	101	75.0-120			1.93	20
Vinyl acetate	125	84.3	80.9	67.4	64.7	46.0-160			4.15	20
Vinyl chloride	25.0	21.5	23.2	86.2	92.7	64.0-133			7.26	20
Xylenes, Total	75.0	76.8	79.3	102	106	77.0-120			3.20	20
(S) Toluene-d8				113	114	80.0-120				
(S) Dibromofluoromethane				94.6	95.2	76.0-123				
(S) 4-Bromofluorobenzene				99.1	98.3	80.0-120				

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230933-3 07/04/17 07:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
2-Chlorotoluene	U		0.111	0.500
Chloroform	U		0.0860	0.500
4-Chlorotoluene	U		0.0972	0.500
Chloromethane	U		0.153	1.25
Dibromomethane	U		0.117	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,1-Dichloropropene	U		0.128	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500
cis-1,3-Dichloropropene	U		0.0976	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230933-3 07/04/17 07:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
trans-1,3-Dichloropropene	U		0.222	0.500
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
2-Hexanone	U		0.757	5.00
Isopropylbenzene	U		0.126	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
1,2,3-Trichloropropane	U		0.247	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
Xylenes, Total	U		0.316	1.50
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	116			76.0-123
(S) 4-Bromofluorobenzene	107			80.0-120

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



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

(LCS) R3230933-1 07/04/17 05:05 • (LCSD) R3230933-2 07/04/17 05:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	125	140	144	112	115	60.0-142			2.36	20
Bromobenzene	25.0	22.5	22.0	89.9	88.1	79.0-120			1.98	20
2-Chlorotoluene	25.0	22.6	22.5	90.6	90.0	74.0-122			0.610	20
4-Chlorotoluene	25.0	22.0	22.0	88.1	88.1	79.0-120			0.0500	20
Dibromomethane	25.0	24.3	24.5	97.2	97.9	78.0-120			0.700	20
1,1-Dichloropropene	25.0	25.3	25.6	101	102	71.0-129			1.32	20
1,3-Dichloropropane	25.0	19.2	19.4	76.8	77.4	80.0-121	J4	J4	0.790	20
Acetone	125	125	143	99.8	114	10.0-160			13.5	23
Benzene	25.0	25.4	25.8	102	103	69.0-123			1.30	20
trans-1,4-Dichloro-2-butene	25.0	21.8	21.5	87.0	86.0	55.0-134			1.22	20
2,2-Dichloropropane	25.0	23.5	24.4	94.1	97.7	60.0-125			3.74	20
Bromodichloromethane	25.0	24.1	23.8	96.4	95.2	76.0-120			1.32	20
Di-isopropyl ether	25.0	27.3	27.8	109	111	59.0-133			1.71	20
Bromochloromethane	25.0	25.1	25.4	100	102	76.0-122			1.39	20
Bromoform	25.0	25.7	25.4	103	102	67.0-132			1.02	20
Hexachloro-1,3-butadiene	25.0	19.1	20.0	76.3	80.2	64.0-131			4.97	20
Bromomethane	25.0	29.0	28.2	116	113	18.0-160			2.74	20
n-Hexane	25.0	24.6	24.2	98.4	96.8	56.0-124			1.67	20
Iodomethane	125	125	128	100	103	57.0-140			2.47	20
n-Butylbenzene	25.0	21.6	22.0	86.6	88.0	72.0-126			1.68	20
sec-Butylbenzene	25.0	22.2	22.5	88.9	90.1	74.0-121			1.34	20
tert-Butylbenzene	25.0	22.0	22.1	87.8	88.5	75.0-122			0.810	20
Carbon disulfide	25.0	27.7	28.6	111	115	55.0-127			3.48	20
Carbon tetrachloride	25.0	24.5	24.7	98.1	98.7	63.0-122			0.650	20
Chlorobenzene	25.0	20.0	20.9	80.0	83.6	79.0-121			4.36	20
Chlorodibromomethane	25.0	20.6	21.1	82.5	84.2	75.0-125			2.09	20
Chloroethane	25.0	23.6	23.9	94.3	95.5	47.0-152			1.26	20
Chloroform	25.0	25.6	26.1	102	104	72.0-121			1.95	20
1,1,1,2-Tetrachloroethane	25.0	21.9	23.2	87.8	92.9	75.0-122			5.65	20
Chloromethane	25.0	22.5	23.2	90.1	92.9	48.0-139			3.07	20
1,2-Dibromo-3-Chloropropane	25.0	23.4	25.0	93.5	100	64.0-127			6.69	20
1,2-Dibromoethane	25.0	18.6	19.2	74.4	76.8	77.0-123	J4	J4	3.23	20
1,2-Dichlorobenzene	25.0	21.7	21.8	86.8	87.4	80.0-120			0.630	20
1,3-Dichlorobenzene	25.0	21.6	21.8	86.3	87.2	72.0-123			1.04	20
1,4-Dichlorobenzene	25.0	21.4	21.6	85.5	86.4	77.0-120			1.03	20
Dichlorodifluoromethane	25.0	23.8	23.5	95.2	93.9	49.0-155			1.38	20
1,2,3-Trichloropropane	25.0	24.3	23.6	97.1	94.5	72.0-124			2.68	20
1,1-Dichloroethane	25.0	26.8	27.5	107	110	70.0-126			2.70	20
1,2,3-Trimethylbenzene	25.0	22.2	22.6	88.8	90.3	75.0-120			1.65	20
1,2-Dichloroethane	25.0	25.5	25.8	102	103	67.0-126			1.14	20

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





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

(LCS) R3230933-1 07/04/17 05:05 • (LCSD) R3230933-2 07/04/17 05:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethene	25.0	25.1	26.0	100	104	64.0-129			3.40	20
cis-1,2-Dichloroethene	25.0	25.1	25.7	100	103	73.0-120			2.21	20
Vinyl acetate	125	51.9	54.9	41.5	43.9	46.0-160	J4	J4	5.55	20
trans-1,2-Dichloroethene	25.0	24.9	25.7	99.5	103	71.0-121			3.33	20
1,2-Dichloropropane	25.0	25.4	25.5	101	102	75.0-125			0.550	20
Xylenes, Total	75.0	61.7	64.8	82.3	86.4	77.0-120			4.90	20
cis-1,3-Dichloropropene	25.0	21.3	22.2	85.3	88.7	79.0-123			3.96	20
trans-1,3-Dichloropropene	25.0	21.4	21.6	85.8	86.4	74.0-127			0.710	20
Ethylbenzene	25.0	19.2	20.1	76.7	80.5	77.0-120	J4		4.77	20
2-Hexanone	125	96.5	101	77.2	80.5	58.0-147			4.16	20
Isopropylbenzene	25.0	21.5	21.8	85.9	87.1	75.0-120			1.43	20
p-Isopropyltoluene	25.0	21.7	21.9	86.6	87.5	74.0-126			0.970	20
2-Butanone (MEK)	125	92.4	97.5	73.9	78.0	37.0-158			5.34	20
Methylene Chloride	25.0	25.7	26.1	103	105	66.0-121			1.51	20
4-Methyl-2-pentanone (MIBK)	125	106	110	84.8	88.0	59.0-143			3.77	20
Methyl tert-butyl ether	25.0	26.5	26.5	106	106	64.0-123			0.210	20
Naphthalene	25.0	21.1	22.2	84.3	88.9	62.0-128			5.32	20
n-Propylbenzene	25.0	21.8	21.9	87.4	87.4	79.0-120			0.0200	20
Styrene	25.0	22.1	21.9	88.4	87.6	78.0-124			0.890	20
1,1,2,2-Tetrachloroethane	25.0	21.6	21.5	86.4	86.2	71.0-122			0.280	20
Tetrachloroethene	25.0	19.3	20.4	77.0	81.4	70.0-127			5.53	20
Toluene	25.0	20.6	21.4	82.5	85.7	77.0-120			3.87	20
1,1,2-Trichlorotrifluoroethane	25.0	26.7	26.9	107	107	61.0-136			0.700	20
1,2,3-Trichlorobenzene	25.0	19.7	20.8	78.7	83.1	61.0-133			5.47	20
1,2,4-Trichlorobenzene	25.0	18.7	20.0	74.8	79.9	69.0-129			6.51	20
1,1,1-Trichloroethane	25.0	25.1	25.5	100	102	68.0-122			1.43	20
1,1,2-Trichloroethane	25.0	20.4	20.0	81.5	79.9	78.0-120			2.09	20
Trichloroethene	25.0	24.9	24.9	99.7	99.4	78.0-120			0.280	20
Trichlorofluoromethane	25.0	23.4	23.8	93.5	95.3	56.0-137			1.95	20
1,2,4-Trimethylbenzene	25.0	22.7	22.9	90.7	91.7	75.0-120			1.10	20
1,3,5-Trimethylbenzene	25.0	22.2	22.4	88.6	89.5	75.0-120			1.02	20
Vinyl chloride	25.0	24.2	24.8	96.8	99.1	64.0-133			2.32	20
(S) Toluene-d8				100	104	80.0-120				
(S) Dibromofluoromethane				115	116	76.0-123				
(S) 4-Bromofluorobenzene				109	107	80.0-120				

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



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.
V	The sample concentration is too high to evaluate accurate spike recoveries.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

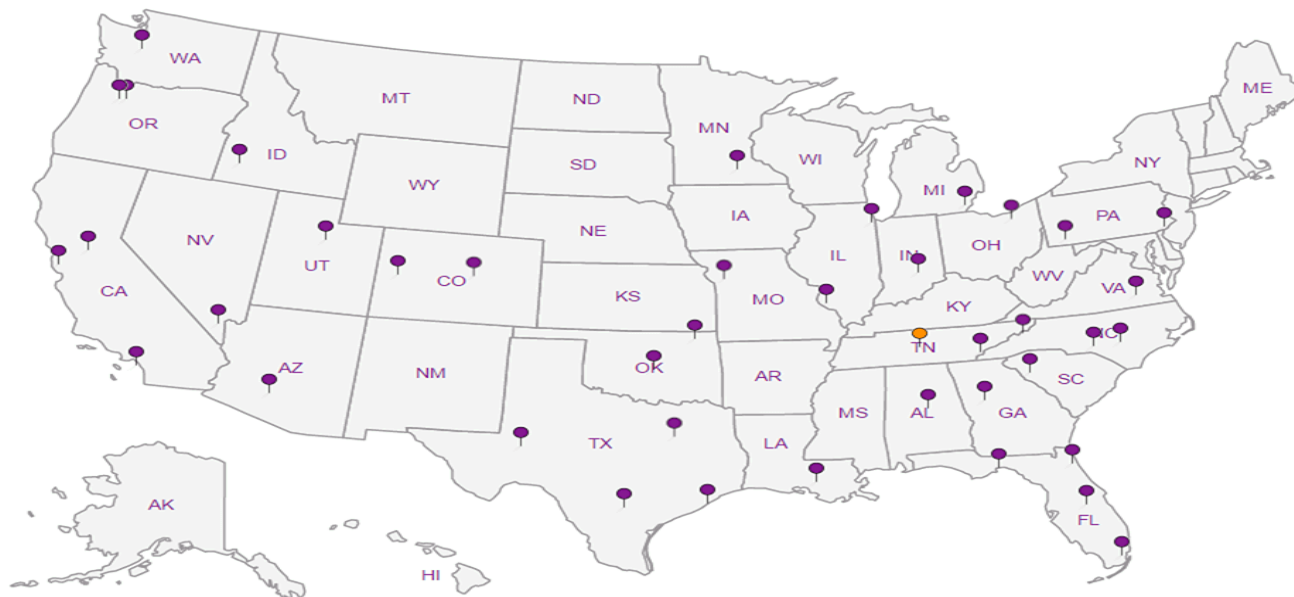
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:

Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

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



L# 91772  
**D065**

Acctnum: **PESENVSWA**  
Template: **T124201**  
Prelogin: **P603202**  
TSR: **110 - Brian Ford**  
PB: 5-31-17

Shipped Via: **FedEX Ground**

Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #

Date Results Needed

No.  
of  
Cntrs

Immediately  
Packed on Ice  **N**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	* Alk, Cl, NO3, SO4 250ml/HDPE-NoPres	NWTPHGX 40ml/Amb HCl	TOC 250ml/Amb-HCl	Total Fe Mn 6020 250ml/HDPE-HNO3	low level 8260C 40ml/Amb-HCl	low level RSK175 40ml/Amb-HCl	Remarks	Sample # (lab only)
MW129-062117	GRAB	GW	65	6/21/17	1225	9	X	X	X	X	X	X		01
SMW-3-062117	↓	GW	14	↓	1455	4	X							-04
		GW												
		GW												
		GW												
		GW												
		GW												
		GW												
		GW												
		GW												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
 UPS  FedEx  Courier

Tracking # 7372 1955 0650

**Sample Receipt Checklist**

COC Seal Present/Intact:  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) *[Signature]*

Date: 6/21/17

Time: 1545

Received by: (Signature)

Trip Blank Received: Yes  No   
HCL/MeOH  
TBH

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 2.5° C Bottles Received: 13

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature) *[Signature]*

Date: 6-22-17 Time: 0845

Hold: Condition: NO / OK

**Matt Shacklock**

**ESC Lab Sciences**  
**Non-Conformance Form**

<b>Login #917742</b>	<b>Client: PESENVSWA</b>	<b>Date:6/22/17</b>	<b>Evaluated by:Matt S</b>
----------------------	--------------------------	---------------------	----------------------------

**Non-Conformance (check applicable items)**

<b>Sample Integrity</b>	<b>Chain of Custody Clarification</b>	<b>If Broken Container:</b>
Parameter(s) past holding time <input checked="" type="checkbox"/>	Login Clarification Needed	
Improper temperature	Chain of custody is incomplete	Insufficient packing material around container
Improper container type	Please specify Metals requested.	Insufficient packing material inside cooler
Improper preservation	Please specify TCLP requested.	Improper handling by carrier (FedEx / UPS / Courier)
Insufficient sample volume.	Received additional samples not listed on coc.	Sample was frozen
Sample is biphasic.	Sample ids on containers do not match ids on coc	Container lid not intact
Vials received with headspace.	Trip Blank not received.	<b>If no Chain of Custody:</b>
Broken container	Client did not "X" analysis.	Received by:
Broken container:	Chain of Custody is missing	Date/Time:
Sufficient sample remains		Temp./Cont. Rec./pH:
		Carrier:
		Tracking#

**Login Comments: for SMW-3-062117 - we received 4 vials HCL and client is requesting ALK, CL, NO3, SO4**

<b>Client informed by:</b>	<input type="checkbox"/> Call	<input type="checkbox"/> Email	<input checked="" type="checkbox"/> Voice Mail	<b>Date:06/22/17</b>	<b>Time:1500</b>
<b>TSR Initials:bjf</b>	<b>Client Contact: Bill Haldeman</b>				

**Login Instructions:**

Log SMW-3-062117 for V8260LLC only.

**This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.**

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_\_ of \_\_\_\_



YOUR LAB OF CHOICE

12065 Lebanon Rd  
Mount Juliet, TN 37122  
Phone: 615-758-5858  
FAX: 615-758-5859  
Fax: 615-758-5859



Report to:  
**Bill Haldeman**

Email To: bhaldean@pesenv.com

Project Description: **American Linen Supply**

City/State Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

Rush? (Lab MUST Be Notified)  
Same Day \_\_\_\_\_ Five Day \_\_\_\_\_  
Next Day \_\_\_\_\_ 3 Day (Rad Only) \_\_\_\_\_  
Two Day \_\_\_\_\_ 10 Day (Rad Only) \_\_\_\_\_  
Three Day \_\_\_\_\_

Quote #

Date Results Needed

Immediately Packed on Ice: **N**

No of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cnts	*Alk,Cl,NO3,SO4 250mlHDPE-NoPres	NWTPHGX 40mlAmb-HCI	TOC 250mlAmb-HCI	Total Fe Mn 6020 250mlHDPE-HNO3	low level B260C 40mlAmb-HCI	low level RSK175 40mlAmb-HCI								
MW128-062117	GRAB	GW	65	6/2/17	1225	9	X	X	X	X	X	X								
SMW-3-062117	↓	GW	14	↓	1455	4	X	X	X	X	X	X								
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		

L# **9177A**  
**D065**  
Acctnum: **PESENVSWA**  
Template: **T124201**  
Prelogin: **P603202**  
TSR: **110 - Brian Ford**  
PB: **5-31-17**  
Shipped Via: **FedEx Ground**

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - Waste Water  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist  
 CCC Seal Present/Intact: **NP**  
 CCC Signed/Accurate: **NP**  
 Bottles arrive intact: **NP**  
 Correct bottles used: **NP**  
 Sufficient volume sent: **NP**  
 VOA Zero Headspace: **NP**  
 Preservation Correct/Checked: **NP**

Samples returned via:  
UPS \_\_\_\_\_ FedEx \_\_\_\_\_ Courier \_\_\_\_\_

Tracking # **7372 1955 0650**

Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>6/2/17</b>	Time: <b>1545</b>	Received by: (Signature)	Trip Blank Received: Yes (No) <b>HEI/MeOH</b> <b>TBR</b>
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <b>2.5°</b> °C <b>70F</b> Bottles Received: <b>13</b>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>6-22-17</b> Time: <b>0845</b> Hold: _____ Condition: <b>OK</b>

## MEMORANDUM

**TO:** Project File **DATE:** July 25, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 21, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L917742

---

Two (2) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 21, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L917742. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L917742 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.5 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

Note that ESC assigned L917742-04 to sample SMW-3-062117 though only two samples were submitted with this chain of custody. No action is taken other than to note this.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

The sample was analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

The sample was analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

The sample was analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.



## Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for acrylonitrile, bromomethane, chloromethane, 1,2-dibromo-3-chloropropane, dibromomethane, 1,2-dichloroethane, trans-1,4-dichloro-2-butene, di-isopropyl ether, 2-Butanone (MEK), 4-methyl-2-pentanone (MIBK), methyl tert-butyl ether, naphthalene, 1,1,2,2-tetrachloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, and vinyl acetate were identified by the laboratory sample with analytical batch WG993152 (analyzed on June 27, 2017). Sample MW128-062117 results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **Sample MW128-062117 results for above mentioned compounds are estimated and qualified (UJ).**
- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for 1, 2-dibromomethane, 1,3-dichloropropane, ethylbenzene, hexachloro-1,3-butadiene, 2-hexanone, 2-butanone (MEK), tetrachloroethene, 1,2,4-trichlorobenzene, and vinyl acetate were identified by the laboratory for all associated samples with analytical batch WG995407 (analyzed on July 4, 2017). Sample SMW-3-062117 results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **Sample SMW-3-062117 results for above mentioned compounds are estimated and qualified (UJ).**

## Method Blank Results

### *USEPA Method 8260C:*

Laboratory method blanks were included with each analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blanks at or above the reported detection limits (RDLs).

### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of methane was measured in the method blank associated with analytical batch WG992377 (date of analysis is June 23, 2017) between the RDL and method detection limit (MDL). No action was necessary as associated methane sample result is significantly greater than the detection in the blank.

### *USEPA Method 6020:*

Laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blank at or above the RDL.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of alkalinity was measured in the method blank associated with analytical batch WG993343 (date of analysis is June 28, 2017) between the RDL and MDL. No action was necessary as associated alkalinity sample result is significantly greater than the detection in the blank.
- A low level of chloride was detected in the method blank associated with analytical batch WG991886 (date of analysis is June 22, 2017) between the RDL and MDL. No action was necessary as associated chloride sample result is significantly greater than the detection in the blank.

### **Trip Blank Results**

*USEPA Method 8260C:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate analyses were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate samples were performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on non-client samples within the analytical batch. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSDs, and the method blanks are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following exceptions:

- LCS/LCSD (Batch WG993152) spike compound (acrylonitrile) percent recovery is slightly below laboratory acceptance criteria and qualified by the laboratory (J4). No action was taken on this basis as LCS percent recovery result is within criteria. LCS/LCSD (Batch WG993152) spike compound (1,2,3-trichloropropane) percent recoveries are slightly below laboratory acceptance criteria and qualified by the laboratory (J4). **Spike compound, 1,2,3-trichloropropane, was not detected in Sample MW128-062117, and is estimated (UJ) due to low LCS/LCSD recoveries.**
- LCS/LCSD (Batch WG995407) spike compounds (1,3-dichloropropane, 1,2-dibromoethane, and vinyl acetate) percent recoveries are slightly below laboratory acceptance criteria and qualified by the laboratory (J4). **Spike compound, 1,3-dichloropropane, 1,2-dibromoethane, and vinyl acetate are not detected in sample SMW-3-062117, and these compounds are estimated (UJ) due to low LCS/LCSD recoveries.**
- LCS (Batch WG995407) spike compound (ethylbenzene) percent recovery is slightly below laboratory acceptance criteria and qualified by the laboratory (J4). No action was taken on this basis as LCSD percent recovery result is within criteria.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analyses were not performed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on a non-client sample within the analytical batch. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample with the following discussion:

- Manganese sample amount was greater than four times the spike amount and the MSD was not recovered. No action was taken other than to note this. Refer to LCS/LCSD results for additional information.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS/MSD analyses were performed on non-client samples within the analytical batches. MS and MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analyses were not performed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	1050000		2710	20000	1	06/28/2017 19:21	WG993343

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	24600		51.9	1000	1	06/22/2017 21:06	WG991886
Nitrate	U		22.7	100	1	06/22/2017 21:06	WG991886
Sulfate	U		77.4	5000	1	06/22/2017 21:06	WG991886

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	7810		102	1000	1	06/26/2017 19:04	WG992872

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	23000		15.0	100	1	06/28/2017 13:12	WG993124
Manganese	704		0.250	5.00	1	06/28/2017 13:12	WG993124

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	19600		7.18	17.0	25	06/23/2017 14:24	WG992377
Ethane	33.4		0.296	1.29	1	06/23/2017 12:17	WG992015
Ethene	45.1		0.422	1.27	1	06/23/2017 12:17	WG992015

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.07	J	1.05	25.0	1	06/27/2017 16:36	WG993152
Acrylonitrile	U	WJ JO J4	0.873	5.00	1	06/27/2017 16:36	WG993152
Benzene	3.84		0.0896	0.500	1	06/29/2017 01:12	WG993152
Bromobenzene	U		0.133	0.500	1	06/27/2017 16:36	WG993152
Bromodichloromethane	U		0.0800	0.500	1	06/27/2017 16:36	WG993152
Bromochloromethane	U		0.145	0.500	1	06/27/2017 16:36	WG993152
Bromoform	U		0.186	0.500	1	06/27/2017 16:36	WG993152
Bromomethane	U	WJ JO	0.157	2.50	1	06/27/2017 16:36	WG993152
n-Butylbenzene	U		0.143	0.500	1	06/27/2017 16:36	WG993152
sec-Butylbenzene	U		0.134	0.500	1	06/27/2017 16:36	WG993152
tert-Butylbenzene	U		0.183	0.500	1	06/27/2017 16:36	WG993152
Carbon disulfide	U		0.101	0.500	1	06/27/2017 16:36	WG993152
Carbon tetrachloride	U		0.159	0.500	1	06/27/2017 16:36	WG993152
Chlorobenzene	U		0.140	0.500	1	06/27/2017 16:36	WG993152
Chlorodibromomethane	U		0.128	0.500	1	06/27/2017 16:36	WG993152
Chloroethane	U		0.141	2.50	1	06/27/2017 16:36	WG993152
Chloroform	U		0.0860	0.500	1	06/27/2017 16:36	WG993152
Chloromethane	U		0.153	1.25	1	06/27/2017 16:36	WG993152
2-Chlorotoluene	U		0.111	0.500	1	06/27/2017 16:36	WG993152
4-Chlorotoluene	U		0.0972	0.500	1	06/27/2017 16:36	WG993152
1,2-Dibromo-3-Chloropropane	U	WJ JO	0.325	2.50	1	06/27/2017 16:36	WG993152
1,2-Dibromoethane	U		0.193	0.500	1	06/27/2017 16:36	WG993152
Dibromomethane	U	WJ JO	0.117	0.500	1	06/27/2017 16:36	WG993152

See 7/25/17



Collected date/time: 06/21/17 12:25

L917742

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	06/27/2017 16:36	WG993152
1,3-Dichlorobenzene	U		0.130	0.500	1	06/27/2017 16:36	WG993152
1,4-Dichlorobenzene	U		0.121	0.500	1	06/27/2017 16:36	WG993152
Dichlorodifluoromethane	U		0.127	2.50	1	06/27/2017 16:36	WG993152
1,1-Dichloroethane	U		0.114	0.500	1	06/27/2017 16:36	WG993152
1,2-Dichloroethane	U	UJ JO	0.108	0.500	1	06/27/2017 16:36	WG993152
1,1-Dichloroethene	U		0.188	0.500	1	06/27/2017 16:36	WG993152
cis-1,2-Dichloroethene	109		0.0933	0.500	1	06/27/2017 16:36	WG993152
trans-1,2-Dichloroethene	U		0.152	0.500	1	06/27/2017 16:36	WG993152
1,2-Dichloropropane	U		0.190	0.500	1	06/27/2017 16:36	WG993152
1,1-Dichloropropene	U		0.128	0.500	1	06/27/2017 16:36	WG993152
1,3-Dichloropropane	U		0.147	1.00	1	06/27/2017 16:36	WG993152
cis-1,3-Dichloropropene	U		0.0976	0.500	1	06/27/2017 16:36	WG993152
trans-1,3-Dichloropropene	U		0.222	0.500	1	06/27/2017 16:36	WG993152
trans-1,4-Dichloro-2-butene	U	UJ JO	0.257	5.00	1	06/27/2017 16:36	WG993152
2,2-Dichloropropane	U		0.0929	0.500	1	06/27/2017 16:36	WG993152
Di-isopropyl ether	U	UJ JO	0.0924	0.500	1	06/27/2017 16:36	WG993152
Ethylbenzene	U		0.158	0.500	1	06/27/2017 16:36	WG993152
Hexachloro-1,3-butadiene	U		0.157	1.00	1	06/27/2017 16:36	WG993152
2-Hexanone	U		0.757	5.00	1	06/27/2017 16:36	WG993152
n-Hexane	U		0.305	5.00	1	06/27/2017 16:36	WG993152
Iodomethane	U		0.377	10.0	1	06/27/2017 16:36	WG993152
Isopropylbenzene	U		0.126	0.500	1	06/27/2017 16:36	WG993152
p-Isopropyltoluene	U		0.138	0.500	1	06/27/2017 16:36	WG993152
2-Butanone (MEK)	U	UJ JO	1.28	5.00	1	06/27/2017 16:36	WG993152
Methylene Chloride	U		1.07	2.50	1	06/27/2017 16:36	WG993152
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	06/27/2017 16:36	WG993152
Methyl tert-butyl ether	U	UJ JO	0.102	0.500	1	06/27/2017 16:36	WG993152
Naphthalene	U	UJ JO	0.174	2.50	1	06/27/2017 16:36	WG993152
n-Propylbenzene	U		0.162	0.500	1	06/27/2017 16:36	WG993152
Styrene	U		0.117	0.500	1	06/27/2017 16:36	WG993152
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	06/27/2017 16:36	WG993152
1,1,2,2-Tetrachloroethane	U	UJ JO	0.130	0.500	1	06/27/2017 16:36	WG993152
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	06/27/2017 16:36	WG993152
Tetrachloroethene	U		0.199	0.500	1	06/27/2017 16:36	WG993152
Toluene	0.541		0.412	0.500	1	06/29/2017 01:12	WG993152
1,2,3-Trichlorobenzene	U	UJ JO	0.164	0.500	1	06/27/2017 16:36	WG993152
1,2,4-Trichlorobenzene	U		0.355	0.500	1	06/27/2017 16:36	WG993152
1,1,1-Trichloroethane	U		0.0940	0.500	1	06/27/2017 16:36	WG993152
1,1,2-Trichloroethane	U		0.186	0.500	1	06/27/2017 16:36	WG993152
Trichloroethene	U		0.153	0.500	1	06/27/2017 16:36	WG993152
Trichlorofluoromethane	U		0.130	2.50	1	06/27/2017 16:36	WG993152
1,2,3-Trichloropropane	U	UJ JO J4	0.247	2.50	1	06/27/2017 16:36	WG993152
1,2,4-Trimethylbenzene	U		0.123	0.500	1	06/27/2017 16:36	WG993152
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	06/27/2017 16:36	WG993152
1,3,5-Trimethylbenzene	U		0.124	0.500	1	06/27/2017 16:36	WG993152
Vinyl acetate	U	UJ JO	0.645	5.00	1	06/27/2017 16:36	WG993152
Vinyl chloride	195		0.118	0.500	1	06/27/2017 16:36	WG993152
Xylenes, Total	U		0.316	1.50	1	06/29/2017 01:12	WG993152
(S) Toluene-d8	111	✓		80.0-120		06/27/2017 16:36	WG993152
(S) Toluene-d8	110	✓		80.0-120		06/29/2017 01:12	WG993152
(S) Dibromofluoromethane	99.8	✓		76.0-123		06/27/2017 16:36	WG993152
(S) Dibromofluoromethane	103	✓		76.0-123		06/29/2017 01:12	WG993152
(S) 4-Bromofluorobenzene	104	✓		80.0-120		06/29/2017 01:12	WG993152
(S) 4-Bromofluorobenzene	99.3	✓		80.0-120		06/27/2017 16:36	WG993152

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Jc  
7/25/17



Collected date/time: 06/21/17 14:55

L917742

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/04/2017 07:58 <i>-ok</i>	WG995407
Acrylonitrile	U		0.873	5.00	1	07/04/2017 07:58	WG995407
Benzene	U		0.0896	0.500	1	07/04/2017 07:58	WG995407
Bromobenzene	U		0.133	0.500	1	07/04/2017 07:58	WG995407
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 07:58	WG995407
Bromochloromethane	U		0.145	0.500	1	07/04/2017 07:58	WG995407
Bromoform	U		0.186	0.500	1	07/04/2017 07:58	WG995407
Bromomethane	U		0.157	2.50	1	07/04/2017 07:58	WG995407
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 07:58	WG995407
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 07:58	WG995407
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 07:58	WG995407
Carbon disulfide	U		0.101	0.500	1	07/04/2017 07:58	WG995407
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 07:58	WG995407
Chlorobenzene	U		0.140	0.500	1	07/04/2017 07:58	WG995407
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 07:58	WG995407
Chloroethane	U		0.141	2.50	1	07/04/2017 07:58	WG995407
Chloroform	U		0.0860	0.500	1	07/04/2017 07:58	WG995407
Chloromethane	U		0.153	1.25	1	07/04/2017 07:58	WG995407
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 07:58	WG995407
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 07:58	WG995407
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 07:58	WG995407
1,2-Dibromoethane	U	<i>VJ</i> <u>JO J4</u>	0.193	0.500	1	07/04/2017 07:58	WG995407
Dibromomethane	U		0.117	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 07:58	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 07:58	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 07:58	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 07:58	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 07:58	WG995407
1,1-Dichloroethene	U		0.188	0.500	1	07/04/2017 07:58	WG995407
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/04/2017 07:58	WG995407
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/04/2017 07:58	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 07:58	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 07:58	WG995407
1,3-Dichloropropane	U	<i>VJ</i> <u>JO J4</u>	0.147	1.00	1	07/04/2017 07:58	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 07:58	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 07:58	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 07:58	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 07:58	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 07:58	WG995407
Ethylbenzene	U	<i>VJ</i> <u>JO J4</u>	0.158	0.500	1	07/04/2017 07:58	WG995407
Hexachloro-1,3-butadiene	U	<i>VJ</i> <u>JO</u>	0.157	1.00	1	07/04/2017 07:58	WG995407
2-Hexanone	U	<i>VJ</i> <u>JO</u>	0.757	5.00	1	07/04/2017 07:58	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 07:58	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 07:58	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 07:58	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 07:58	WG995407
2-Butanone (MEK)	U	<i>VJ</i> <u>JO</u>	1.28	5.00	1	07/04/2017 07:58	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 07:58	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 07:58	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 07:58	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 07:58	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 07:58	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 07:58	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 07:58	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 07:58	WG995407

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

*JC 7/25/17*



SMW-3-062117

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/21/17 14:55

L917742

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 07:58	WG995407
Tetrachloroethene	U	VJ JO	0.199	0.500	1	07/04/2017 07:58	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 07:58	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 07:58	WG995407
1,2,4-Trichlorobenzene	U	VJ JO	0.355	0.500	1	07/04/2017 07:58	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 07:58	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 07:58	WG995407
Trichloroethene	U		0.153	0.500	1	07/04/2017 07:58	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 07:58	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 07:58	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 07:58	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 07:58	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 07:58	WG995407
Vinyl acetate	U	VJ JO J4	0.645	5.00	1	07/04/2017 07:58	WG995407
Vinyl chloride	U		0.118	0.500	1	07/04/2017 07:58	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 07:58	WG995407
(S) Toluene-d8	102			80.0-120		07/04/2017 07:58	WG995407
(S) Dibromofluoromethane	114			76.0-123		07/04/2017 07:58	WG995407
(S) 4-Bromofluorobenzene	110			80.0-120		07/04/2017 07:58	WG995407

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Jc  
7/25/17

## PES Environmental, Inc.- WA

Sample Delivery Group: L918096  
Samples Received: 06/23/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161









Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



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<b>Ss: Sample Summary</b>	<b>3</b>	
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# SAMPLE SUMMARY



## F5-062217 L918096-01 GW

Collected by Shannon McKernan  
Collected date/time 06/22/17 08:35  
Received date/time 06/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG992527	1	06/24/17 07:04	06/24/17 07:04	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 14:50	07/02/17 14:50	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## F13-062217 L918096-02 GW

Collected by Shannon McKernan  
Collected date/time 06/22/17 09:55  
Received date/time 06/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG993348	1	06/29/17 02:03	06/29/17 02:03	MCG
Wet Chemistry by Method 9056A	WG992228	1	06/23/17 18:17	06/23/17 18:17	CSU
Wet Chemistry by Method 9060A	WG994361	2	06/30/17 17:29	06/30/17 17:29	CSU
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:25	JPD
Volatile Organic Compounds (GC) by Method NWTPHGX	WG992527	1	06/24/17 07:25	06/24/17 07:25	LRL
Volatile Organic Compounds (GC) by Method RSK175	WG992330	1	06/25/17 10:54	06/25/17 10:54	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG992750	5	06/25/17 14:29	06/25/17 14:29	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 15:08	07/02/17 15:08	JHH

## MW115-062217 L918096-03 GW

Collected by Shannon McKernan  
Collected date/time 06/22/17 12:15  
Received date/time 06/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG993348	1	06/29/17 02:10	06/29/17 02:10	MCG
Wet Chemistry by Method 9056A	WG992228	1	06/23/17 18:30	06/23/17 18:30	CSU
Wet Chemistry by Method 9060A	WG993861	1	06/29/17 16:33	06/29/17 16:33	SJM
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:28	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG992330	1	06/25/17 10:56	06/25/17 10:56	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG992750	5	06/25/17 14:31	06/25/17 14:31	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 15:26	07/02/17 15:26	JHH

## F9-062217 L918096-04 GW

Collected by Shannon McKernan  
Collected date/time 06/22/17 14:15  
Received date/time 06/23/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG992527	1	06/24/17 07:46	06/24/17 07:46	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 15:44	07/02/17 15:44	JHH



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

Brian Ford  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:04	WG992527
(S) a,a,a-Trifluorotoluene(FID)	98.1			77.0-122		06/24/2017 07:04	WG992527

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	37.9		1.05	25.0	1	07/02/2017 14:50	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 14:50	WG994563
Benzene	0.374	J	0.0896	0.500	1	07/02/2017 14:50	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 14:50	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 14:50	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 14:50	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 14:50	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 14:50	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 14:50	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 14:50	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 14:50	WG994563
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 14:50	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 14:50	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 14:50	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 14:50	WG994563
Chloroethane	2.89		0.141	2.50	1	07/02/2017 14:50	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 14:50	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 14:50	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 14:50	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 14:50	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 14:50	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 14:50	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 14:50	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 14:50	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 14:50	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 14:50	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 14:50	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 14:50	WG994563
cis-1,2-Dichloroethene	10.4		0.0933	0.500	1	07/02/2017 14:50	WG994563
trans-1,2-Dichloroethene	0.485	J	0.152	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 14:50	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 14:50	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 14:50	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 14:50	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 14:50	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 14:50	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 14:50	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 14:50	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 14:50	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 14:50	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 14:50	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 14:50	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 14:50	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 14:50	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 14:50	WG994563
2-Butanone (MEK)	41.2		1.28	5.00	1	07/02/2017 14:50	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 14:50	WG994563



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 14:50	<a href="#">WG994563</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Naphthalene	U		0.174	2.50	1	07/02/2017 14:50	<a href="#">WG994563</a>
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Styrene	U		0.117	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Toluene	0.708		0.412	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 14:50	<a href="#">WG994563</a>
Vinyl chloride	63.9		0.118	0.500	1	07/02/2017 14:50	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 14:50	<a href="#">WG994563</a>
(S) Toluene-d8	107			80.0-120		07/02/2017 14:50	<a href="#">WG994563</a>
(S) Dibromofluoromethane	95.8			76.0-123		07/02/2017 14:50	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 14:50	<a href="#">WG994563</a>

- 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	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	484000		2710	20000	1	06/29/2017 02:03	<a href="#">WG993348</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	12600		51.9	1000	1	06/23/2017 18:17	<a href="#">WG992228</a>
Nitrate	U		22.7	100	1	06/23/2017 18:17	<a href="#">WG992228</a>
Sulfate	6130		77.4	5000	1	06/23/2017 18:17	<a href="#">WG992228</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	10900		204	2000	2	06/30/2017 17:29	<a href="#">WG994361</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	29300		15.0	100	1	06/28/2017 13:25	<a href="#">WG993124</a>
Manganese	806		0.250	5.00	1	06/28/2017 13:25	<a href="#">WG993124</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:25	<a href="#">WG992527</a>
(S) a,a,a-Trifluorotoluene(FID)	98.3			77.0-122		06/24/2017 07:25	<a href="#">WG992527</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	2610		1.44	3.39	5	06/25/2017 14:29	<a href="#">WG992750</a>
Ethane	U		0.296	1.29	1	06/25/2017 10:54	<a href="#">WG992330</a>
Ethene	U		0.422	1.27	1	06/25/2017 10:54	<a href="#">WG992330</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	1.38	J	1.05	25.0	1	07/02/2017 15:08	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>





Collected date/time: 06/22/17 09:55

L918096

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloroform	U		0.0860	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 15:08	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
cis-1,2-Dichloroethene	0.194	J	0.0933	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
n-Hexane	U		0.305	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 15:08	<a href="#">WG994563</a>
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Naphthalene	U		0.174	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Styrene	U		0.117	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Toluene	U		0.412	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:08	<a href="#">WG994563</a>
Vinyl chloride	1.32		0.118	0.500	1	07/02/2017 15:08	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:08	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	107			80.0-120		07/02/2017 15:08	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.2			76.0-123		07/02/2017 15:08	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 15:08	<a href="#">WG994563</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	401000		2710	20000	1	06/29/2017 02:10	<a href="#">WG993348</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	33000		51.9	1000	1	06/23/2017 18:30	<a href="#">WG992228</a>
Nitrate	U		22.7	100	1	06/23/2017 18:30	<a href="#">WG992228</a>
Sulfate	46100		77.4	5000	1	06/23/2017 18:30	<a href="#">WG992228</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	7390		102	1000	1	06/29/2017 16:33	<a href="#">WG993861</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	6190		15.0	100	1	06/28/2017 13:28	<a href="#">WG993124</a>
Manganese	1190		0.250	5.00	1	06/28/2017 13:28	<a href="#">WG993124</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	3570		1.44	3.39	5	06/25/2017 14:31	<a href="#">WG992750</a>
Ethane	4.98		0.296	1.29	1	06/25/2017 10:56	<a href="#">WG992330</a>
Ethene	U		0.422	1.27	1	06/25/2017 10:56	<a href="#">WG992330</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 15:26	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Carbon disulfide	U	<a href="#">JO</a>	0.101	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 15:26	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>



Collected date/time: 06/22/17 12:15

L918096

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
cis-1,2-Dichloroethene	0.523		0.0933	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
n-Hexane	U		0.305	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
Iodomethane	U	<a href="#">JO J3</a>	0.377	10.0	1	07/02/2017 15:26	<a href="#">WG994563</a>
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Naphthalene	U		0.174	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Styrene	U		0.117	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Toluene	U		0.412	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:26	<a href="#">WG994563</a>
Vinyl chloride	8.45		0.118	0.500	1	07/02/2017 15:26	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:26	<a href="#">WG994563</a>
(S) Toluene-d8	109			80.0-120		07/02/2017 15:26	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.2			76.0-123		07/02/2017 15:26	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	102			80.0-120		07/02/2017 15:26	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:46	WG992527
(S) a,a,a-Trifluorotoluene(FID)	98.1			77.0-122		06/24/2017 07:46	WG992527

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.74	J	1.05	25.0	1	07/02/2017 15:44	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:44	WG994563
Benzene	0.471	J	0.0896	0.500	1	07/02/2017 15:44	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:44	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:44	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:44	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 15:44	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 15:44	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:44	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:44	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:44	WG994563
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 15:44	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:44	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:44	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:44	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 15:44	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 15:44	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 15:44	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:44	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:44	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 15:44	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:44	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:44	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:44	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:44	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:44	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:44	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:44	WG994563
cis-1,2-Dichloroethene	6.10		0.0933	0.500	1	07/02/2017 15:44	WG994563
trans-1,2-Dichloroethene	0.610		0.152	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:44	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:44	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:44	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:44	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:44	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:44	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:44	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:44	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:44	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:44	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:44	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 15:44	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 15:44	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:44	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:44	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:44	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:44	WG994563



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:44	<a href="#">WG994563</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Naphthalene	U		0.174	2.50	1	07/02/2017 15:44	<a href="#">WG994563</a>
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Styrene	U		0.117	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Toluene	1.70		0.412	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:44	<a href="#">WG994563</a>
Vinyl chloride	3.57		0.118	0.500	1	07/02/2017 15:44	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:44	<a href="#">WG994563</a>
(S) Toluene-d8	108			80.0-120		07/02/2017 15:44	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.5			76.0-123		07/02/2017 15:44	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	99.6			80.0-120		07/02/2017 15:44	<a href="#">WG994563</a>

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



Method Blank (MB)

(MB) R3229693-1 06/29/17 00:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	3230	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L917941-07 Original Sample (OS) • Duplicate (DUP)

(OS) L917941-07 06/29/17 00:37 • (DUP) R3229693-3 06/29/17 00:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	430000	442000	1	3.00		20

L918096-03 Original Sample (OS) • Duplicate (DUP)

(OS) L918096-03 06/29/17 02:10 • (DUP) R3229693-5 06/29/17 02:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	401000	402000	1	0.000		20

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

(LCS) R3229693-4 06/29/17 01:25 • (LCSD) R3229693-6 06/29/17 02:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	104000	110000	104	110	85.0-115			5.00	20



Method Blank (MB)

(MB) R3228442-1 06/23/17 06:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918050-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918050-01 06/23/17 15:42 • (DUP) R3228442-5 06/23/17 15:55

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	ND	0.000	1	0		15
Sulfate	ND	0.000	1	0		15

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

(LCS) R3228442-2 06/23/17 06:43 • (LCSD) R3228442-3 06/23/17 06:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39300	39300	98	98	80-120			0	15
Nitrate	8000	8150	8170	102	102	80-120			0	15
Sulfate	40000	38800	38800	97	97	80-120			0	15

L916561-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L916561-05 06/23/17 14:11 • (MS) R3228442-4 06/23/17 14:24

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	54300	95500	83	1	80-120	
Nitrate	5000	335	4560	84	1	80-120	
Sulfate	50000	80600	117000	74	1	80-120	<a href="#">E J6</a>

L918119-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918119-02 06/23/17 18:56 • (MS) R3228442-6 06/23/17 19:09 • (MSD) R3228442-7 06/23/17 19:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	50000	11400	57800	57400	93	92	1	80-120			1	15
Nitrate	5000	4530	9280	9390	95	97	1	80-120			1	15
Sulfate	50000	27300	71800	71400	89	88	1	80-120			1	15





Method Blank (MB)

(MB) R3230074-2 06/29/17 13:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L917700-05 Original Sample (OS) • Duplicate (DUP)

(OS) L917700-05 06/29/17 14:59 • (DUP) R3230074-4 06/29/17 15:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	7540	7250	1	4		20

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

(LCS) R3230074-3 06/29/17 14:08 • (LCSD) R3230074-5 06/29/17 17:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	71100	70300	95	94	85-115			1	20

L918537-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918537-01 06/29/17 20:43 • (MS) R3230074-6 06/29/17 20:58 • (MSD) R3230074-7 06/29/17 21:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	1560	48400	48500	94	94	1	80-120			0	20



Method Blank (MB)

(MB) R3230426-1 06/30/17 16:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L919296-03 Original Sample (OS) • Duplicate (DUP)

(OS) L919296-03 07/01/17 05:07 • (DUP) R3230426-7 07/01/17 05:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	46600	46800	1	0		20

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

(LCS) R3230426-2 06/30/17 16:56 • (LCSD) R3230426-3 06/30/17 18:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	72100	71800	96	96	85-115			0	20

L918846-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918846-01 07/01/17 02:59 • (MS) R3230426-5 07/01/17 03:17 • (MSD) R3230426-6 07/01/17 03:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	17100	57700	56900	81	80	1	80-120			1	20



Method Blank (MB)

(MB) R3229499-1 06/28/17 11:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3229499-2 06/28/17 12:03 • (LCSD) R3229499-3 06/28/17 12:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Iron	5000	5100	5150	102	103	80-120			1	20
Manganese	50.0	46.0	46.4	92	93	80-120			1	20

5 Sr

6 Qc

L917294-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917294-12 06/28/17 12:10 • (MS) R3229499-5 06/28/17 12:17 • (MSD) R3229499-6 06/28/17 12:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron	5000	57.6	5120	5080	101	100	1	75-125			1	20
Manganese	50.0	3010	3060	3040	118	67	1	75-125		V	1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3229771-3 06/24/17 00:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)				77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3229771-1 06/23/17 23:55 • (LCSD) R3229771-2 06/24/17 00:16

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	6180	5590	112	102	72.0-134			10.0	20
(S) a,a,a-Trifluorotoluene(FID)				102	102	77.0-122				

5 Sr

6 Qc

7 Gl

L917945-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917945-02 06/24/17 02:05 • (MS) R3229771-4 06/24/17 02:26 • (MSD) R3229771-5 06/24/17 02:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	ND	3590	3450	65.4	62.8	1	23.0-159			3.99	20
(S) a,a,a-Trifluorotoluene(FID)					98.6	98.4		77.0-122				

8 Al

9 Sc



Method Blank (MB)

(MB) R3228521-1 06/25/17 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

L917941-01 Original Sample (OS) • Duplicate (DUP)

(OS) L917941-01 06/25/17 10:34 • (DUP) R3228521-2 06/25/17 11:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

5 Sr

6 Qc

L918130-07 Original Sample (OS) • Duplicate (DUP)

(OS) L918130-07 06/25/17 11:06 • (DUP) R3228521-3 06/25/17 11:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	ND	0.000	1	0.000		20
Ethene	ND	0.000	1	0.000		20

7 Gl

8 Al

9 Sc

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

(LCS) R3228521-4 06/25/17 11:34 • (LCSD) R3228521-5 06/25/17 11:37

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethane	129	117	120	90.5	93.0	70.0-130			2.79	20
Ethene	127	111	114	87.6	89.5	70.0-130			2.13	20



Method Blank (MB)

(MB) R3228534-1 06/25/17 14:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L918096-03 Original Sample (OS) • Duplicate (DUP)

(OS) L918096-03 06/25/17 14:31 • (DUP) R3228534-2 06/25/17 14:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	3570	3600	5	0.820		20

7 Gl

8 Al

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

(LCS) R3228534-3 06/25/17 14:52 • (LCSD) R3228534-4 06/25/17 14:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	69.0	67.3	102	99.2	70.0-130			2.54	20

9 Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	1.00
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	105			80.0-120
(S) Dibromofluoromethane	94.3			76.0-123
(S) 4-Bromofluorobenzene	97.6			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	107	112	85.3	89.2	10.0-160			4.52	23
Acrylonitrile	125	130	124	104	99.4	60.0-142			4.37	20
Benzene	25.0	23.2	24.2	92.8	96.7	69.0-123			4.06	20
Bromobenzene	25.0	24.0	24.9	96.0	99.6	79.0-120			3.68	20
Bromodichloromethane	25.0	22.3	23.5	89.3	94.2	76.0-120			5.27	20
Bromochloromethane	25.0	25.5	26.5	102	106	76.0-122			3.56	20
Bromoform	25.0	23.4	24.3	93.6	97.3	67.0-132			3.88	20
Bromomethane	25.0	20.6	23.9	82.5	95.7	18.0-160			14.9	20
n-Butylbenzene	25.0	22.8	23.7	91.4	94.7	72.0-126			3.54	20
sec-Butylbenzene	25.0	22.8	23.3	91.2	93.3	74.0-121			2.28	20
tert-Butylbenzene	25.0	23.3	23.9	93.2	95.5	75.0-122			2.46	20
Carbon disulfide	25.0	19.9	21.1	79.5	84.4	55.0-127			5.96	20
Carbon tetrachloride	25.0	23.1	24.2	92.5	96.6	63.0-122			4.41	20
Chlorobenzene	25.0	25.5	26.0	102	104	79.0-121			1.76	20
Chlorodibromomethane	25.0	24.1	24.7	96.3	98.9	75.0-125			2.67	20
Chloroethane	25.0	23.6	24.6	94.6	98.4	47.0-152			3.99	20
Chloroform	25.0	22.5	23.5	89.9	94.0	72.0-121			4.50	20
Chloromethane	25.0	22.2	24.3	88.7	97.0	48.0-139			8.96	20
2-Chlorotoluene	25.0	24.1	24.8	96.4	99.3	74.0-122			3.03	20
4-Chlorotoluene	25.0	24.3	24.7	97.0	99.0	79.0-120			2.00	20
1,2-Dibromo-3-Chloropropane	25.0	24.8	24.1	99.3	96.2	64.0-127			3.17	20
1,2-Dibromoethane	25.0	25.5	25.6	102	102	77.0-123			0.530	20
Dibromomethane	25.0	23.8	24.9	95.2	99.5	78.0-120			4.38	20
1,2-Dichlorobenzene	25.0	24.1	25.2	96.2	101	80.0-120			4.63	20
1,3-Dichlorobenzene	25.0	24.0	25.0	95.9	100	72.0-123			4.35	20
1,4-Dichlorobenzene	25.0	23.7	24.5	94.9	98.1	77.0-120			3.24	20
Dichlorodifluoromethane	25.0	30.8	32.1	123	128	49.0-155			4.04	20
1,1-Dichloroethane	25.0	24.0	25.4	96.0	102	70.0-126			5.71	20
1,2-Dichloroethane	25.0	23.8	24.8	95.2	99.3	67.0-126			4.16	20
1,1-Dichloroethene	25.0	24.1	25.3	96.3	101	64.0-129			4.79	20
cis-1,2-Dichloroethene	25.0	22.8	23.7	91.3	94.8	73.0-120			3.80	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.1	71.0-121			2.82	20
1,2-Dichloropropane	25.0	24.3	25.0	97.2	100	75.0-125			2.85	20
1,1-Dichloropropene	25.0	25.0	25.9	100	104	71.0-129			3.59	20
1,3-Dichloropropane	25.0	25.4	26.1	102	105	80.0-121			2.83	20
cis-1,3-Dichloropropene	25.0	24.8	25.5	99.0	102	79.0-123			2.96	20
trans-1,3-Dichloropropene	25.0	25.7	25.6	103	102	74.0-127			0.470	20
trans-1,4-Dichloro-2-butene	25.0	20.7	21.1	82.8	84.2	55.0-134			1.68	20
2,2-Dichloropropane	25.0	23.0	24.1	91.9	96.5	60.0-125			4.82	20
Di-isopropyl ether	25.0	23.1	24.2	92.2	96.6	59.0-133			4.64	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.0	25.4	100	102	77.0-120			1.45	20
Hexachloro-1,3-butadiene	25.0	21.5	21.5	86.0	85.9	64.0-131			0.120	20
2-Hexanone	125	120	118	96.4	94.7	58.0-147			1.73	20
n-Hexane	25.0	21.4	22.1	85.5	88.5	56.0-124			3.43	20
Iodomethane	125	74.7	106	59.7	84.5	57.0-140		J3	34.3	20
Isopropylbenzene	25.0	23.3	24.4	93.2	97.8	75.0-120			4.83	20
p-Isopropyltoluene	25.0	23.1	23.7	92.5	94.6	74.0-126			2.25	20
2-Butanone (MEK)	125	112	113	89.3	90.4	37.0-158			1.26	20
Methylene Chloride	25.0	21.8	23.4	87.4	93.5	66.0-121			6.77	20
4-Methyl-2-pentanone (MIBK)	125	116	115	93.2	91.8	59.0-143			1.47	20
Methyl tert-butyl ether	25.0	22.9	23.8	91.4	95.3	64.0-123			4.12	20
Naphthalene	25.0	23.3	23.7	93.3	94.8	62.0-128			1.55	20
n-Propylbenzene	25.0	23.9	25.0	95.5	99.9	79.0-120			4.43	20
Styrene	25.0	24.5	26.1	97.9	104	78.0-124			6.33	20
1,1,1,2-Tetrachloroethane	25.0	24.3	24.7	97.2	98.8	75.0-122			1.62	20
1,1,2,2-Tetrachloroethane	25.0	24.9	25.2	99.7	101	71.0-122			0.930	20
1,1,2-Trichlorotrifluoroethane	25.0	25.3	26.4	101	105	61.0-136			4.06	20
Tetrachloroethene	25.0	25.4	26.3	102	105	70.0-127			3.29	20
Toluene	25.0	23.8	24.5	95.0	97.9	77.0-120			3.05	20
1,2,3-Trichlorobenzene	25.0	22.4	23.1	89.5	92.5	61.0-133			3.27	20
1,2,4-Trichlorobenzene	25.0	22.8	23.2	91.1	92.8	69.0-129			1.81	20
1,1,1-Trichloroethane	25.0	23.2	24.1	92.9	96.6	68.0-122			3.80	20
1,1,2-Trichloroethane	25.0	24.6	24.9	98.3	99.8	78.0-120			1.47	20
Trichloroethene	25.0	24.8	26.1	99.1	104	78.0-120			5.17	20
Trichlorofluoromethane	25.0	23.3	24.6	93.3	98.3	56.0-137			5.18	20
1,2,3-Trichloropropane	25.0	25.2	26.0	101	104	72.0-124			3.19	20
1,2,4-Trimethylbenzene	25.0	23.0	23.8	92.1	95.4	75.0-120			3.47	20
1,2,3-Trimethylbenzene	25.0	23.5	24.4	94.0	97.4	75.0-120			3.59	20
1,3,5-Trimethylbenzene	25.0	22.8	24.0	91.4	95.9	75.0-120			4.84	20
Vinyl acetate	125	114	115	91.5	92.3	46.0-160			0.860	20
Vinyl chloride	25.0	27.7	29.1	111	116	64.0-133			5.11	20
Xylenes, Total	75.0	73.0	75.6	97.3	101	77.0-120			3.50	20
(S) Toluene-d8				105	102	80.0-120				
(S) Dibromofluoromethane				96.6	98.2	76.0-123				
(S) 4-Bromofluorobenzene				99.0	100	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

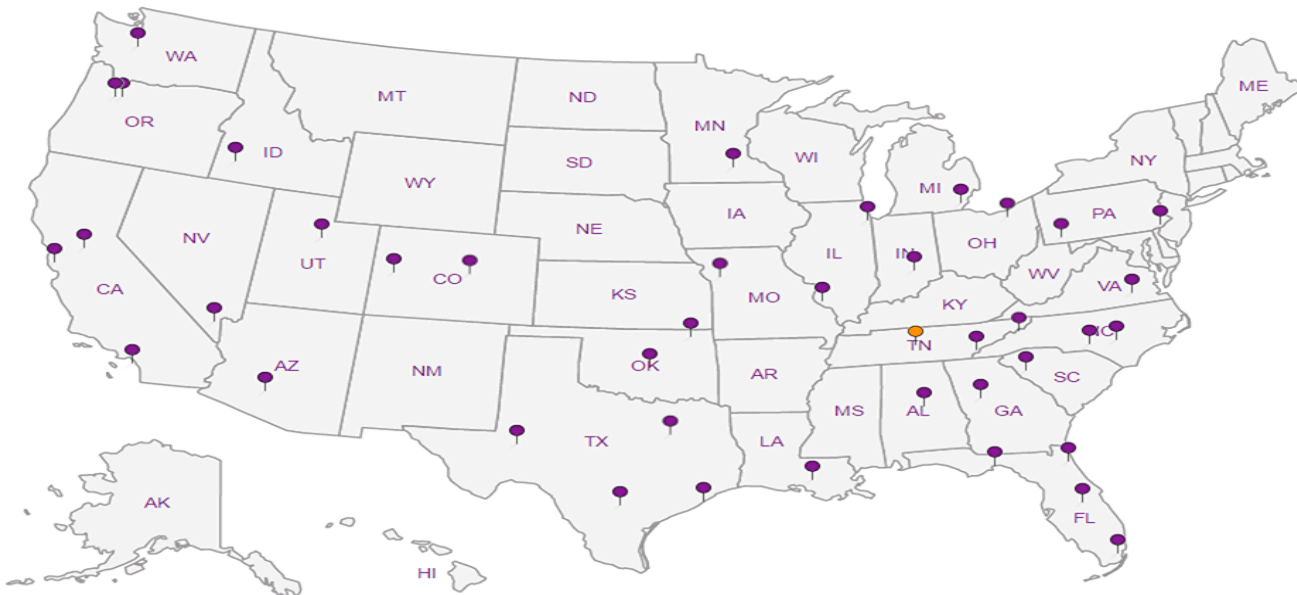
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:

Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page    of   



YOUR LAB OF CHOICE

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



L# 718026

**C035**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: 5-31-17

Shipped Via: **FedEX Ground**

Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #

Date Results Needed

No.  
of  
Cnts

Immediately  
Packed on Ice N    Y X

\*Alk, Cl, NO3, SO4 250ml HDPE - NoPres  
NWT PHGX 40ml Amb HCl  
TOC 250ml Amb-HCl  
Total Fe Mn 6020 250ml HDPE-HNO3  
low level 8260C 40ml Amb-HCl  
low level RSK175 40ml Amb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
F5-062217	GRAB	GW	25	6/22/17	0835	6
F13-062217	↓	GW	25	↓	0955	11
MN15-062217	↓	GW	40	↓	1215	9
F9-062217	↓	GW	20	↓	1415	6
		GW				
		GW				
		GW				
		GW				
		GW				
		GW				

Remarks Sample # (lab only)

01  
02  
07  
07

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

Samples returned via:  
 UPS  FedEx  Courier

Tracking # 7372 1955 0660

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

**Sample Receipt Checklist**  
COC Seal Present/Intact:  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VOA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  
*[Signature]*

Date: 6/22/17 Time: 1515

Received by: (Signature)

Trip Blank Received: Yes /  No  
HCL / MeOH  
TBR

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature)

Temp: 4.2 °C Bottles Received: 32

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature)

Date: 6/23/17 Time: 8:45

Hold: \_\_\_\_\_

Condition:  
NCF /  OK

## MEMORANDUM

**TO:** Project File **DATE:** July 25, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 22, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L918096

---

Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 22, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L918096. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L918096 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 4.2 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

Samples were analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

## **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for carbon disulfide and iodomethane associated with analytical batch WG994563 (analyzed on July 2, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for carbon disulfide and iodomethane are estimated and qualified (UJ).**

## **Method Blank Results**

### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or above the RDL.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of alkalinity was measured in the method blank between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity sample results are significantly greater than the detections in the blank.

## **Trip Blank Results**

### *USEPA Method 8260C and NWTPH-Gx:*

A trip blank was not collected.

## **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.



## **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

## **Laboratory Duplicate Analyses**

### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

### *NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

### *Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples and on sample MW115-062217. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

### *USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

### *General Chemistry:*

*SM 2320B:* A laboratory duplicate sample was performed on a non-client sample and on sample MW115-062217 within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* A laboratory duplicate sample was performed on non-client sample within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batches. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

## **Surrogate Recoveries**

### *USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### *NWTPH-Gx Method:*

The surrogate recovery results for the sample, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

#### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG994563) RPDs for compound iodomethane are above laboratory acceptance criteria (20%) and qualified by the laboratory (J3). No action was taken on this basis as LCS/LCSD percent recovery results are recovered wide but are within control limits.

#### *NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

#### *Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

#### *USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

#### *General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

### **Matrix Spike/Matrix Spike Duplicates**

#### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

#### *NWTPH-Gx Method:*

Matrix spike analysis was performed on a non-client sample within the analytical batch.

MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on a non-client sample within the analytical batch. MS/MSD % Rs and RPDs are acceptable and within laboratory control limit criteria for the water sample with the following discussion:

- Manganese sample amount was greater than four times the spike amount and the MSD was not recovered. No action was taken other than to note this. Refer to LCS/LCSD results for additional information.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis was performed on non-client samples within the analytical batch. MS % Rs and MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water with the following discussion:

- The MS result for sulfate (analytical batch WG992228 analyzed on June 23, 2017) exceeded linear range of the instrument and recovery was below laboratory acceptance criteria. No action was taken since the spike was performed on a non-client sample and LCS/LCSD sulfate results are acceptable.

*EPA Method 9060A:* MS/MSD analyses were performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

## **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:04	WG992527
(S) o,a,a-Trifluorotoluene(FID)	98.1			77.0-122		06/24/2017 07:04	WG992527

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	37.9		1.05	25.0	1	07/02/2017 14:50	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 14:50	WG994563
Benzene	0.374	J J	0.0896	0.500	1	07/02/2017 14:50	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 14:50	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 14:50	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 14:50	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 14:50	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 14:50	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 14:50	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 14:50	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 14:50	WG994563
Carbon disulfide	U	VJ JO	0.101	0.500	1	07/02/2017 14:50	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 14:50	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 14:50	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 14:50	WG994563
Chloroethane	2.89		0.141	2.50	1	07/02/2017 14:50	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 14:50	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 14:50	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 14:50	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 14:50	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 14:50	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 14:50	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 14:50	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 14:50	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 14:50	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 14:50	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 14:50	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 14:50	WG994563
cis-1,2-Dichloroethene	10.4		0.0933	0.500	1	07/02/2017 14:50	WG994563
trans-1,2-Dichloroethene	0.485	J J	0.152	0.500	1	07/02/2017 14:50	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 14:50	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 14:50	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 14:50	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 14:50	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 14:50	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 14:50	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 14:50	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 14:50	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 14:50	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 14:50	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 14:50	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 14:50	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 14:50	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 14:50	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 14:50	WG994563
2-Butanone (MEK)	41.2		1.28	5.00	1	07/02/2017 14:50	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 14:50	WG994563

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

JC  
7/25/17

F5-062217

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/22/17 08:35

L918096

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 14:50	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 14:50	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 14:50	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 14:50	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 14:50	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 14:50	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 14:50	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 14:50	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 14:50	WG994563
Toluene	0.708		0.412	0.500	1	07/02/2017 14:50	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 14:50	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 14:50	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 14:50	WG994563
1,1,2-Trichloroethane	U		0.185	0.500	1	07/02/2017 14:50	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 14:50	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 14:50	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 14:50	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 14:50	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 14:50	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 14:50	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 14:50	WG994563
Vinyl chloride	63.9		0.118	0.500	1	07/02/2017 14:50	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 14:50	WG994563
(S) Toluene-d8	107			80.0-120		07/02/2017 14:50	WG994563
(S) Dibromofluoromethane	95.8			76.0-123		07/02/2017 14:50	WG994563
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 14:50	WG994563

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

*Je*  
7/25/17



Collected date/time: 06/22/17 09:55

L918096

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	484000		2710	20000	1	06/29/2017 02:03	WG993348

Ca

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	12600		51.9	1000	1	06/23/2017 18:17	WG992228
Nitrate	U		22.7	100	1	06/23/2017 18:17	WG992228
Sulfate	6130		77.4	5000	1	06/23/2017 18:17	WG992228

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	10900		204	2000	2	06/30/2017 17:29	WG994361

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	29300		15.0	100	1	06/28/2017 13:25	WG993124
Manganese	806		0.250	5.00	1	06/28/2017 13:25	WG993124

Al

Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:25	WG992527
(S) a,a,a-Trifluorotoluene(FID)	98.3			77.0-122		06/24/2017 07:25	WG992527

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	2610		1.44	3.39	5	06/25/2017 14:29	WG992750
Ethane	U		0.296	1.29	1	06/25/2017 10:54	WG992330
Ethene	U		0.422	1.27	1	06/25/2017 10:54	WG992330

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.38	J ↓	1.05	25.0	1	07/02/2017 15:08	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:08	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 15:08	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:08	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:08	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:08	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 15:08	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 15:08	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:08	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:08	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:08	WG994563
Carbon disulfide	U	VS JO	0.101	0.500	1	07/02/2017 15:08	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:08	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:08	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:08	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 15:08	WG994563

GC 7/25/17



Collected date/time: 06/22/17 09:55

L918096

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloroform	U		0.0860	0.500	1	07/02/2017 15:08	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 15:08	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:08	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:08	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 15:08	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:08	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:08	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:08	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:08	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:08	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:08	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:08	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:08	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:08	WG994563
cis-1,2-Dichloroethene	0.194	J	0.0933	0.500	1	07/02/2017 15:08	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 15:08	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:08	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:08	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:08	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:08	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:08	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:08	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:08	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:08	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:08	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:08	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:08	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 15:08	WG994563
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 15:08	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:08	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:08	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:08	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:08	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:08	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:08	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 15:08	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:08	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 15:08	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:08	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:08	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:08	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:08	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 15:08	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:08	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:08	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:08	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 15:08	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:08	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:08	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:08	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:08	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:08	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:08	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:08	WG994563
Vinyl chloride	1.32		0.118	0.500	1	07/02/2017 15:08	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:08	WG994563

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

JC  
7/25/17





Collected date/time: 06/22/17 09:55

L918096

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	107 ✓			80.0-120		07/02/2017 15:08	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.2 ✓			76.0-123		07/02/2017 15:08	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	101 ✓			80.0-120		07/02/2017 15:08	<a href="#">WG994563</a>

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

*Handwritten signature and date: 7/25/17*

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	401000		2710	20000	1	06/29/2017 02:10	WG993348

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	33000		51.9	1000	1	06/23/2017 18:30	WG992228
Nitrate	U		22.7	100	1	06/23/2017 18:30	WG992228
Sulfate	46100		77.4	5000	1	06/23/2017 18:30	WG992228

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	7390		102	1000	1	06/29/2017 16:33	WG993861

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	6190		15.0	100	1	06/28/2017 13:28	WG993124
Manganese	1190		0.250	5.00	1	06/28/2017 13:28	WG993124

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	3570		1.44	3.39	5	06/25/2017 14:31	WG992750
Ethane	4.98		0.296	1.29	1	06/25/2017 10:56	WG992330
Ethene	U		0.422	1.27	1	06/25/2017 10:56	WG992330

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	07/02/2017 15:26	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:26	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 15:26	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:26	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:26	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:26	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 15:26	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 15:26	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:26	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:26	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:26	WG994563
Carbon disulfide	U	UJ JO	0.101	0.500	1	07/02/2017 15:26	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:26	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:26	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:26	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 15:26	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 15:26	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 15:26	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:26	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:26	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 15:26	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:26	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:26	WG994563

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

*Jo 7/25/17*

MW115-062217

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/22/17 12:15

L918096

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:26	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:26	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:26	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:26	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:26	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:26	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:26	WG994563
cis-1,2-Dichloroethene	0.523		0.0933	0.500	1	07/02/2017 15:26	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 15:26	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:26	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:26	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:26	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:26	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:26	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:26	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:26	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:26	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:26	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:26	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:26	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 15:26	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 15:26	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:26	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:26	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:26	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:26	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:26	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:26	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 15:26	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:26	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 15:26	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:26	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:26	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:26	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:26	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 15:26	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:26	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:26	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:26	WG994563
1,1,2-Trichloroethane	U		0.185	0.500	1	07/02/2017 15:26	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:26	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:26	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:26	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:26	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:26	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:26	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:26	WG994563
Vinyl chloride	8.45		0.118	0.500	1	07/02/2017 15:26	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:26	WG994563
(S) Toluene-d8	109			80.0-120		07/02/2017 15:26	WG994563
(S) Dibromofluoromethane	96.2			76.0-123		07/02/2017 15:26	WG994563
(S) 4-Bromofluorobenzene	102			80.0-120		07/02/2017 15:26	WG994563

- CP
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

JC  
7/25/17



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	06/24/2017 07:46	WG992527
(S) o,a,a-Trifluorotoluene(FID)	98.1			77.0-122		06/24/2017 07:46	WG992527

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.74	J	1.05	25.0	1	07/02/2017 15:44	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 15:44	WG994563
Benzene	0.471	J	0.0896	0.500	1	07/02/2017 15:44	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 15:44	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 15:44	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 15:44	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 15:44	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 15:44	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 15:44	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 15:44	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 15:44	WG994563
Carbon disulfide	U	VS JO	0.101	0.500	1	07/02/2017 15:44	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 15:44	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 15:44	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 15:44	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 15:44	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 15:44	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 15:44	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 15:44	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 15:44	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 15:44	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 15:44	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 15:44	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 15:44	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 15:44	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 15:44	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 15:44	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 15:44	WG994563
cis-1,2-Dichloroethene	6.10		0.0933	0.500	1	07/02/2017 15:44	WG994563
trans-1,2-Dichloroethene	0.610		0.152	0.500	1	07/02/2017 15:44	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 15:44	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 15:44	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 15:44	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 15:44	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 15:44	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 15:44	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 15:44	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 15:44	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 15:44	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 15:44	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 15:44	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 15:44	WG994563
Iodomethane	U	VS JO J3	0.377	10.0	1	07/02/2017 15:44	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 15:44	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 15:44	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 15:44	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 15:44	WG994563

Co

Tc

Ss

Cn

Si

Qc

GI

AI

Sc

Handwritten signature and date: Jc 7/25/17



Collected date/time: 06/22/17 14:15

L918096

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 15:44	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 15:44	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 15:44	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 15:44	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 15:44	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 15:44	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 15:44	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 15:44	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 15:44	WG994563
Toluene	1.70		0.412	0.500	1	07/02/2017 15:44	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 15:44	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 15:44	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 15:44	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 15:44	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 15:44	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 15:44	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 15:44	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 15:44	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 15:44	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 15:44	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 15:44	WG994563
Vinyl chloride	3.57		0.118	0.500	1	07/02/2017 15:44	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 15:44	WG994563
(S) Toluene-d8	108			80.0-120		07/02/2017 15:44	WG994563
(S) Dibromofluoromethane	96.5			76.0-123		07/02/2017 15:44	WG994563
(S) 4-Bromofluorobenzene	99.6			80.0-120		07/02/2017 15:44	WG994563

1 Cp

2 Tc

3 Ss

4 Cn

Sr

5 Qc

7 GI

8 AI

9 Sc

gc 7/25/17

July 05, 2017

## PES Environmental, Inc.- WA

Sample Delivery Group: L918537  
Samples Received: 06/24/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
FMW-131-062317 L918537-01	<b>5</b>	
GEI-2-062317 L918537-02	<b>7</b>	
FMW-3D-062317 L918537-03	<b>9</b>	
FMW-129-062317 L918537-04	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>13</b>	<b>6</b> Qc
Wet Chemistry by Method 2320 B-2011	<b>13</b>	
Wet Chemistry by Method 9056A	<b>14</b>	<b>7</b> Gl
Wet Chemistry by Method 9060A	<b>16</b>	<b>8</b> Al
Metals (ICPMS) by Method 6020A	<b>17</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>18</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>21</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>25</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>26</b>	
<b>Sc: Chain of Custody</b>	<b>27</b>	

# SAMPLE SUMMARY



## FMW-131-062317 L918537-01 GW

Collected by  
Shannon McKernan      Collected date/time  
06/23/17 08:45      Received date/time  
06/24/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994293	1	06/30/17 16:38	06/30/17 16:38	MCG
Wet Chemistry by Method 9056A	WG992587	1	06/24/17 17:43	06/24/17 17:43	DR
Wet Chemistry by Method 9060A	WG993861	1	06/29/17 20:43	06/29/17 20:43	SJM
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:32	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG992737	1	06/25/17 13:24	06/25/17 13:24	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 16:38	07/02/17 16:38	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

## GEI-2-062317 L918537-02 GW

Collected by  
Shannon McKernan      Collected date/time  
06/23/17 10:45      Received date/time  
06/24/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994293	1	06/30/17 16:45	06/30/17 16:45	MCG
Wet Chemistry by Method 9056A	WG992587	1	06/24/17 18:27	06/24/17 18:27	DR
Wet Chemistry by Method 9060A	WG993861	1	06/29/17 21:24	06/29/17 21:24	SJM
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:35	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG992737	1	06/25/17 13:30	06/25/17 13:30	MJ
Volatile Organic Compounds (GC) by Method RSK175	WG992750	20	06/25/17 14:34	06/25/17 14:34	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 16:56	07/02/17 16:56	JHH

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## FMW-3D-062317 L918537-03 GW

Collected by  
Shannon McKernan      Collected date/time  
06/23/17 12:45      Received date/time  
06/24/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 17:14	07/02/17 17:14	JHH

## FMW-129-062317 L918537-04 GW

Collected by  
Shannon McKernan      Collected date/time  
06/23/17 15:05      Received date/time  
06/24/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994293	1	06/30/17 16:51	06/30/17 16:51	MCG
Wet Chemistry by Method 9056A	WG992587	1	06/24/17 18:42	06/24/17 18:42	DR
Wet Chemistry by Method 9060A	WG993861	1	06/29/17 21:35	06/29/17 21:35	SJM
Metals (ICPMS) by Method 6020A	WG993124	1	06/28/17 09:01	06/28/17 13:39	JPD
Volatile Organic Compounds (GC) by Method RSK175	WG992750	1	06/25/17 14:36	06/25/17 14:36	MJ
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 17:32	07/02/17 17:32	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	10	07/04/17 11:43	07/04/17 11:43	JHH





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

Brian Ford  
Technical Service Representative

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



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	273000		2710	20000	1	06/30/2017 16:38	<a href="#">WG994293</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	28100		51.9	1000	1	06/24/2017 17:43	<a href="#">WG992587</a>
Nitrate	109		22.7	100	1	06/24/2017 17:43	<a href="#">WG992587</a>
Sulfate	29200		77.4	5000	1	06/24/2017 17:43	<a href="#">WG992587</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1560		102	1000	1	06/29/2017 20:43	<a href="#">WG993861</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	2390		15.0	100	1	06/28/2017 13:32	<a href="#">WG993124</a>
Manganese	1260		0.250	5.00	1	06/28/2017 13:32	<a href="#">WG993124</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	87.4		0.287	0.678	1	06/25/2017 13:24	<a href="#">WG992737</a>
Ethane	U		0.296	1.29	1	06/25/2017 13:24	<a href="#">WG992737</a>
Ethene	U		0.422	1.27	1	06/25/2017 13:24	<a href="#">WG992737</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 16:38	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 16:38	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 16:38	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Carbon disulfide	U	<u>JO</u>	0.101	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 16:38	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 16:38	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 16:38	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 16:38	<a href="#">WG994563</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 16:38	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 16:38	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 16:38	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 16:38	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 16:38	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 16:38	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 16:38	WG994563
cis-1,2-Dichloroethene	3.61		0.0933	0.500	1	07/02/2017 16:38	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 16:38	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 16:38	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 16:38	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 16:38	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 16:38	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 16:38	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 16:38	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 16:38	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 16:38	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 16:38	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 16:38	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 16:38	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 16:38	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 16:38	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 16:38	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 16:38	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 16:38	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 16:38	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 16:38	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 16:38	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 16:38	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 16:38	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 16:38	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 16:38	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 16:38	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 16:38	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 16:38	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 16:38	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 16:38	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 16:38	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 16:38	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 16:38	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 16:38	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 16:38	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 16:38	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 16:38	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 16:38	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 16:38	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 16:38	WG994563
Vinyl chloride	0.264	J	0.118	0.500	1	07/02/2017 16:38	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 16:38	WG994563
(S) Toluene-d8	108			80.0-120		07/02/2017 16:38	WG994563
(S) Dibromofluoromethane	94.0			76.0-123		07/02/2017 16:38	WG994563
(S) 4-Bromofluorobenzene	98.9			80.0-120		07/02/2017 16:38	WG994563

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	458000		2710	20000	1	06/30/2017 16:45	<a href="#">WG994293</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	23000		51.9	1000	1	06/24/2017 18:27	<a href="#">WG992587</a>
Nitrate	U		22.7	100	1	06/24/2017 18:27	<a href="#">WG992587</a>
Sulfate	8900		77.4	5000	1	06/24/2017 18:27	<a href="#">WG992587</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	6840		102	1000	1	06/29/2017 21:24	<a href="#">WG993861</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	14900		15.0	100	1	06/28/2017 13:35	<a href="#">WG993124</a>
Manganese	483		0.250	5.00	1	06/28/2017 13:35	<a href="#">WG993124</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	10500		5.74	13.6	20	06/25/2017 14:34	<a href="#">WG992750</a>
Ethane	23.8		0.296	1.29	1	06/25/2017 13:30	<a href="#">WG992737</a>
Ethene	42.5		0.422	1.27	1	06/25/2017 13:30	<a href="#">WG992737</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 16:56	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 16:56	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Carbon disulfide	U	<u>JO</u>	0.101	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 16:56	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 16:56	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 16:56	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 16:56	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 16:56	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 16:56	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 16:56	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 16:56	WG994563
cis-1,2-Dichloroethene	16.3		0.0933	0.500	1	07/02/2017 16:56	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 16:56	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 16:56	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 16:56	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 16:56	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 16:56	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 16:56	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 16:56	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 16:56	WG994563
Di-isopropyl ether	0.130	J	0.0924	0.500	1	07/02/2017 16:56	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 16:56	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 16:56	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 16:56	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 16:56	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 16:56	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 16:56	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 16:56	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 16:56	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 16:56	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 16:56	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 16:56	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 16:56	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 16:56	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 16:56	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 16:56	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 16:56	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 16:56	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 16:56	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 16:56	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 16:56	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 16:56	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 16:56	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 16:56	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 16:56	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 16:56	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 16:56	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 16:56	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 16:56	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 16:56	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 16:56	WG994563
Vinyl chloride	127		0.118	0.500	1	07/02/2017 16:56	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 16:56	WG994563
(S) Toluene-d8	106			80.0-120		07/02/2017 16:56	WG994563
(S) Dibromofluoromethane	94.8			76.0-123		07/02/2017 16:56	WG994563
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 16:56	WG994563

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



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 17:14	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:14	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 17:14	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:14	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:14	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:14	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 17:14	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 17:14	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:14	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:14	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:14	WG994563
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 17:14	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:14	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:14	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:14	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 17:14	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 17:14	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 17:14	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:14	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:14	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 17:14	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:14	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:14	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:14	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:14	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:14	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:14	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 17:14	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/02/2017 17:14	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:14	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:14	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:14	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:14	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:14	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:14	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:14	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:14	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:14	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:14	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:14	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:14	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 17:14	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:14	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:14	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:14	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:14	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:14	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:14	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:14	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:14	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:14	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:14	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:14	WG994563

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Toluene	U		0.412	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:14	<a href="#">WG994563</a>
Vinyl chloride	U		0.118	0.500	1	07/02/2017 17:14	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:14	<a href="#">WG994563</a>
(S) Toluene-d8	106			80.0-120		07/02/2017 17:14	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.4			76.0-123		07/02/2017 17:14	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 17:14	<a href="#">WG994563</a>

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	296000		2710	20000	1	06/30/2017 16:51	<a href="#">WG994293</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	36100		51.9	1000	1	06/24/2017 18:42	<a href="#">WG992587</a>
Nitrate	91.4	J	22.7	100	1	06/24/2017 18:42	<a href="#">WG992587</a>
Sulfate	95500		77.4	5000	1	06/24/2017 18:42	<a href="#">WG992587</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1700		102	1000	1	06/29/2017 21:35	<a href="#">WG993861</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	9920		15.0	100	1	06/28/2017 13:39	<a href="#">WG993124</a>
Manganese	412		0.250	5.00	1	06/28/2017 13:39	<a href="#">WG993124</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	276		0.287	0.678	1	06/25/2017 14:36	<a href="#">WG992750</a>
Ethane	14.7		0.296	1.29	1	06/25/2017 14:36	<a href="#">WG992750</a>
Ethene	U		0.422	1.27	1	06/25/2017 14:36	<a href="#">WG992750</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.15	J	1.05	25.0	1	07/02/2017 17:32	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:32	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 17:32	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 17:32	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 17:32	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 17:32	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:32	<a href="#">WG994563</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:32	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:32	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:32	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:32	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:32	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:32	WG994563
1,1-Dichloroethene	1.37		0.188	0.500	1	07/02/2017 17:32	WG994563
cis-1,2-Dichloroethene	474		0.933	5.00	10	07/04/2017 11:43	WG994563
trans-1,2-Dichloroethene	1.21		0.152	0.500	1	07/02/2017 17:32	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:32	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:32	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:32	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:32	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:32	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:32	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:32	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:32	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:32	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:32	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:32	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:32	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 17:32	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:32	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:32	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:32	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:32	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:32	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:32	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:32	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:32	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:32	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:32	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:32	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:32	WG994563
Tetrachloroethene	81.1		0.199	0.500	1	07/02/2017 17:32	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 17:32	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:32	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:32	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:32	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:32	WG994563
Trichloroethene	182		0.153	0.500	1	07/02/2017 17:32	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:32	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:32	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:32	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:32	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:32	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:32	WG994563
Vinyl chloride	4.13		0.118	0.500	1	07/02/2017 17:32	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:32	WG994563
(S) Toluene-d8	99.2			80.0-120		07/04/2017 11:43	WG994563
(S) Toluene-d8	103			80.0-120		07/02/2017 17:32	WG994563
(S) Dibromofluoromethane	97.8			76.0-123		07/02/2017 17:32	WG994563
(S) Dibromofluoromethane	118			76.0-123		07/04/2017 11:43	WG994563
(S) 4-Bromofluorobenzene	107			80.0-120		07/04/2017 11:43	WG994563
(S) 4-Bromofluorobenzene	98.6			80.0-120		07/02/2017 17:32	WG994563

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



Method Blank (MB)

(MB) R3230425-1 06/30/17 15:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Alkalinity	4340	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L918392-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918392-01 06/30/17 15:55 • (DUP) R3230425-2 06/30/17 16:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	183000	188000	1	2.00		20

L918687-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-01 06/30/17 20:06 • (DUP) R3230425-6 06/30/17 20:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	543000	504000	1	7.00		20

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

(LCS) R3230425-3 06/30/17 16:57 • (LCSD) R3230425-5 06/30/17 19:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	109000	108000	109	108	85.0-115			1.00	20



Method Blank (MB)

(MB) R3228654-1 06/24/17 06:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

L918361-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918361-01 06/24/17 09:50 • (DUP) R3228654-4 06/24/17 10:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	2660	2750	1	3		15
Sulfate	85500	85500	1	0		15

5 Sr

6 Qc

L918431-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918431-01 06/24/17 15:25 • (DUP) R3228654-6 06/24/17 15:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	6720	6650	1	1		15
Nitrate	1060	1360	1	25	J3	15
Sulfate	ND	0.000	1	0		15

7 Gl

8 Al

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

(LCS) R3228654-2 06/24/17 06:18 • (LCSD) R3228654-3 06/24/17 06:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39300	39400	98	98	80-120			0	15
Nitrate	8000	8040	8040	100	101	80-120			0	15
Sulfate	40000	39400	39500	99	99	80-120			0	15

9 Sc

L918431-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L918431-02 06/24/17 11:36 • (MS) R3228654-5 06/24/17 11:51

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	8980	57800	98	1	80-120	
Nitrate	5000	1830	6800	99	1	80-120	
Sulfate	50000	ND	50500	99	1	80-120	



L918537-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918537-01 06/24/17 17:43 • (MS) R3228654-7 06/24/17 17:58 • (MSD) R3228654-8 06/24/17 18:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits
Chloride	50000	28100	76000	76700	96	97	1	80-120			1	15
Nitrate	5000	109	4840	4990	95	98	1	80-120			3	15
Sulfate	50000	29200	77000	77700	96	97	1	80-120			1	15

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



Method Blank (MB)

(MB) R3230074-2 06/29/17 13:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L917700-05 Original Sample (OS) • Duplicate (DUP)

(OS) L917700-05 06/29/17 14:59 • (DUP) R3230074-4 06/29/17 15:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	7540	7250	1	4		20

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3230074-3 06/29/17 14:08 • (LCSD) R3230074-5 06/29/17 17:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	71100	70300	95	94	85-115			1	20

<sup>9</sup> Sc

L918537-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918537-01 06/29/17 20:43 • (MS) R3230074-6 06/29/17 20:58 • (MSD) R3230074-7 06/29/17 21:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	1560	48400	48500	94	94	1	80-120			0	20



Method Blank (MB)

(MB) R3229499-1 06/28/17 11:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3229499-2 06/28/17 12:03 • (LCSD) R3229499-3 06/28/17 12:06

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Iron	5000	5100	5150	102	103	80-120			1	20
Manganese	50.0	46.0	46.4	92	93	80-120			1	20

5 Sr

6 Qc

L917294-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L917294-12 06/28/17 12:10 • (MS) R3229499-5 06/28/17 12:17 • (MSD) R3229499-6 06/28/17 12:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Iron	5000	57.6	5120	5080	101	100	1	75-125			1	20
Manganese	50.0	3010	3060	3040	118	67	1	75-125	V		1	20

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3228532-1 06/25/17 12:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918537-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918537-01 06/25/17 13:24 • (DUP) R3228532-2 06/25/17 13:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	87.4	78.1	1	11.2		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L918570-05 Original Sample (OS) • Duplicate (DUP)

(OS) L918570-05 06/25/17 13:41 • (DUP) R3228532-3 06/25/17 13:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	935	878	1	6.29		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

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

(LCS) R3228532-6 06/25/17 14:06 • (LCSD) R3228532-7 06/25/17 14:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	70.3	67.6	104	99.7	70.0-130			3.89	20
Ethane	129	120	121	92.7	93.6	70.0-130			0.980	20
Ethene	127	114	115	89.5	90.3	70.0-130			0.920	20

L918570-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918570-05 06/25/17 13:41 • (MS) R3228532-4 06/25/17 13:59 • (MSD) R3228532-5 06/25/17 14:02

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Methane	67.8	935	932	942	0.000	11.2	1	70.0-130	V	V	1.15	20
Ethane	129	U	147	145	114	112	1	70.0-130			1.37	20



L918570-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918570-05 06/25/17 13:41 • (MS) R3228532-4 06/25/17 13:59 • (MSD) R3228532-5 06/25/17 14:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits
Ethene	127	U	139	137	110	108	1	70.0-130			1.62	20

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





Method Blank (MB)

(MB) R3228534-1 06/25/17 14:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

L918096-03 Original Sample (OS) • Duplicate (DUP)

(OS) L918096-03 06/25/17 14:31 • (DUP) R3228534-2 06/25/17 14:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	3570	3600	5	0.820		20
Ethane	U	0.000	5	0.000		20
Ethene	U	0.000	5	0.000		20

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

(LCS) R3228534-3 06/25/17 14:52 • (LCSD) R3228534-4 06/25/17 14:55

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	69.0	67.3	102	99.2	70.0-130			2.54	20
Ethane	129	121	119	94.0	92.0	70.0-130			2.13	20
Ethene	127	115	113	90.3	89.0	70.0-130			1.50	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	1.00
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	105			80.0-120
(S) Dibromofluoromethane	94.3			76.0-123
(S) 4-Bromofluorobenzene	97.6			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	107	112	85.3	89.2	10.0-160			4.52	23
Acrylonitrile	125	130	124	104	99.4	60.0-142			4.37	20
Benzene	25.0	23.2	24.2	92.8	96.7	69.0-123			4.06	20
Bromobenzene	25.0	24.0	24.9	96.0	99.6	79.0-120			3.68	20
Bromodichloromethane	25.0	22.3	23.5	89.3	94.2	76.0-120			5.27	20
Bromochloromethane	25.0	25.5	26.5	102	106	76.0-122			3.56	20
Bromoform	25.0	23.4	24.3	93.6	97.3	67.0-132			3.88	20
Bromomethane	25.0	20.6	23.9	82.5	95.7	18.0-160			14.9	20
n-Butylbenzene	25.0	22.8	23.7	91.4	94.7	72.0-126			3.54	20
sec-Butylbenzene	25.0	22.8	23.3	91.2	93.3	74.0-121			2.28	20
tert-Butylbenzene	25.0	23.3	23.9	93.2	95.5	75.0-122			2.46	20
Carbon disulfide	25.0	19.9	21.1	79.5	84.4	55.0-127			5.96	20
Carbon tetrachloride	25.0	23.1	24.2	92.5	96.6	63.0-122			4.41	20
Chlorobenzene	25.0	25.5	26.0	102	104	79.0-121			1.76	20
Chlorodibromomethane	25.0	24.1	24.7	96.3	98.9	75.0-125			2.67	20
Chloroethane	25.0	23.6	24.6	94.6	98.4	47.0-152			3.99	20
Chloroform	25.0	22.5	23.5	89.9	94.0	72.0-121			4.50	20
Chloromethane	25.0	22.2	24.3	88.7	97.0	48.0-139			8.96	20
2-Chlorotoluene	25.0	24.1	24.8	96.4	99.3	74.0-122			3.03	20
4-Chlorotoluene	25.0	24.3	24.7	97.0	99.0	79.0-120			2.00	20
1,2-Dibromo-3-Chloropropane	25.0	24.8	24.1	99.3	96.2	64.0-127			3.17	20
1,2-Dibromoethane	25.0	25.5	25.6	102	102	77.0-123			0.530	20
Dibromomethane	25.0	23.8	24.9	95.2	99.5	78.0-120			4.38	20
1,2-Dichlorobenzene	25.0	24.1	25.2	96.2	101	80.0-120			4.63	20
1,3-Dichlorobenzene	25.0	24.0	25.0	95.9	100	72.0-123			4.35	20
1,4-Dichlorobenzene	25.0	23.7	24.5	94.9	98.1	77.0-120			3.24	20
Dichlorodifluoromethane	25.0	30.8	32.1	123	128	49.0-155			4.04	20
1,1-Dichloroethane	25.0	24.0	25.4	96.0	102	70.0-126			5.71	20
1,2-Dichloroethane	25.0	23.8	24.8	95.2	99.3	67.0-126			4.16	20
1,1-Dichloroethene	25.0	24.1	25.3	96.3	101	64.0-129			4.79	20
cis-1,2-Dichloroethene	25.0	22.8	23.7	91.3	94.8	73.0-120			3.80	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.1	71.0-121			2.82	20
1,2-Dichloropropane	25.0	24.3	25.0	97.2	100	75.0-125			2.85	20
1,1-Dichloropropene	25.0	25.0	25.9	100	104	71.0-129			3.59	20
1,3-Dichloropropane	25.0	25.4	26.1	102	105	80.0-121			2.83	20
cis-1,3-Dichloropropene	25.0	24.8	25.5	99.0	102	79.0-123			2.96	20
trans-1,3-Dichloropropene	25.0	25.7	25.6	103	102	74.0-127			0.470	20
trans-1,4-Dichloro-2-butene	25.0	20.7	21.1	82.8	84.2	55.0-134			1.68	20
2,2-Dichloropropane	25.0	23.0	24.1	91.9	96.5	60.0-125			4.82	20
Di-isopropyl ether	25.0	23.1	24.2	92.2	96.6	59.0-133			4.64	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.0	25.4	100	102	77.0-120			1.45	20
Hexachloro-1,3-butadiene	25.0	21.5	21.5	86.0	85.9	64.0-131			0.120	20
2-Hexanone	125	120	118	96.4	94.7	58.0-147			1.73	20
n-Hexane	25.0	21.4	22.1	85.5	88.5	56.0-124			3.43	20
Iodomethane	125	74.7	106	59.7	84.5	57.0-140		J3	34.3	20
Isopropylbenzene	25.0	23.3	24.4	93.2	97.8	75.0-120			4.83	20
p-Isopropyltoluene	25.0	23.1	23.7	92.5	94.6	74.0-126			2.25	20
2-Butanone (MEK)	125	112	113	89.3	90.4	37.0-158			1.26	20
Methylene Chloride	25.0	21.8	23.4	87.4	93.5	66.0-121			6.77	20
4-Methyl-2-pentanone (MIBK)	125	116	115	93.2	91.8	59.0-143			1.47	20
Methyl tert-butyl ether	25.0	22.9	23.8	91.4	95.3	64.0-123			4.12	20
Naphthalene	25.0	23.3	23.7	93.3	94.8	62.0-128			1.55	20
n-Propylbenzene	25.0	23.9	25.0	95.5	99.9	79.0-120			4.43	20
Styrene	25.0	24.5	26.1	97.9	104	78.0-124			6.33	20
1,1,1,2-Tetrachloroethane	25.0	24.3	24.7	97.2	98.8	75.0-122			1.62	20
1,1,2,2-Tetrachloroethane	25.0	24.9	25.2	99.7	101	71.0-122			0.930	20
1,1,2-Trichlorotrifluoroethane	25.0	25.3	26.4	101	105	61.0-136			4.06	20
Tetrachloroethene	25.0	25.4	26.3	102	105	70.0-127			3.29	20
Toluene	25.0	23.8	24.5	95.0	97.9	77.0-120			3.05	20
1,2,3-Trichlorobenzene	25.0	22.4	23.1	89.5	92.5	61.0-133			3.27	20
1,2,4-Trichlorobenzene	25.0	22.8	23.2	91.1	92.8	69.0-129			1.81	20
1,1,1-Trichloroethane	25.0	23.2	24.1	92.9	96.6	68.0-122			3.80	20
1,1,2-Trichloroethane	25.0	24.6	24.9	98.3	99.8	78.0-120			1.47	20
Trichloroethene	25.0	24.8	26.1	99.1	104	78.0-120			5.17	20
Trichlorofluoromethane	25.0	23.3	24.6	93.3	98.3	56.0-137			5.18	20
1,2,3-Trichloropropane	25.0	25.2	26.0	101	104	72.0-124			3.19	20
1,2,4-Trimethylbenzene	25.0	23.0	23.8	92.1	95.4	75.0-120			3.47	20
1,2,3-Trimethylbenzene	25.0	23.5	24.4	94.0	97.4	75.0-120			3.59	20
1,3,5-Trimethylbenzene	25.0	22.8	24.0	91.4	95.9	75.0-120			4.84	20
Vinyl acetate	125	114	115	91.5	92.3	46.0-160			0.860	20
Vinyl chloride	25.0	27.7	29.1	111	116	64.0-133			5.11	20
Xylenes, Total	75.0	73.0	75.6	97.3	101	77.0-120			3.50	20
(S) Toluene-d8				105	102	80.0-120				
(S) Dibromofluoromethane				96.6	98.2	76.0-123				
(S) 4-Bromofluorobenzene				99.0	100	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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



## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

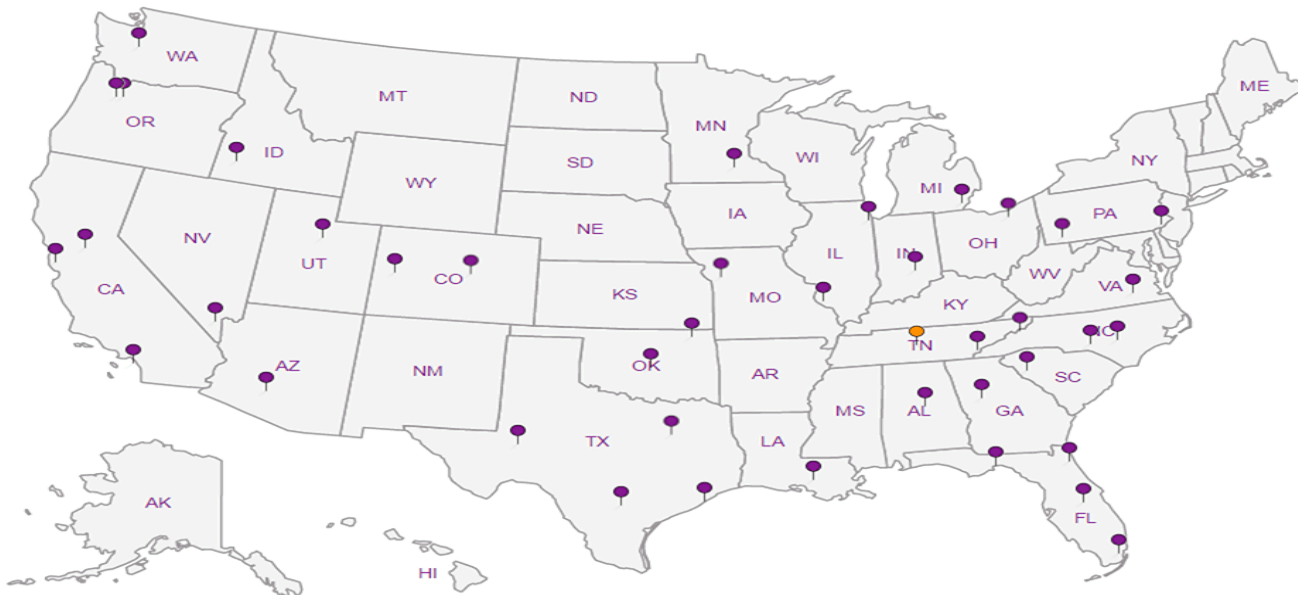
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Immediately  
Packed on Ice N    Y    **A**

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

No.  
of  
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk,Cl,NO3,S04 250mlHDPE-NoPres	NWTPHGX 40mlAmb-HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
FMW-131-062317	GRAB	GW	68	6/23/17	0845	9	X	X	X	X	X	X
GEI-2-062317	↓	GW	55.5	↓	1045	9	X	X	X	X	X	X
FMW-3D-062317	↓	GW	63.5	↓	1245	4	X	X	X	X	X	X
FMW-129-062317	↓	GW	87	↓	1505	9	X	X	X	X	X	X
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7372 1955 0774**

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If Applicable	
VGA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Relinquished by: (Signature)

Date: **6/23/17**  
Time: **1645**

Received by: (Signature)

Trip Blank Received: Yes/No  
HCL/ MeOH  
TBR

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received by: (Signature)

Temp: **1.6** °C  
Bottles Received: **31**

Hold: \_\_\_\_\_

Relinquished by: (Signature)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

Received for lab by: (Signature)

Date: **6/24/17**  
Time: **0845**

Condition: **NCF / OK**

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



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



L# **L918537**  
**G180**

Acctnum: **PESENVSWA**  
Template: **T124201**  
Prelogin: **P603202**  
TSR: **110 - Brian Ford**  
PB: **5-31-176**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

-01  
02  
03  
04



## MEMORANDUM

**TO:** Project File **DATE:** July 25, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 23, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L918537

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Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 23, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L918537. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L918537 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 1.6 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for carbon disulfide and iodomethane associated with analytical batch WG994563 (analyzed on July 2, 2017). These results are qualified by the laboratory “J0” to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All sample results for carbon disulfide and iodomethane are estimated and qualified (UJ).**

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

#### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

#### *USEPA Method 6020:*

Laboratory method blank was included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blank at or above the RDL.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of alkalinity was measured in the method blank between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity sample results are significantly greater than the detections in the blank.

### **Trip Blank Results**

#### *USEPA Method 8260C:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

#### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample

duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples and on sample FMW-131-062317. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit with the following discussion:

- Nitrate RPD result associated with batch WG992587 is greater than laboratory acceptance criteria but the laboratory duplicate analysis was performed on a non-client sample. No action is taken since the LCS/LCSD RPD result is acceptable.

*EPA Method 9060A:* A laboratory duplicate sample analyses was performed on a non-client sample within the analytical batch. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG994563) RPD for compound iodomethane are above laboratory acceptance criteria (20%) and qualified by the laboratory (J3). No action was taken on this basis as LCS/LCSD percent recovery results are recovered wide but are within control limits.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analysis was performed on a non-client sample. The methane concentration in the non-client sample (WG992737) is greater than four times the spike amount and the MS was not recovered. No action was taken other than to note this. Refer to LCS/LCSD results for additional information on accuracy and precision.

*USEPA Method 6020:*

MS/MSD analysis was performed on a non-client sample (WG993124) within the analytical batch. Manganese sample amount was greater than four times the spike amount and the MSD was not recovered. No action was taken other than to note this. Remaining MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis was performed on non-client sample and on sample FMW-131-062317 within the analytical batch. MS % Rs and MS/MSD % Rs and RPDs for anions were within the laboratory control criteria for water.

*EPA Method 9060A*: MS/MSD analyses were performed on a non-client sample within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	273000		2710	20000	1	06/30/2017 16:38	WG994293

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	28100		51.9	1000	1	06/24/2017 17:43	WG992587
Nitrate	109		22.7	100	1	06/24/2017 17:43	WG992587
Sulfate	29200		77.4	5000	1	06/24/2017 17:43	WG992587

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1560		102	1000	1	06/29/2017 20:43	WG993861

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	2390		15.0	100	1	06/28/2017 13:32	WG993124
Manganese	1260		0.250	5.00	1	06/28/2017 13:32	WG993124

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	87.4		0.287	0.678	1	06/25/2017 13:24	WG992737
Ethane	U		0.296	1.29	1	06/25/2017 13:24	WG992737
Ethene	U		0.422	1.27	1	06/25/2017 13:24	WG992737

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	07/02/2017 16:38	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 16:38	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 16:38	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 16:38	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 16:38	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 16:38	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 16:38	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 16:38	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 16:38	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 16:38	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 16:38	WG994563
Carbon disulfide	U	UJ JO	0.101	0.500	1	07/02/2017 16:38	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 16:38	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 16:38	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 16:38	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 16:38	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 16:38	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 16:38	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 16:38	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 16:38	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 16:38	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 16:38	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 16:38	WG994563

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 16:38	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 16:38	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 16:38	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 16:38	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 16:38	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 16:38	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 16:38	WG994563
cis-1,2-Dichloroethene	3.61		0.0933	0.500	1	07/02/2017 16:38	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 16:38	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 16:38	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 16:38	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 16:38	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 16:38	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 16:38	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 16:38	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 16:38	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 16:38	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 16:38	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 16:38	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 16:38	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 16:38	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 16:38	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 16:38	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 16:38	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 16:38	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 16:38	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 16:38	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 16:38	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 16:38	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 16:38	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 16:38	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 16:38	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 16:38	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 16:38	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 16:38	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 16:38	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 16:38	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 16:38	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 16:38	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 16:38	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 16:38	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 16:38	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 16:38	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 16:38	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 16:38	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 16:38	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 16:38	WG994563
Vinyl chloride	0.264	J J	0.118	0.500	1	07/02/2017 16:38	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 16:38	WG994563
(S) Toluene-d8	108	✓		80.0-120		07/02/2017 16:38	WG994563
(S) Dibromofluoromethane	94.0	✓		76.0-123		07/02/2017 16:38	WG994563
(S) 4-Bromofluorobenzene	98.9	✓		80.0-120		07/02/2017 16:38	WG994563

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- GI
- AI
- Sc





Collected date/time: 06/23/17 10:45

L918537

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	458000		2710	20000	1	06/30/2017 16:45	<a href="#">WG994293</a>

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	23000		51.9	1000	1	06/24/2017 18:27	<a href="#">WG992587</a>
Nitrate	U		22.7	100	1	06/24/2017 18:27	<a href="#">WG992587</a>
Sulfate	8900		77.4	5000	1	06/24/2017 18:27	<a href="#">WG992587</a>

Ss

Cn

Si

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	6840		102	1000	1	06/29/2017 21:24	<a href="#">WG993861</a>

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	14900		15.0	100	1	06/28/2017 13:35	<a href="#">WG993124</a>
Manganese	483		0.250	5.00	1	06/28/2017 13:35	<a href="#">WG993124</a>

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	10500		5.74	13.6	<u>20</u>	06/25/2017 14:34	<a href="#">WG992750</a>
Ethane	23.8		0.296	1.29	1	06/25/2017 13:30	<a href="#">WG992737</a>
Ethene	42.5		0.422	1.27	1	06/25/2017 13:30	<a href="#">WG992737</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	07/02/2017 16:56	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 16:56	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Carbon disulfide	U	<i>UJ JO</i>	0.101	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 16:56	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 16:56	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 16:56	<a href="#">WG994563</a>



Collected date/time: 06/23/17 10:45

L918537

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 16:56	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 16:56	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 16:56	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 16:56	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 16:56	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 16:56	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 16:56	WG994563
cis-1,2-Dichloroethene	16.3		0.0933	0.500	1	07/02/2017 16:56	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 16:56	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 16:56	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 16:56	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 16:56	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 16:56	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 16:56	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 16:56	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 16:56	WG994563
Di-isopropyl ether	0.130	J J	0.0924	0.500	1	07/02/2017 16:56	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 16:56	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 16:56	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 16:56	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 16:56	WG994563
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 16:56	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 16:56	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 16:56	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 16:56	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 16:56	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 16:56	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 16:56	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 16:56	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 16:56	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 16:56	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 16:56	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 16:56	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 16:56	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 16:56	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 16:56	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 16:56	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 16:56	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 16:56	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 16:56	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 16:56	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 16:56	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 16:56	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 16:56	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 16:56	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 16:56	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 16:56	WG994563
Vinyl chloride	127		0.118	0.500	1	07/02/2017 16:56	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 16:56	WG994563
(S) Toluene-d8	106			80.0-120		07/02/2017 16:56	WG994563
(S) Dibromofluoromethane	94.8			76.0-123		07/02/2017 16:56	WG994563
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 16:56	WG994563

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



Collected date/time: 06/23/17 12:45

L918537

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
Acetone	U		1.05	25.0	1	07/02/2017 17:14	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:14	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 17:14	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:14	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:14	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:14	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 17:14	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 17:14	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:14	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:14	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:14	WG994563
Carbon disulfide	U	VJ JO	0.101	0.500	1	07/02/2017 17:14	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:14	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:14	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:14	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 17:14	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 17:14	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 17:14	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:14	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:14	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 17:14	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:14	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:14	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:14	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:14	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:14	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:14	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 17:14	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/02/2017 17:14	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 17:14	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:14	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:14	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:14	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:14	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:14	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:14	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:14	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:14	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:14	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:14	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:14	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:14	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 17:14	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:14	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:14	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:14	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:14	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:14	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:14	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:14	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:14	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:14	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:14	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:14	WG994563

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



Collected date/time: 06/23/17 12:45

L918537

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:14	WG994563	1 Cp
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 17:14	WG994563	2 Tc
Toluene	U		0.412	0.500	1	07/02/2017 17:14	WG994563	3 Ss
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:14	WG994563	4 Cn
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:14	WG994563	5 Sr
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:14	WG994563	6 Qc
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:14	WG994563	7 Gl
Trichloroethene	U		0.153	0.500	1	07/02/2017 17:14	WG994563	8 Al
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:14	WG994563	9 Sc
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:14	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:14	WG994563	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:14	WG994563	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:14	WG994563	
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:14	WG994563	
Vinyl chloride	U		0.118	0.500	1	07/02/2017 17:14	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:14	WG994563	
(S) Toluene-d8	106			80.0-120		07/02/2017 17:14	WG994563	
(S) Dibromofluoromethane	96.4			76.0-123		07/02/2017 17:14	WG994563	
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 17:14	WG994563	



Collected date/time: 06/23/17 15:05

L918537

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	296000		2710	20000	1	06/30/2017 16:51	WG994293

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	36100		51.9	1000	1	06/24/2017 18:42	WG992587
Nitrate	91.4	J J	22.7	100	1	06/24/2017 18:42	WG992587
Sulfate	95500		77.4	5000	1	06/24/2017 18:42	WG992587

3 Ss

4 Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1700		102	1000	1	06/29/2017 21:35	WG993861

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	9920		15.0	100	1	06/28/2017 13:39	WG993124
Manganese	412		0.250	5.00	1	06/28/2017 13:39	WG993124

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	276		0.287	0.678	1	06/25/2017 14:36	WG992750
Ethane	14.7		0.296	1.29	1	06/25/2017 14:36	WG992750
Ethene	U		0.422	1.27	1	06/25/2017 14:36	WG992750

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.15	J J	1.05	25.0	1	07/02/2017 17:32	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:32	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 17:32	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:32	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:32	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:32	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 17:32	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 17:32	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:32	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:32	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:32	WG994563
Carbon disulfide	U	U J JO	0.101	0.500	1	07/02/2017 17:32	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:32	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:32	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:32	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 17:32	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 17:32	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 17:32	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:32	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:32	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 17:32	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:32	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:32	WG994563



Collected date/time: 06/23/17 15:05

L918537

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:32	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:32	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:32	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:32	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:32	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:32	WG994563
1,1-Dichloroethene	1.37		0.188	0.500	1	07/02/2017 17:32	WG994563
cis-1,2-Dichloroethene	474		0.933	5.00	10	07/04/2017 11:43	WG994563
trans-1,2-Dichloroethene	1.21		0.152	0.500	1	07/02/2017 17:32	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:32	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:32	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:32	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:32	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:32	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:32	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:32	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:32	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:32	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:32	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:32	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:32	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 17:32	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:32	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:32	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:32	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:32	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:32	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:32	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:32	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:32	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:32	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:32	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:32	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:32	WG994563
Tetrachloroethene	81.1		0.199	0.500	1	07/02/2017 17:32	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 17:32	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:32	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:32	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:32	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:32	WG994563
Trichloroethene	182		0.153	0.500	1	07/02/2017 17:32	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:32	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:32	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:32	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:32	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:32	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:32	WG994563
Vinyl chloride	4.13		0.118	0.500	1	07/02/2017 17:32	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:32	WG994563
(S) Toluene-d8	99.2	✓		80.0-120		07/04/2017 11:43	WG994563
(S) Toluene-d8	103	✓		80.0-120		07/02/2017 17:32	WG994563
(S) Dibromofluoromethane	97.8	✓		76.0-123		07/02/2017 17:32	WG994563
(S) Dibromofluoromethane	118	✓		76.0-123		07/04/2017 11:43	WG994563
(S) 4-Bromofluorobenzene	107	✓		80.0-120		07/04/2017 11:43	WG994563
(S) 4-Bromofluorobenzene	98.6	✓		80.0-120		07/02/2017 17:32	WG994563

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

## PES Environmental, Inc.- WA

Sample Delivery Group: L918598  
Samples Received: 06/24/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
<b>MW123-062417 L918598-01</b>	<b>5</b>	<b>5</b> Sr
<b>Qc: Quality Control Summary</b>	<b>7</b>	<b>6</b> Qc
<b>Volatile Organic Compounds (GC/MS) by Method 8260C</b>	<b>7</b>	<b>5</b> Sr
<b>Gl: Glossary of Terms</b>	<b>11</b>	<b>7</b> Gl
<b>Al: Accreditations &amp; Locations</b>	<b>12</b>	<b>8</b> Al
<b>Sc: Chain of Custody</b>	<b>13</b>	<b>9</b> Sc



# SAMPLE SUMMARY



MW123-062417 L918598-01 GW

Collected by Shannon McKernan  
 Collected date/time 06/24/17 07:50  
 Received date/time 06/24/17 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 17:50	07/02/17 17:50	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/04/17 10:53	07/04/17 10:53	JHH

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

Brian Ford  
Technical Service Representative

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



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 17:50	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:50	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 17:50	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:50	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:50	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:50	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 17:50	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 17:50	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:50	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:50	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:50	WG994563
Carbon disulfide	U		0.101	0.500	1	07/02/2017 17:50	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:50	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:50	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:50	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 17:50	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 17:50	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 17:50	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:50	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:50	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 17:50	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:50	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:50	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:50	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:50	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:50	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:50	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 17:50	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/04/2017 10:53	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:50	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:50	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:50	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:50	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:50	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:50	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:50	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:50	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:50	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:50	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:50	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:50	WG994563
Iodomethane	U	J3	0.377	10.0	1	07/02/2017 17:50	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:50	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:50	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:50	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:50	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:50	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:50	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:50	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:50	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:50	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:50	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:50	WG994563

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Toluene	U		0.412	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:50	<a href="#">WG994563</a>
Vinyl chloride	U		0.118	0.500	1	07/02/2017 17:50	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:50	<a href="#">WG994563</a>
(S) Toluene-d8	105			80.0-120		07/02/2017 17:50	<a href="#">WG994563</a>
(S) Toluene-d8	102			80.0-120		07/04/2017 10:53	<a href="#">WG994563</a>
(S) Dibromofluoromethane	116			76.0-123		07/04/2017 10:53	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.2			76.0-123		07/02/2017 17:50	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	111			80.0-120		07/04/2017 10:53	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	99.0			80.0-120		07/02/2017 17:50	<a href="#">WG994563</a>

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



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	1.00
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	105			80.0-120
(S) Dibromofluoromethane	94.3			76.0-123
(S) 4-Bromofluorobenzene	97.6			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	107	112	85.3	89.2	10.0-160			4.52	23
Acrylonitrile	125	130	124	104	99.4	60.0-142			4.37	20
Benzene	25.0	23.2	24.2	92.8	96.7	69.0-123			4.06	20
Bromobenzene	25.0	24.0	24.9	96.0	99.6	79.0-120			3.68	20
Bromodichloromethane	25.0	22.3	23.5	89.3	94.2	76.0-120			5.27	20
Bromochloromethane	25.0	25.5	26.5	102	106	76.0-122			3.56	20
Bromoform	25.0	23.4	24.3	93.6	97.3	67.0-132			3.88	20
Bromomethane	25.0	20.6	23.9	82.5	95.7	18.0-160			14.9	20
n-Butylbenzene	25.0	22.8	23.7	91.4	94.7	72.0-126			3.54	20
sec-Butylbenzene	25.0	22.8	23.3	91.2	93.3	74.0-121			2.28	20
tert-Butylbenzene	25.0	23.3	23.9	93.2	95.5	75.0-122			2.46	20
Carbon disulfide	25.0	19.9	21.1	79.5	84.4	55.0-127			5.96	20
Carbon tetrachloride	25.0	23.1	24.2	92.5	96.6	63.0-122			4.41	20
Chlorobenzene	25.0	25.5	26.0	102	104	79.0-121			1.76	20
Chlorodibromomethane	25.0	24.1	24.7	96.3	98.9	75.0-125			2.67	20
Chloroethane	25.0	23.6	24.6	94.6	98.4	47.0-152			3.99	20
Chloroform	25.0	22.5	23.5	89.9	94.0	72.0-121			4.50	20
Chloromethane	25.0	22.2	24.3	88.7	97.0	48.0-139			8.96	20
2-Chlorotoluene	25.0	24.1	24.8	96.4	99.3	74.0-122			3.03	20
4-Chlorotoluene	25.0	24.3	24.7	97.0	99.0	79.0-120			2.00	20
1,2-Dibromo-3-Chloropropane	25.0	24.8	24.1	99.3	96.2	64.0-127			3.17	20
1,2-Dibromoethane	25.0	25.5	25.6	102	102	77.0-123			0.530	20
Dibromomethane	25.0	23.8	24.9	95.2	99.5	78.0-120			4.38	20
1,2-Dichlorobenzene	25.0	24.1	25.2	96.2	101	80.0-120			4.63	20
1,3-Dichlorobenzene	25.0	24.0	25.0	95.9	100	72.0-123			4.35	20
1,4-Dichlorobenzene	25.0	23.7	24.5	94.9	98.1	77.0-120			3.24	20
Dichlorodifluoromethane	25.0	30.8	32.1	123	128	49.0-155			4.04	20
1,1-Dichloroethane	25.0	24.0	25.4	96.0	102	70.0-126			5.71	20
1,2-Dichloroethane	25.0	23.8	24.8	95.2	99.3	67.0-126			4.16	20
1,1-Dichloroethene	25.0	24.1	25.3	96.3	101	64.0-129			4.79	20
cis-1,2-Dichloroethene	25.0	22.8	23.7	91.3	94.8	73.0-120			3.80	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.1	71.0-121			2.82	20
1,2-Dichloropropane	25.0	24.3	25.0	97.2	100	75.0-125			2.85	20
1,1-Dichloropropene	25.0	25.0	25.9	100	104	71.0-129			3.59	20
1,3-Dichloropropane	25.0	25.4	26.1	102	105	80.0-121			2.83	20
cis-1,3-Dichloropropene	25.0	24.8	25.5	99.0	102	79.0-123			2.96	20
trans-1,3-Dichloropropene	25.0	25.7	25.6	103	102	74.0-127			0.470	20
trans-1,4-Dichloro-2-butene	25.0	20.7	21.1	82.8	84.2	55.0-134			1.68	20
2,2-Dichloropropane	25.0	23.0	24.1	91.9	96.5	60.0-125			4.82	20
Di-isopropyl ether	25.0	23.1	24.2	92.2	96.6	59.0-133			4.64	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.0	25.4	100	102	77.0-120			1.45	20
Hexachloro-1,3-butadiene	25.0	21.5	21.5	86.0	85.9	64.0-131			0.120	20
2-Hexanone	125	120	118	96.4	94.7	58.0-147			1.73	20
n-Hexane	25.0	21.4	22.1	85.5	88.5	56.0-124			3.43	20
Iodomethane	125	74.7	106	59.7	84.5	57.0-140		J3	34.3	20
Isopropylbenzene	25.0	23.3	24.4	93.2	97.8	75.0-120			4.83	20
p-Isopropyltoluene	25.0	23.1	23.7	92.5	94.6	74.0-126			2.25	20
2-Butanone (MEK)	125	112	113	89.3	90.4	37.0-158			1.26	20
Methylene Chloride	25.0	21.8	23.4	87.4	93.5	66.0-121			6.77	20
4-Methyl-2-pentanone (MIBK)	125	116	115	93.2	91.8	59.0-143			1.47	20
Methyl tert-butyl ether	25.0	22.9	23.8	91.4	95.3	64.0-123			4.12	20
Naphthalene	25.0	23.3	23.7	93.3	94.8	62.0-128			1.55	20
n-Propylbenzene	25.0	23.9	25.0	95.5	99.9	79.0-120			4.43	20
Styrene	25.0	24.5	26.1	97.9	104	78.0-124			6.33	20
1,1,1,2-Tetrachloroethane	25.0	24.3	24.7	97.2	98.8	75.0-122			1.62	20
1,1,2,2-Tetrachloroethane	25.0	24.9	25.2	99.7	101	71.0-122			0.930	20
1,1,2-Trichlorotrifluoroethane	25.0	25.3	26.4	101	105	61.0-136			4.06	20
Tetrachloroethene	25.0	25.4	26.3	102	105	70.0-127			3.29	20
Toluene	25.0	23.8	24.5	95.0	97.9	77.0-120			3.05	20
1,2,3-Trichlorobenzene	25.0	22.4	23.1	89.5	92.5	61.0-133			3.27	20
1,2,4-Trichlorobenzene	25.0	22.8	23.2	91.1	92.8	69.0-129			1.81	20
1,1,1-Trichloroethane	25.0	23.2	24.1	92.9	96.6	68.0-122			3.80	20
1,1,2-Trichloroethane	25.0	24.6	24.9	98.3	99.8	78.0-120			1.47	20
Trichloroethene	25.0	24.8	26.1	99.1	104	78.0-120			5.17	20
Trichlorofluoromethane	25.0	23.3	24.6	93.3	98.3	56.0-137			5.18	20
1,2,3-Trichloropropane	25.0	25.2	26.0	101	104	72.0-124			3.19	20
1,2,4-Trimethylbenzene	25.0	23.0	23.8	92.1	95.4	75.0-120			3.47	20
1,2,3-Trimethylbenzene	25.0	23.5	24.4	94.0	97.4	75.0-120			3.59	20
1,3,5-Trimethylbenzene	25.0	22.8	24.0	91.4	95.9	75.0-120			4.84	20
Vinyl acetate	125	114	115	91.5	92.3	46.0-160			0.860	20
Vinyl chloride	25.0	27.7	29.1	111	116	64.0-133			5.11	20
Xylenes, Total	75.0	73.0	75.6	97.3	101	77.0-120			3.50	20
(S) Toluene-d8				105	102	80.0-120				
(S) Dibromofluoromethane				96.6	98.2	76.0-123				
(S) 4-Bromofluorobenzene				99.0	100	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





## Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

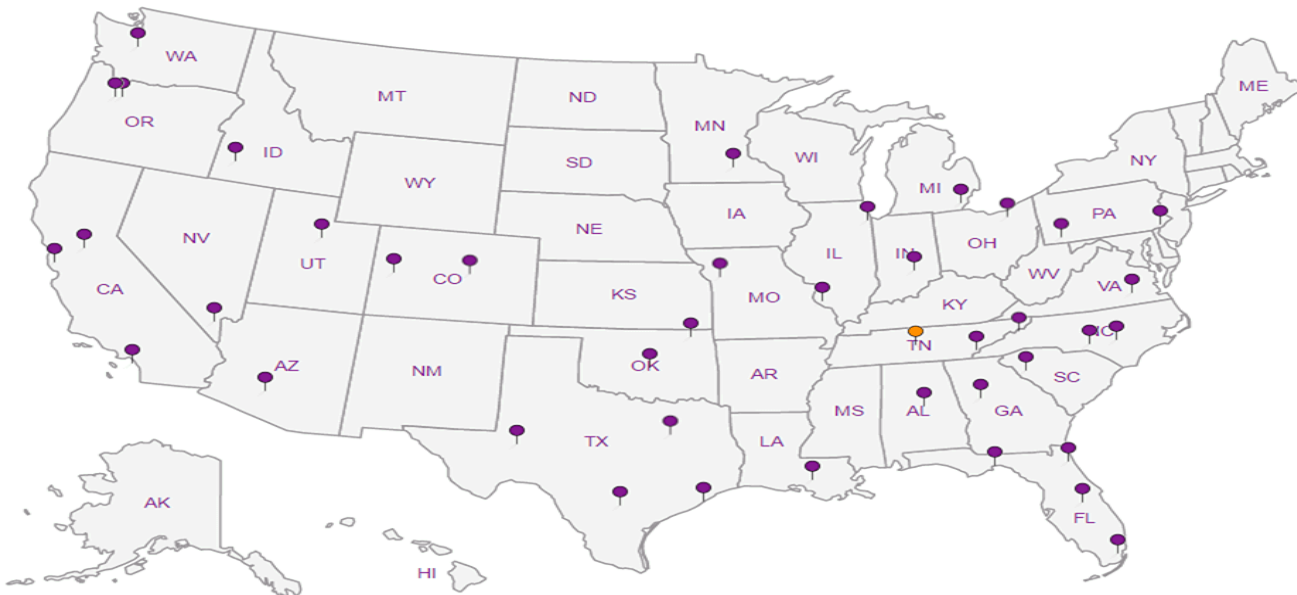
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:

Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

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



Report to:  
**Bill Haldeman**

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):

**Rush?** (Lab MUST Be Notified)

Quote #

Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Date Results Needed

Immediately  
Packed on Ice N  Y

No.  
of  
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk,Cl,NO3,S04 250mlHDPE-NoPres	NWTPHGX 40mlAmb HCl	TOC 250mlAmb-HCl	Total Fe Mn 6020 250mlHDPE-HNO3	low level 8260C 40mlAmb-HCl	low level RSK175 40mlAmb-HCl
MW123-062417	GRAB	GW	75	6/24/17	0750	4					X	
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										
		GW										

L# **L918598**  
**A217**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: **5-36176**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

Samples returned via:  
 UPS  FedEx  Courier

Tracking # **7372 1955 0763**

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist:  
COC Seal Present/Intact:  Y  N  
COC Signed/Accurate:  Y  N  
Bottles arrive intact:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
If Applicable  
VCA Zero Headspace:  Y  N  
Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) **[Signature]**

Date: **6/24/17** Time: **1140**

Received by: (Signature)

Trip Blank Received: Yes/No  
HCL/MeOH  
TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: °C **2.9** Bottles Received: **4 vP**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature) **[Signature]**

Date: **6/26/17** Time: **9:30**

Hold: Condition: **NCF / OK**

## MEMORANDUM

**TO:** Project File **DATE:** July 26, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 24, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L918598

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One (1) groundwater sample was collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 24, 2017. The sample was shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. The sample was analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C.

The results are reported in ESC Sample Delivery Group (SDG) L918598. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L918598 is summarized below.

### **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017).

### **DATA VALIDATION**

#### **Completeness**

The sample was collected and analyzed as requested.

#### **Sample Collection and Preservation**

The sample was collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The sample was packed on ice and shipped overnight by

courier to ESC. The laboratory reported that the cooler and sample was received at 2.9 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the sample was received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

*USEPA Method 8260C:*

The sample was analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable and ESC's notes do indicate any issues.

### **Method Blank Results**

*USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### **Trip Blank Results**

*USEPA Method 8260C:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

### **Surrogate Recoveries**

#### *USEPA Method 8260C:*

The surrogate recovery results for the sample, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analysis.

### **Laboratory Control Samples**

#### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG994563) RPD for compound iodomethane are above laboratory acceptance criteria (20%) and qualified by the laboratory (J3). No action was taken on this basis as LCS/LCSD percent recovery results are recovered wide but are both within control limits.

### **Matrix Spike/Matrix Spike Duplicates**

#### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project.

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017)

No data qualifiers were assigned. All data are judged to be acceptable for their intended use.

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
Acetone	U		1.05	25.0	1	07/02/2017 17:50	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 17:50	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 17:50	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 17:50	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 17:50	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 17:50	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 17:50	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 17:50	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 17:50	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 17:50	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 17:50	WG994563
Carbon disulfide	U		0.101	0.500	1	07/02/2017 17:50	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 17:50	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 17:50	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 17:50	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 17:50	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 17:50	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 17:50	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 17:50	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 17:50	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 17:50	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 17:50	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 17:50	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 17:50	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 17:50	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 17:50	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 17:50	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 17:50	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/04/2017 10:53	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 17:50	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 17:50	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 17:50	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 17:50	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 17:50	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 17:50	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 17:50	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 17:50	WG994563
Di-Isopropyl ether	U		0.0924	0.500	1	07/02/2017 17:50	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 17:50	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 17:50	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 17:50	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 17:50	WG994563
Iodomethane	U		0.377	10.0	1	07/02/2017 17:50	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 17:50	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 17:50	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 17:50	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 17:50	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 17:50	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 17:50	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 17:50	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 17:50	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 17:50	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 17:50	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 17:50	WG994563

*Handwritten:* J3  
 7/25/17

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc



Collected date/time: 06/24/17 07:50

L918598

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 17:50	WG994563	Cp
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 17:50	WG994563	2 Tc
Toluene	U		0.412	0.500	1	07/02/2017 17:50	WG994563	3 Ss
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 17:50	WG994563	4 Cn
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 17:50	WG994563	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 17:50	WG994563	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 17:50	WG994563	
Trichloroethene	U		0.153	0.500	1	07/02/2017 17:50	WG994563	
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 17:50	WG994563	Sr
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 17:50	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 17:50	WG994563	6 Qc
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 17:50	WG994563	7 Gl
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 17:50	WG994563	8 Al
Vinyl acetate	U		0.645	5.00	1	07/02/2017 17:50	WG994563	
Vinyl chloride	U		0.118	0.500	1	07/02/2017 17:50	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 17:50	WG994563	9 Sc
(S) Toluene-d8	105			80.0-120		07/02/2017 17:50	WG994563	
(S) Toluene-d8	102			80.0-120		07/04/2017 10:53	WG994563	
(S) Dibromofluoromethane	116			76.0-123		07/04/2017 10:53	WG994563	
(S) Dibromofluoromethane	96.2			76.0-123		07/02/2017 17:50	WG994563	
(S) 4-Bromofluorobenzene	111			80.0-120		07/04/2017 10:53	WG994563	
(S) 4-Bromofluorobenzene	99.0			80.0-120		07/02/2017 17:50	WG994563	



## PES Environmental, Inc.- WA

Sample Delivery Group: L918687  
Samples Received: 06/27/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>5</b>	
<b>Sr: Sample Results</b>	<b>6</b>	<b>3</b> Ss
D15-062617 L918687-01	6	
J5-062617 L918687-02	8	<b>4</b> Cn
J15-062617 L918687-03	10	<b>5</b> Sr
K8-062617 L918687-04	12	
M15-062617 L918687-05	14	<b>6</b> Qc
TRIP BLANK L918687-06	16	
<b>Qc: Quality Control Summary</b>	<b>18</b>	<b>7</b> Gl
Wet Chemistry by Method 2320 B-2011	18	
Wet Chemistry by Method 9056A	21	<b>8</b> Al
Wet Chemistry by Method 9060A	22	
Metals (ICPMS) by Method 6020A	24	
Volatile Organic Compounds (GC) by Method RSK175	25	
Volatile Organic Compounds (GC/MS) by Method 8260C	27	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>31</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>32</b>	
<b>Sc: Chain of Custody</b>	<b>33</b>	

# SAMPLE SUMMARY



## D15-062617 L918687-01 GW

Collected by  
Shannon McKernan  
Collected date/time  
06/26/17 08:05  
Received date/time  
06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994293	1	06/30/17 20:06	06/30/17 20:06	MCG
Wet Chemistry by Method 9056A	WG993484	1	06/28/17 00:30	06/28/17 00:30	DR
Wet Chemistry by Method 9060A	WG994361	1	06/30/17 21:31	06/30/17 21:31	SJM
Metals (ICPMS) by Method 6020A	WG994449	1	06/30/17 10:14	06/30/17 20:28	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993522	1	06/28/17 12:55	06/28/17 12:55	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG993867	5	06/28/17 14:15	06/28/17 14:15	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 18:26	07/02/17 18:26	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

## J5-062617 L918687-02 GW

Collected by  
Shannon McKernan  
Collected date/time  
06/26/17 09:20  
Received date/time  
06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994295	1	06/30/17 12:19	06/30/17 12:19	MCG
Wet Chemistry by Method 9056A	WG993484	1	06/28/17 00:44	06/28/17 00:44	DR
Wet Chemistry by Method 9060A	WG994888	2	07/01/17 12:46	07/01/17 12:46	SJM
Metals (ICPMS) by Method 6020A	WG994449	1	06/30/17 10:14	06/30/17 20:42	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993522	1	06/28/17 12:58	06/28/17 12:58	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG993867	20	06/28/17 14:17	06/28/17 14:17	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 18:44	07/02/17 18:44	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	10	07/04/17 12:08	07/04/17 12:08	JHH

6  
Qc

7  
Gl

8  
Al

9  
Sc

## J15-062617 L918687-03 GW

Collected by  
Shannon McKernan  
Collected date/time  
06/26/17 11:15  
Received date/time  
06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994297	1	06/30/17 21:27	06/30/17 21:27	MCG
Wet Chemistry by Method 9056A	WG993484	1	06/28/17 01:13	06/28/17 01:13	DR
Wet Chemistry by Method 9060A	WG994361	1	06/30/17 21:56	06/30/17 21:56	SJM
Metals (ICPMS) by Method 6020A	WG994449	1	06/30/17 10:14	06/30/17 20:45	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993522	1	06/28/17 13:00	06/28/17 13:00	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG993867	5	06/28/17 14:19	06/28/17 14:19	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 19:02	07/02/17 19:02	JHH

## K8-062617 L918687-04 GW

Collected by  
Shannon McKernan  
Collected date/time  
06/26/17 12:30  
Received date/time  
06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994295	1	06/30/17 12:25	06/30/17 12:25	MCG
Wet Chemistry by Method 9056A	WG993484	1	06/28/17 01:27	06/28/17 01:27	DR
Wet Chemistry by Method 9060A	WG994361	1	06/30/17 22:08	06/30/17 22:08	SJM
Metals (ICPMS) by Method 6020A	WG994449	1	06/30/17 10:14	06/30/17 20:49	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993522	1	06/28/17 13:31	06/28/17 13:31	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 19:20	07/02/17 19:20	JHH

## M15-062617 L918687-05 GW

Collected by  
Shannon McKernan  
Collected date/time  
06/26/17 14:50  
Received date/time  
06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG994297	1	06/30/17 21:41	06/30/17 21:41	MCG
Wet Chemistry by Method 9056A	WG993484	1	06/28/17 02:39	06/28/17 02:39	DR
Wet Chemistry by Method 9060A	WG994888	2	07/01/17 12:57	07/01/17 12:57	SJM

# SAMPLE SUMMARY



## M15-062617 L918687-05 GW

Collected by: Shannon McKernan  
 Collected date/time: 06/26/17 14:50  
 Received date/time: 06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICPMS) by Method 6020A	WG994449	1	06/30/17 10:14	06/30/17 21:10	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993522	1	06/28/17 13:05	06/28/17 13:05	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG993867	20	06/28/17 14:23	06/28/17 14:23	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 19:38	07/02/17 19:38	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

## TRIP BLANK L918687-06 GW

Collected by: Shannon McKernan  
 Collected date/time: 06/26/17 00:00  
 Received date/time: 06/27/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG994563	1	07/02/17 13:20	07/02/17 13:20	JHH

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc



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

Brian Ford  
Technical Service Representative

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



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	543000		2710	20000	1	06/30/2017 20:06	<a href="#">WG994293</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	22100		51.9	1000	1	06/28/2017 00:30	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 00:30	<a href="#">WG993484</a>
Sulfate	60400		77.4	5000	1	06/28/2017 00:30	<a href="#">WG993484</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	19000		102	1000	1	06/30/2017 21:31	<a href="#">WG994361</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	3020		15.0	100	1	06/30/2017 20:28	<a href="#">WG994449</a>
Manganese	3030	<u>V</u>	0.250	5.00	1	06/30/2017 20:28	<a href="#">WG994449</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	2340		1.44	3.39	5	06/28/2017 14:15	<a href="#">WG993867</a>
Ethane	U		0.296	1.29	1	06/28/2017 12:55	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 12:55	<a href="#">WG993522</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.91	<u>J</u>	1.05	25.0	1	07/02/2017 18:26	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 18:26	<a href="#">WG994563</a>
Benzene	0.173	<u>J</u>	0.0896	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 18:26	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Carbon disulfide	U	<u>JO</u>	0.101	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 18:26	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 18:26	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 18:26	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 18:26	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/26/17 08:05

L918687

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 18:26	WG994563	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 18:26	WG994563	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 18:26	WG994563	
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 18:26	WG994563	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 18:26	WG994563	
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 18:26	WG994563	4 Cn
1,1-Dichloroethene	1.81		0.188	0.500	1	07/02/2017 18:26	WG994563	
cis-1,2-Dichloroethene	39.3		0.0933	0.500	1	07/02/2017 18:26	WG994563	
trans-1,2-Dichloroethene	1.03		0.152	0.500	1	07/02/2017 18:26	WG994563	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 18:26	WG994563	
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 18:26	WG994563	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 18:26	WG994563	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 18:26	WG994563	
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 18:26	WG994563	7 Gl
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 18:26	WG994563	
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 18:26	WG994563	8 Al
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 18:26	WG994563	
Ethylbenzene	U		0.158	0.500	1	07/02/2017 18:26	WG994563	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 18:26	WG994563	9 Sc
2-Hexanone	U		0.757	5.00	1	07/02/2017 18:26	WG994563	
n-Hexane	U		0.305	5.00	1	07/02/2017 18:26	WG994563	
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 18:26	WG994563	
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 18:26	WG994563	
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 18:26	WG994563	
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 18:26	WG994563	
Methylene Chloride	U		1.07	2.50	1	07/02/2017 18:26	WG994563	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 18:26	WG994563	
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 18:26	WG994563	
Naphthalene	U		0.174	2.50	1	07/02/2017 18:26	WG994563	
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 18:26	WG994563	
Styrene	U		0.117	0.500	1	07/02/2017 18:26	WG994563	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 18:26	WG994563	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 18:26	WG994563	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 18:26	WG994563	
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 18:26	WG994563	
Toluene	0.551		0.412	0.500	1	07/02/2017 18:26	WG994563	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 18:26	WG994563	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 18:26	WG994563	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 18:26	WG994563	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 18:26	WG994563	
Trichloroethene	U		0.153	0.500	1	07/02/2017 18:26	WG994563	
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 18:26	WG994563	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 18:26	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 18:26	WG994563	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 18:26	WG994563	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 18:26	WG994563	
Vinyl acetate	U		0.645	5.00	1	07/02/2017 18:26	WG994563	
Vinyl chloride	6.73		0.118	0.500	1	07/02/2017 18:26	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 18:26	WG994563	
(S) Toluene-d8	107			80.0-120		07/02/2017 18:26	WG994563	
(S) Dibromofluoromethane	97.2			76.0-123		07/02/2017 18:26	WG994563	
(S) 4-Bromofluorobenzene	99.7			80.0-120		07/02/2017 18:26	WG994563	



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	209000		2710	20000	1	06/30/2017 12:19	<a href="#">WG994295</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	45100		51.9	1000	1	06/28/2017 00:44	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 00:44	<a href="#">WG993484</a>
Sulfate	8850		77.4	5000	1	06/28/2017 00:44	<a href="#">WG993484</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	11400		204	2000	2	07/01/2017 12:46	<a href="#">WG994888</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	2910		15.0	100	1	06/30/2017 20:42	<a href="#">WG994449</a>
Manganese	2240		0.250	5.00	1	06/30/2017 20:42	<a href="#">WG994449</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	9600		5.74	13.6	20	06/28/2017 14:17	<a href="#">WG993867</a>
Ethane	19.6		0.296	1.29	1	06/28/2017 12:58	<a href="#">WG993522</a>
Ethene	34.4		0.422	1.27	1	06/28/2017 12:58	<a href="#">WG993522</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.15	J	1.05	25.0	1	07/02/2017 18:44	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 18:44	<a href="#">WG994563</a>
Benzene	0.252	J	0.0896	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 18:44	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 18:44	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 18:44	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 18:44	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 18:44	<a href="#">WG994563</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 18:44	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 18:44	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 18:44	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 18:44	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 18:44	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 18:44	WG994563
1,1-Dichloroethene	0.425	J	0.188	0.500	1	07/02/2017 18:44	WG994563
cis-1,2-Dichloroethene	366		0.933	5.00	10	07/04/2017 12:08	WG994563
trans-1,2-Dichloroethene	1.94		0.152	0.500	1	07/02/2017 18:44	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 18:44	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 18:44	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 18:44	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 18:44	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 18:44	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 18:44	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 18:44	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 18:44	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 18:44	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 18:44	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 18:44	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 18:44	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 18:44	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 18:44	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 18:44	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 18:44	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 18:44	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 18:44	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 18:44	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 18:44	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 18:44	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 18:44	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 18:44	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 18:44	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 18:44	WG994563
Tetrachloroethene	36.1		0.199	0.500	1	07/02/2017 18:44	WG994563
Toluene	0.506		0.412	0.500	1	07/02/2017 18:44	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 18:44	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 18:44	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 18:44	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 18:44	WG994563
Trichloroethene	37.1		0.153	0.500	1	07/02/2017 18:44	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 18:44	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 18:44	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 18:44	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 18:44	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 18:44	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 18:44	WG994563
Vinyl chloride	77.7		0.118	0.500	1	07/02/2017 18:44	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 18:44	WG994563
(S) Toluene-d8	101			80.0-120		07/04/2017 12:08	WG994563
(S) Toluene-d8	106			80.0-120		07/02/2017 18:44	WG994563
(S) Dibromofluoromethane	96.8			76.0-123		07/02/2017 18:44	WG994563
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 12:08	WG994563
(S) 4-Bromofluorobenzene	109			80.0-120		07/04/2017 12:08	WG994563
(S) 4-Bromofluorobenzene	99.1			80.0-120		07/02/2017 18:44	WG994563

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	486000		2710	20000	1	06/30/2017 21:27	<a href="#">WG994297</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	22000		51.9	1000	1	06/28/2017 01:13	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 01:13	<a href="#">WG993484</a>
Sulfate	60300		77.4	5000	1	06/28/2017 01:13	<a href="#">WG993484</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	19100		102	1000	1	06/30/2017 21:56	<a href="#">WG994361</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	2660		15.0	100	1	06/30/2017 20:45	<a href="#">WG994449</a>
Manganese	3090		0.250	5.00	1	06/30/2017 20:45	<a href="#">WG994449</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	2220		1.44	3.39	5	06/28/2017 14:19	<a href="#">WG993867</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:00	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:00	<a href="#">WG993522</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.49	J	1.05	25.0	1	07/02/2017 19:02	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:02	<a href="#">WG994563</a>
Benzene	0.173	J	0.0896	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:02	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:02	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:02	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:02	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:02	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:02	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:02	WG994563
1,1-Dichloroethene	1.84		0.188	0.500	1	07/02/2017 19:02	WG994563
cis-1,2-Dichloroethene	39.8		0.0933	0.500	1	07/02/2017 19:02	WG994563
trans-1,2-Dichloroethene	1.06		0.152	0.500	1	07/02/2017 19:02	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:02	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:02	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:02	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:02	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:02	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:02	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:02	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:02	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:02	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:02	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:02	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 19:02	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 19:02	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:02	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:02	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:02	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:02	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:02	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:02	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 19:02	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:02	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 19:02	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:02	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:02	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:02	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 19:02	WG994563
Toluene	0.459	J	0.412	0.500	1	07/02/2017 19:02	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:02	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:02	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:02	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:02	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 19:02	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:02	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:02	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:02	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:02	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:02	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:02	WG994563
Vinyl chloride	6.30		0.118	0.500	1	07/02/2017 19:02	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:02	WG994563
(S) Toluene-d8	107			80.0-120		07/02/2017 19:02	WG994563
(S) Dibromofluoromethane	95.4			76.0-123		07/02/2017 19:02	WG994563
(S) 4-Bromofluorobenzene	100			80.0-120		07/02/2017 19:02	WG994563

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	97500		2710	20000	1	06/30/2017 12:25	<a href="#">WG994295</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	14700		51.9	1000	1	06/28/2017 01:27	<a href="#">WG993484</a>
Nitrate	307		22.7	100	1	06/28/2017 01:27	<a href="#">WG993484</a>
Sulfate	25800		77.4	5000	1	06/28/2017 01:27	<a href="#">WG993484</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	6450		102	1000	1	06/30/2017 22:08	<a href="#">WG994361</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	41.1	J	15.0	100	1	06/30/2017 20:49	<a href="#">WG994449</a>
Manganese	296		0.250	5.00	1	06/30/2017 20:49	<a href="#">WG994449</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	72.7		0.287	0.678	1	06/28/2017 13:31	<a href="#">WG993522</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:31	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:31	<a href="#">WG993522</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.07	J	1.05	25.0	1	07/02/2017 19:20	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:20	<a href="#">WG994563</a>
Benzene	0.246	J	0.0896	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:20	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/26/17 12:30

L918687

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:20	WG994563	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:20	WG994563	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:20	WG994563	
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:20	WG994563	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:20	WG994563	
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:20	WG994563	4 Cn
1,1-Dichloroethene	1.34		0.188	0.500	1	07/02/2017 19:20	WG994563	
cis-1,2-Dichloroethene	140		0.0933	0.500	1	07/02/2017 19:20	WG994563	
trans-1,2-Dichloroethene	0.750		0.152	0.500	1	07/02/2017 19:20	WG994563	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:20	WG994563	
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:20	WG994563	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:20	WG994563	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:20	WG994563	
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:20	WG994563	7 Gl
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:20	WG994563	
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:20	WG994563	8 Al
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:20	WG994563	
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:20	WG994563	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:20	WG994563	9 Sc
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:20	WG994563	
n-Hexane	U		0.305	5.00	1	07/02/2017 19:20	WG994563	
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 19:20	WG994563	
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:20	WG994563	
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:20	WG994563	
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:20	WG994563	
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:20	WG994563	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:20	WG994563	
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:20	WG994563	
Naphthalene	U		0.174	2.50	1	07/02/2017 19:20	WG994563	
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:20	WG994563	
Styrene	U		0.117	0.500	1	07/02/2017 19:20	WG994563	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:20	WG994563	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:20	WG994563	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:20	WG994563	
Tetrachloroethene	67.9		0.199	0.500	1	07/02/2017 19:20	WG994563	
Toluene	U		0.412	0.500	1	07/02/2017 19:20	WG994563	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:20	WG994563	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:20	WG994563	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:20	WG994563	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:20	WG994563	
Trichloroethene	28.7		0.153	0.500	1	07/02/2017 19:20	WG994563	
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:20	WG994563	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:20	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:20	WG994563	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:20	WG994563	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:20	WG994563	
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:20	WG994563	
Vinyl chloride	0.456	J	0.118	0.500	1	07/02/2017 19:20	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:20	WG994563	
(S) Toluene-d8	105			80.0-120		07/02/2017 19:20	WG994563	
(S) Dibromofluoromethane	94.8			76.0-123		07/02/2017 19:20	WG994563	
(S) 4-Bromofluorobenzene	97.1			80.0-120		07/02/2017 19:20	WG994563	



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	904000		2710	20000	1	06/30/2017 21:41	<a href="#">WG994297</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	11000		51.9	1000	1	06/28/2017 02:39	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 02:39	<a href="#">WG993484</a>
Sulfate	47200		77.4	5000	1	06/28/2017 02:39	<a href="#">WG993484</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	11000		204	2000	2	07/01/2017 12:57	<a href="#">WG994888</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	3320		15.0	100	1	06/30/2017 21:10	<a href="#">WG994449</a>
Manganese	6320		0.250	5.00	1	06/30/2017 21:10	<a href="#">WG994449</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	7250		5.74	13.6	20	06/28/2017 14:23	<a href="#">WG993867</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:05	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:05	<a href="#">WG993522</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 19:38	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:38	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Carbon disulfide	U	<u>JO</u>	0.101	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:38	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/26/17 14:50

L918687

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:38	WG994563	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:38	WG994563	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:38	WG994563	
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:38	WG994563	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:38	WG994563	
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:38	WG994563	4 Cn
1,1-Dichloroethene	0.508		0.188	0.500	1	07/02/2017 19:38	WG994563	
cis-1,2-Dichloroethene	25.8		0.0933	0.500	1	07/02/2017 19:38	WG994563	
trans-1,2-Dichloroethene	0.523		0.152	0.500	1	07/02/2017 19:38	WG994563	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:38	WG994563	
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:38	WG994563	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:38	WG994563	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:38	WG994563	
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:38	WG994563	7 Gl
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:38	WG994563	
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:38	WG994563	8 Al
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:38	WG994563	
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:38	WG994563	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:38	WG994563	9 Sc
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:38	WG994563	
n-Hexane	U		0.305	5.00	1	07/02/2017 19:38	WG994563	
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 19:38	WG994563	
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:38	WG994563	
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:38	WG994563	
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:38	WG994563	
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:38	WG994563	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:38	WG994563	
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:38	WG994563	
Naphthalene	U		0.174	2.50	1	07/02/2017 19:38	WG994563	
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:38	WG994563	
Styrene	U		0.117	0.500	1	07/02/2017 19:38	WG994563	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:38	WG994563	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:38	WG994563	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:38	WG994563	
Tetrachloroethene	0.233	J	0.199	0.500	1	07/02/2017 19:38	WG994563	
Toluene	U		0.412	0.500	1	07/02/2017 19:38	WG994563	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:38	WG994563	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:38	WG994563	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:38	WG994563	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:38	WG994563	
Trichloroethene	1.80		0.153	0.500	1	07/02/2017 19:38	WG994563	
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:38	WG994563	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:38	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:38	WG994563	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:38	WG994563	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:38	WG994563	
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:38	WG994563	
Vinyl chloride	15.0		0.118	0.500	1	07/02/2017 19:38	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:38	WG994563	
(S) Toluene-d8	107			80.0-120		07/02/2017 19:38	WG994563	
(S) Dibromofluoromethane	96.5			76.0-123		07/02/2017 19:38	WG994563	
(S) 4-Bromofluorobenzene	99.9			80.0-120		07/02/2017 19:38	WG994563	



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 13:20	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 13:20	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 13:20	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 13:20	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 13:20	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 13:20	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 13:20	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 13:20	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 13:20	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 13:20	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 13:20	WG994563
Carbon disulfide	U	JO	0.101	0.500	1	07/02/2017 13:20	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 13:20	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 13:20	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 13:20	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 13:20	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 13:20	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 13:20	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 13:20	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 13:20	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 13:20	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 13:20	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 13:20	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 13:20	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 13:20	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 13:20	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 13:20	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 13:20	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/02/2017 13:20	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 13:20	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 13:20	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 13:20	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 13:20	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 13:20	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 13:20	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 13:20	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 13:20	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 13:20	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 13:20	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 13:20	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 13:20	WG994563
Iodomethane	U	JO J3	0.377	10.0	1	07/02/2017 13:20	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 13:20	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 13:20	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 13:20	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 13:20	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 13:20	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 13:20	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 13:20	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 13:20	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 13:20	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 13:20	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 13:20	WG994563

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Collected date/time: 06/26/17 00:00

L918687

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Toluene	U		0.412	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Trichloroethene	U		0.153	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Vinyl acetate	U		0.645	5.00	1	07/02/2017 13:20	<a href="#">WG994563</a>
Vinyl chloride	U		0.118	0.500	1	07/02/2017 13:20	<a href="#">WG994563</a>
Xylenes, Total	U		0.316	1.50	1	07/02/2017 13:20	<a href="#">WG994563</a>
(S) Toluene-d8	105			80.0-120		07/02/2017 13:20	<a href="#">WG994563</a>
(S) Dibromofluoromethane	96.1			76.0-123		07/02/2017 13:20	<a href="#">WG994563</a>
(S) 4-Bromofluorobenzene	101			80.0-120		07/02/2017 13:20	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3230425-1 06/30/17 15:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Alkalinity	4340	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L918392-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918392-01 06/30/17 15:55 • (DUP) R3230425-2 06/30/17 16:03

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	183000	188000	1	2.00		20

L918687-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-01 06/30/17 20:06 • (DUP) R3230425-6 06/30/17 20:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	543000	504000	1	7.00		20

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

(LCS) R3230425-3 06/30/17 16:57 • (LCSD) R3230425-5 06/30/17 19:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	109000	108000	109	108	85.0-115			1.00	20



Method Blank (MB)

(MB) R3230424-1 06/30/17 11:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	U		2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L917855-04 Original Sample (OS) • Duplicate (DUP)

(OS) L917855-04 06/30/17 11:42 • (DUP) R3230424-2 06/30/17 11:50

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	75700	77200	1	2.00		20

L918863-02 Original Sample (OS) • Duplicate (DUP)

(OS) L918863-02 06/30/17 14:53 • (DUP) R3230424-7 06/30/17 15:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	1050000	1070000	1	2.00		20

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

(LCS) R3230424-3 06/30/17 12:40 • (LCSD) R3230424-6 06/30/17 14:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	111000	113000	111	113	85.0-115			2.00	20



Method Blank (MB)

(MB) R3230477-2 06/30/17 21:19

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Alkalinity	4660	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L919024-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919024-01 07/01/17 11:02 • (DUP) R3230477-7 07/01/17 11:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	161000	137000	1	16.0		20

L918687-03 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-03 06/30/17 21:27 • (DUP) R3230477-4 06/30/17 21:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	486000	494000	1	2.00		20

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

(LCS) R3230477-5 06/30/17 22:25 • (LCSD) R3230477-6 06/30/17 23:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	107000	104000	107	104	85.0-115			3.00	20



Method Blank (MB)

(MB) R3229388-1 06/27/17 22:49

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918687-02 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-02 06/28/17 00:44 • (DUP) R3229388-4 06/28/17 00:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	45100	45300	1	0		15
Nitrate	U	0.000	1	0		15
Sulfate	8850	8850	1	0		15

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

(LCS) R3229388-2 06/27/17 23:03 • (LCSD) R3229388-3 06/27/17 23:17

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39800	39900	100	100	80-120			0	15
Nitrate	8000	8110	8120	101	101	80-120			0	15
Sulfate	40000	40300	40300	101	101	80-120			0	15

L918695-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918695-03 06/28/17 02:54 • (MS) R3229388-5 06/28/17 03:08 • (MSD) R3229388-6 06/28/17 03:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Nitrate	5000	ND	4660	4700	92	92	1	80-120			1	15
Sulfate	50000	17800	64900	64700	94	94	1	80-120			0	15



Method Blank (MB)

(MB) R3230426-1 06/30/17 16:12

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L919296-03 Original Sample (OS) • Duplicate (DUP)

(OS) L919296-03 07/01/17 05:07 • (DUP) R3230426-7 07/01/17 05:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	46600	46800	1	0		20

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

(LCS) R3230426-2 06/30/17 16:56 • (LCSD) R3230426-3 06/30/17 18:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	72100	71800	96	96	85-115			0	20

L918846-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918846-01 07/01/17 02:59 • (MS) R3230426-5 07/01/17 03:17 • (MSD) R3230426-6 07/01/17 03:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	17100	57700	56900	81	80	1	80-120			1	20



Method Blank (MB)

(MB) R3230519-1 07/01/17 09:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	202	J	102	1000

1 Cp

2 Tc

3 Ss

L919100-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919100-01 07/01/17 19:32 • (DUP) R3230519-7 07/01/17 19:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	8620	8630	1	0		20

4 Cn

5 Sr

6 Qc

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

(LCS) R3230519-2 07/01/17 12:35 • (LCSD) R3230519-4 07/01/17 15:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	74500	74100	99	99	85-115			0	20

7 Gl

8 Al

L919056-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919056-02 07/01/17 16:23 • (MS) R3230519-5 07/01/17 16:37 • (MSD) R3230519-6 07/01/17 16:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	5820	55500	55600	99	100	1	80-120			0	20

9 Sc



Method Blank (MB)

(MB) R3230433-1 06/30/17 20:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3230433-2 06/30/17 20:21 • (LCSD) R3230433-3 06/30/17 20:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	5000	4890	100	98	80-120			2	20
Manganese	50.0	47.3	46.1	95	92	80-120			3	20

5 Sr

6 Qc

L918687-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L918687-01 06/30/17 20:28 • (MS) R3230433-5 06/30/17 20:35 • (MSD) R3230433-6 06/30/17 20:38

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	3020	7680	7660	93	93	1	75-125			0	20
Manganese	50.0	3030	3030	3040	15	22	1	75-125	V	V	0	20

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3229482-1 06/28/17 12:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918687-04 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-04 06/28/17 13:31 • (DUP) R3229482-2 06/28/17 13:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	72.7	77.7	1	6.65		20
Ethane	U	0.000	1	0.000		20
Ethene	U	0.000	1	0.000		20

L918863-05 Original Sample (OS) • Duplicate (DUP)

(OS) L918863-05 06/28/17 13:43 • (DUP) R3229482-3 06/28/17 13:48

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	373	376	1	0.780		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) R3229482-4 06/28/17 13:51 • (LCSD) R3229482-5 06/28/17 13:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	69.0	75.1	102	111	70.0-130			8.47	20
Ethane	129	126	127	97.8	98.8	70.0-130			1.05	20
Ethene	127	121	122	95.1	96.1	70.0-130			1.00	20



Method Blank (MB)

(MB) R3229512-1 06/28/17 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

L918687-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918687-01 06/28/17 14:15 • (DUP) R3229512-2 06/28/17 14:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	2340	2520	5	7.59		20

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3229512-3 06/28/17 14:45 • (LCSD) R3229512-4 06/28/17 14:48

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	74.2	72.2	109	107	70.0-130			2.71	20

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	1.00
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230904-3 07/02/17 12:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	105			80.0-120
(S) Dibromofluoromethane	94.3			76.0-123
(S) 4-Bromofluorobenzene	97.6			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	107	112	85.3	89.2	10.0-160			4.52	23
Acrylonitrile	125	130	124	104	99.4	60.0-142			4.37	20
Benzene	25.0	23.2	24.2	92.8	96.7	69.0-123			4.06	20
Bromobenzene	25.0	24.0	24.9	96.0	99.6	79.0-120			3.68	20
Bromodichloromethane	25.0	22.3	23.5	89.3	94.2	76.0-120			5.27	20
Bromochloromethane	25.0	25.5	26.5	102	106	76.0-122			3.56	20
Bromoform	25.0	23.4	24.3	93.6	97.3	67.0-132			3.88	20
Bromomethane	25.0	20.6	23.9	82.5	95.7	18.0-160			14.9	20
n-Butylbenzene	25.0	22.8	23.7	91.4	94.7	72.0-126			3.54	20
sec-Butylbenzene	25.0	22.8	23.3	91.2	93.3	74.0-121			2.28	20
tert-Butylbenzene	25.0	23.3	23.9	93.2	95.5	75.0-122			2.46	20
Carbon disulfide	25.0	19.9	21.1	79.5	84.4	55.0-127			5.96	20
Carbon tetrachloride	25.0	23.1	24.2	92.5	96.6	63.0-122			4.41	20
Chlorobenzene	25.0	25.5	26.0	102	104	79.0-121			1.76	20
Chlorodibromomethane	25.0	24.1	24.7	96.3	98.9	75.0-125			2.67	20
Chloroethane	25.0	23.6	24.6	94.6	98.4	47.0-152			3.99	20
Chloroform	25.0	22.5	23.5	89.9	94.0	72.0-121			4.50	20
Chloromethane	25.0	22.2	24.3	88.7	97.0	48.0-139			8.96	20
2-Chlorotoluene	25.0	24.1	24.8	96.4	99.3	74.0-122			3.03	20
4-Chlorotoluene	25.0	24.3	24.7	97.0	99.0	79.0-120			2.00	20
1,2-Dibromo-3-Chloropropane	25.0	24.8	24.1	99.3	96.2	64.0-127			3.17	20
1,2-Dibromoethane	25.0	25.5	25.6	102	102	77.0-123			0.530	20
Dibromomethane	25.0	23.8	24.9	95.2	99.5	78.0-120			4.38	20
1,2-Dichlorobenzene	25.0	24.1	25.2	96.2	101	80.0-120			4.63	20
1,3-Dichlorobenzene	25.0	24.0	25.0	95.9	100	72.0-123			4.35	20
1,4-Dichlorobenzene	25.0	23.7	24.5	94.9	98.1	77.0-120			3.24	20
Dichlorodifluoromethane	25.0	30.8	32.1	123	128	49.0-155			4.04	20
1,1-Dichloroethane	25.0	24.0	25.4	96.0	102	70.0-126			5.71	20
1,2-Dichloroethane	25.0	23.8	24.8	95.2	99.3	67.0-126			4.16	20
1,1-Dichloroethene	25.0	24.1	25.3	96.3	101	64.0-129			4.79	20
cis-1,2-Dichloroethene	25.0	22.8	23.7	91.3	94.8	73.0-120			3.80	20
trans-1,2-Dichloroethene	25.0	22.6	23.3	90.5	93.1	71.0-121			2.82	20
1,2-Dichloropropane	25.0	24.3	25.0	97.2	100	75.0-125			2.85	20
1,1-Dichloropropene	25.0	25.0	25.9	100	104	71.0-129			3.59	20
1,3-Dichloropropane	25.0	25.4	26.1	102	105	80.0-121			2.83	20
cis-1,3-Dichloropropene	25.0	24.8	25.5	99.0	102	79.0-123			2.96	20
trans-1,3-Dichloropropene	25.0	25.7	25.6	103	102	74.0-127			0.470	20
trans-1,4-Dichloro-2-butene	25.0	20.7	21.1	82.8	84.2	55.0-134			1.68	20
2,2-Dichloropropane	25.0	23.0	24.1	91.9	96.5	60.0-125			4.82	20
Di-isopropyl ether	25.0	23.1	24.2	92.2	96.6	59.0-133			4.64	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3230904-1 07/02/17 11:27 • (LCSD) R3230904-2 07/02/17 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.0	25.4	100	102	77.0-120			1.45	20
Hexachloro-1,3-butadiene	25.0	21.5	21.5	86.0	85.9	64.0-131			0.120	20
2-Hexanone	125	120	118	96.4	94.7	58.0-147			1.73	20
n-Hexane	25.0	21.4	22.1	85.5	88.5	56.0-124			3.43	20
Iodomethane	125	74.7	106	59.7	84.5	57.0-140		J3	34.3	20
Isopropylbenzene	25.0	23.3	24.4	93.2	97.8	75.0-120			4.83	20
p-Isopropyltoluene	25.0	23.1	23.7	92.5	94.6	74.0-126			2.25	20
2-Butanone (MEK)	125	112	113	89.3	90.4	37.0-158			1.26	20
Methylene Chloride	25.0	21.8	23.4	87.4	93.5	66.0-121			6.77	20
4-Methyl-2-pentanone (MIBK)	125	116	115	93.2	91.8	59.0-143			1.47	20
Methyl tert-butyl ether	25.0	22.9	23.8	91.4	95.3	64.0-123			4.12	20
Naphthalene	25.0	23.3	23.7	93.3	94.8	62.0-128			1.55	20
n-Propylbenzene	25.0	23.9	25.0	95.5	99.9	79.0-120			4.43	20
Styrene	25.0	24.5	26.1	97.9	104	78.0-124			6.33	20
1,1,1,2-Tetrachloroethane	25.0	24.3	24.7	97.2	98.8	75.0-122			1.62	20
1,1,2,2-Tetrachloroethane	25.0	24.9	25.2	99.7	101	71.0-122			0.930	20
1,1,2-Trichlorotrifluoroethane	25.0	25.3	26.4	101	105	61.0-136			4.06	20
Tetrachloroethene	25.0	25.4	26.3	102	105	70.0-127			3.29	20
Toluene	25.0	23.8	24.5	95.0	97.9	77.0-120			3.05	20
1,2,3-Trichlorobenzene	25.0	22.4	23.1	89.5	92.5	61.0-133			3.27	20
1,2,4-Trichlorobenzene	25.0	22.8	23.2	91.1	92.8	69.0-129			1.81	20
1,1,1-Trichloroethane	25.0	23.2	24.1	92.9	96.6	68.0-122			3.80	20
1,1,2-Trichloroethane	25.0	24.6	24.9	98.3	99.8	78.0-120			1.47	20
Trichloroethene	25.0	24.8	26.1	99.1	104	78.0-120			5.17	20
Trichlorofluoromethane	25.0	23.3	24.6	93.3	98.3	56.0-137			5.18	20
1,2,3-Trichloropropane	25.0	25.2	26.0	101	104	72.0-124			3.19	20
1,2,4-Trimethylbenzene	25.0	23.0	23.8	92.1	95.4	75.0-120			3.47	20
1,2,3-Trimethylbenzene	25.0	23.5	24.4	94.0	97.4	75.0-120			3.59	20
1,3,5-Trimethylbenzene	25.0	22.8	24.0	91.4	95.9	75.0-120			4.84	20
Vinyl acetate	125	114	115	91.5	92.3	46.0-160			0.860	20
Vinyl chloride	25.0	27.7	29.1	111	116	64.0-133			5.11	20
Xylenes, Total	75.0	73.0	75.6	97.3	101	77.0-120			3.50	20
(S) Toluene-d8				105	102	80.0-120				
(S) Dibromofluoromethane				96.6	98.2	76.0-123				
(S) 4-Bromofluorobenzene				99.0	100	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

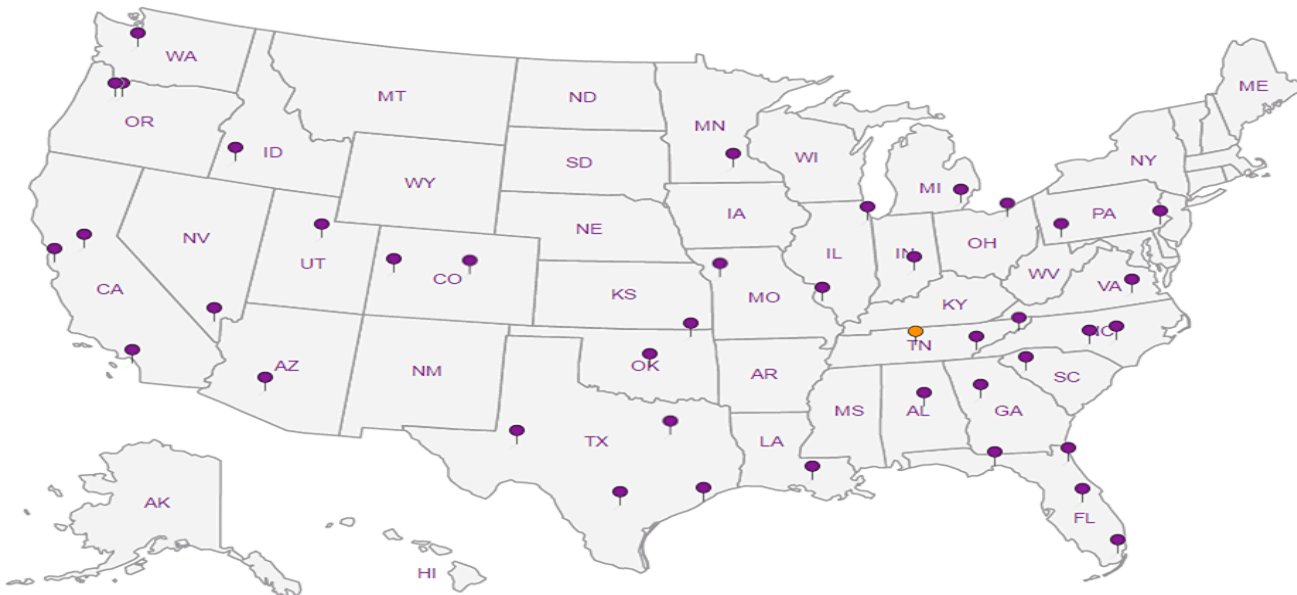
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



**PES Environmental, Inc. - WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Email To: [bhaldeman@pesenv.com](mailto:bhaldeman@pesenv.com)

Report to:  
**Bill Haldeman**

Project Description: **American Linen Supply**

Phone: 206-529-3980  
Fax: 206-529-3985

Client Project #  
**1413.001.02.002**

City/State Collected: **SEATTLE, WA**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

Rush? (Lab MUST Be Notified)

Same Day \_\_\_\_\_ Five Day \_\_\_\_\_  
Next Day \_\_\_\_\_ 5 Day (Rad Only) \_\_\_\_\_  
Two Day \_\_\_\_\_ 10 Day (Rad Only) \_\_\_\_\_  
Three Day \_\_\_\_\_

Quote #

Date Results Needed

Immediately Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*Alk, Cl, NO3, SO4 250ml/HDPE-NoPres	NWTPHGX 40ml/Amb HCl	TOC 250ml/Amb-HCl	Total Fe Mn 6020 250ml/HDPE-HNO3	low level 8260C 40ml/Amb-HCl	low level RSK175 40ml/Amb-HCl
D15-062617	GRAB	GW	25	6/26/17	08:05	9	X	X	X	X	X	X
J5-062617	↓	GW	25	↓	09:20	9	X	X	X	X	X	X
J15-062617	↓	GW	25	↓	11:15	9	X	X	X	X	X	X
K8-062617	↓	GW	25	↓	12:30	9	X	X	X	X	X	X
M15-062617	↓	GW	25	↓	14:50	9	X	X	X	X	X	X
TRIP BLANK	NA	GW	NA	4/11/17	NA	1						
		GW										
		GW										
		GW										
		GW										

Analysis / Container / Preservative

Pres Chk

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE

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



L # **918687**  
**F008**

Acctnum: **PESENVSWA**

Template: **T124201**

Prelogin: **P603202**

TSR: **110 - Brian Ford**

PB: **5-31-176**

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

	01
	02
	03
	04
	05
	06

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other \_\_\_\_\_

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS FedEx Courier \_\_\_\_\_

Tracking # **7372 1955 0671**

Relinquished by: (Signature) *[Signature]* Date: **6/26/17** Time: **1600**

Received by: (Signature) \_\_\_\_\_ Trip Blank Received:  Yes / No  
HCL/MeqH TBR

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) \_\_\_\_\_ Temp: **12.2** °C Bottles Received: **tal 45**

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received for lab by: (Signature) *[Signature]* Date: **6/27/17** Time: **0845**

Sample Receipt Checklist

COC Seal Present/Intact:	NP	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
COC Signed/Accurate:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Bottles arrive intact:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Correct bottles used:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Sufficient volume sent:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
If Applicable			
VDA Zero HeadSpace:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Preservation Correct/Checked:		<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

If preservation required by Login: Date/Time \_\_\_\_\_  
Hold: \_\_\_\_\_ Condition: **NCF / OK**

## MEMORANDUM

**TO:** Project File **DATE:** July 27, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 26, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L918687

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Five (5) groundwater samples and a trip blank were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 26, 2017. The sample was shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. The samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L918687. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L918687 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 1.2 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

The samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

The samples were analyzed for dissolved gases within the method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

The samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

The samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues for carbon disulfide and iodomethane were identified by the laboratory for samples associated with analytical batch WG994563 (analyzed on July 2, 2017). These results are qualified by the laboratory “J0” to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All associated sample results for these compounds are estimated and qualified (UJ).**

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

#### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

#### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or above the RDL.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussions:

- Low levels of alkalinity were detected in the method blanks between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity sample results are significantly greater than the detections in the blanks.
- A low level of TOC was detected in one of the method blanks between the RDL and MDL. No action was necessary as associated TOC sample results are significantly greater than the detection in the blank.

### **Trip Blank Results**

#### *USEPA Method 8260C:*

A trip blank was collected and submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at or above the reported detection limits (RDLs).

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicate (D15-062617 and J15-062617) results are comparable and less than 20% RPD.

## **Laboratory Duplicate Analyses**

### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

### *Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on a non-client sample and on samples K8-062617 and D15-062617. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

### *USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

### *General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client samples and on client samples D15-062617 and J15-062617 within the analytical batches. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* A laboratory duplicate sample was performed on sample J5-062617 within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample was performed on non-client or client samples from another SDG within the analytical batches. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

## **Surrogate Recoveries**

### *USEPA Method 8260C:*

The surrogate recovery results for the sample, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analysis.

## **Laboratory Control Samples**

### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG994563) RPD for compound iodomethane is above the laboratory acceptance criteria (20%) and qualified by the laboratory (J3). No action was taken on this basis as LCS/LCSD percent recovery results are recovered wide but are both within control limits.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

**Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information.

*USEPA Method 6020:*

MS/MSD analysis was performed on sample D15-062617. The MS/MSD % Rs and RPDs were acceptable and within laboratory control limit criteria for the water sample with the following discussion:

Sample D15-062617 manganese concentration was greater than four times the spike amount. No action was taken other than to note this. Refer to LCS/LCSD results for additional information.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS/MSD analysis was performed on non-client sample within the analytical batches. MS/MSD % Rs and RPDs for anions (nitrate and sulfate only) were within the laboratory control criteria for water. For more information on chloride refer to LCS/LCSD results for additional information.

*EPA Method 9060A*: MS/MSD analysis was performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project.

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	543000		2710	20000	1	06/30/2017 20:06	WG994293

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	22100		51.9	1000	1	06/28/2017 00:30	WG993484
Nitrate	U		22.7	100	1	06/28/2017 00:30	WG993484
Sulfate	60400		77.4	5000	1	06/28/2017 00:30	WG993484

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	19000		102	1000	1	06/30/2017 21:31	WG994361

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	3020		15.0	100	1	06/30/2017 20:28	WG994449
Manganese	3030	V	0.250	5.00	1	06/30/2017 20:28	WG994449

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	2340		1.44	3.39	5	06/28/2017 14:15	WG993867
Ethane	U		0.296	1.29	1	06/28/2017 12:55	WG993522
Ethene	U		0.422	1.27	1	06/28/2017 12:55	WG993522

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.91	J J	1.05	25.0	1	07/02/2017 18:26	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 18:26	WG994563
Benzene	0.173	J J	0.0896	0.500	1	07/02/2017 18:26	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 18:26	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 18:26	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 18:26	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 18:26	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 18:26	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 18:26	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 18:26	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 18:26	WG994563
Carbon disulfide	U	V5 JO	0.101	0.500	1	07/02/2017 18:26	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 18:26	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 18:26	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 18:26	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 18:26	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 18:26	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 18:26	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 18:26	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 18:26	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 18:26	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 18:26	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 18:26	WG994563

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

*Jc 7/27/17*



D15-062617

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 08:05

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 18:26	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 18:26	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 18:26	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 18:26	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 18:26	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 18:26	WG994563
1,1-Dichloroethene	1.81		0.188	0.500	1	07/02/2017 18:26	WG994563
cis-1,2-Dichloroethene	39.3		0.0933	0.500	1	07/02/2017 18:26	WG994563
trans-1,2-Dichloroethene	1.03		0.152	0.500	1	07/02/2017 18:26	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 18:26	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 18:26	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 18:26	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 18:26	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 18:26	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 18:26	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 18:26	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 18:26	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 18:26	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 18:26	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 18:26	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 18:26	WG994563
Iodomethane	U	VJ JO J3	0.377	10.0	1	07/02/2017 18:26	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 18:26	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 18:26	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 18:26	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 18:26	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 18:26	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 18:26	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 18:26	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 18:26	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 18:26	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 18:26	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 18:26	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 18:26	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 18:26	WG994563
Toluene	0.551		0.412	0.500	1	07/02/2017 18:26	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 18:26	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 18:26	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 18:26	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 18:26	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 18:26	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 18:26	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 18:26	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 18:26	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 18:26	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 18:26	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 18:26	WG994563
Vinyl chloride	6.73		0.118	0.500	1	07/02/2017 18:26	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 18:26	WG994563
(S) Toluene-d8	107			80.0-120		07/02/2017 18:26	WG994563
(S) Dibromofluoromethane	97.2			76.0-123		07/02/2017 18:26	WG994563
(S) 4-Bromofluorobenzene	99.7			80.0-120		07/02/2017 18:26	WG994563

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

*Handwritten signature: Jc 7/12/17*



Collected date/time: 06/26/17 09:20

L918687

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	209000		2710	20000	1	06/30/2017 12:19	WG994295

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	45100		51.9	1000	1	06/28/2017 00:44	WG993484
Nitrate	U		22.7	100	1	06/28/2017 00:44	WG993484
Sulfate	8850		77.4	5000	1	06/28/2017 00:44	WG993484

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	11400		204	2000	2	07/01/2017 12:46	WG994888

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	2910		15.0	100	1	06/30/2017 20:42	WG994449
Manganese	2240		0.250	5.00	1	06/30/2017 20:42	WG994449

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	9600		5.74	13.6	20	06/28/2017 14:17	WG993867
Ethane	19.6		0.296	1.29	1	06/28/2017 12:58	WG993522
Ethene	34.4		0.422	1.27	1	06/28/2017 12:58	WG993522

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.15	J	1.05	25.0	1	07/02/2017 18:44	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 18:44	WG994563
Benzene	0.252	J	0.0896	0.500	1	07/02/2017 18:44	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 18:44	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 18:44	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 18:44	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 18:44	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 18:44	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 18:44	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 18:44	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 18:44	WG994563
Carbon disulfide	U	VS JO	0.101	0.500	1	07/02/2017 18:44	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 18:44	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 18:44	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 18:44	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 18:44	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 18:44	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 18:44	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 18:44	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 18:44	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 18:44	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 18:44	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 18:44	WG994563

*Handwritten signature and date: Jc 7/27/17*

J5-062617

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 09:20

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 18:44	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 18:44	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 18:44	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 18:44	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 18:44	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 18:44	WG994563
1,1-Dichloroethene	0.425	J J	0.188	0.500	1	07/02/2017 18:44	WG994563
cis-1,2-Dichloroethene	366		0.933	5.00	10	07/04/2017 12:08	WG994563
trans-1,2-Dichloroethene	1.94		0.152	0.500	1	07/02/2017 18:44	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 18:44	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 18:44	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 18:44	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 18:44	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 18:44	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 18:44	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 18:44	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 18:44	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 18:44	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 18:44	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 18:44	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 18:44	WG994563
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 18:44	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 18:44	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 18:44	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 18:44	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 18:44	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 18:44	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 18:44	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 18:44	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 18:44	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 18:44	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 18:44	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 18:44	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 18:44	WG994563
Tetrachloroethene	36.1		0.199	0.500	1	07/02/2017 18:44	WG994563
Toluene	0.506		0.412	0.500	1	07/02/2017 18:44	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 18:44	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 18:44	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 18:44	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 18:44	WG994563
Trichloroethene	37.1		0.153	0.500	1	07/02/2017 18:44	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 18:44	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 18:44	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 18:44	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 18:44	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 18:44	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 18:44	WG994563
Vinyl chloride	77.7		0.118	0.500	1	07/02/2017 18:44	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 18:44	WG994563
(S) Toluene-d8	101	✓		80.0-120		07/04/2017 12:08	WG994563
(S) Toluene-d8	106	✓		80.0-120		07/02/2017 18:44	WG994563
(S) Dibromofluoromethane	96.8	✓		76.0-123		07/02/2017 18:44	WG994563
(S) Dibromofluoromethane	117	✓		76.0-123	✓	07/04/2017 12:08	WG994563
(S) 4-Bromofluorobenzene	109	✓		80.0-120		07/04/2017 12:08	WG994563
(S) 4-Bromofluorobenzene	99.1	✓		80.0-120		07/02/2017 18:44	WG994563

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

*Jc*  
*7/12/17*



Collected date/time: 06/26/17 11:15

L918687

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	486000		2710	20000	1	06/30/2017 21:27	<a href="#">WG994297</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	22000		51.9	1000	1	06/28/2017 01:13	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 01:13	<a href="#">WG993484</a>
Sulfate	60300		77.4	5000	1	06/28/2017 01:13	<a href="#">WG993484</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	19100		102	1000	1	06/30/2017 21:56	<a href="#">WG994361</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	2660		15.0	100	1	06/30/2017 20:45	<a href="#">WG994449</a>
Manganese	3090		0.250	5.00	1	06/30/2017 20:45	<a href="#">WG994449</a>

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	2220		1.44	3.39	5	06/28/2017 14:19	<a href="#">WG993867</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:00	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:00	<a href="#">WG993522</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	1.49	J ↓	1.05	25.0	1	07/02/2017 19:02	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:02	<a href="#">WG994563</a>
Benzene	0.173	J ↓	0.0896	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Carbon disulfide	U	VJ JO	0.101	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:02	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 19:02	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:02	<a href="#">WG994563</a>

*Jc  
7/27/17*

J15-062617

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 11:15

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:02	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:02	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:02	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:02	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:02	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:02	WG994563
1,1-Dichloroethene	1.84		0.188	0.500	1	07/02/2017 19:02	WG994563
cis-1,2-Dichloroethene	39.8		0.0933	0.500	1	07/02/2017 19:02	WG994563
trans-1,2-Dichloroethene	1.06		0.152	0.500	1	07/02/2017 19:02	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:02	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:02	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:02	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:02	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:02	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:02	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:02	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:02	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:02	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:02	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:02	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 19:02	WG994563
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 19:02	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:02	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:02	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:02	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:02	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:02	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:02	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 19:02	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:02	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 19:02	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:02	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:02	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:02	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 19:02	WG994563
Toluene	0.459	J J	0.412	0.500	1	07/02/2017 19:02	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:02	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:02	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:02	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:02	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 19:02	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:02	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:02	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:02	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:02	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:02	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:02	WG994563
Vinyl chloride	6.30		0.118	0.500	1	07/02/2017 19:02	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:02	WG994563
(S) Toluene-d8	107	✓		80.0-120		07/02/2017 19:02	WG994563
(S) Dibromofluoromethane	95.4	✓		76.0-123		07/02/2017 19:02	WG994563
(S) 4-Bromofluorobenzene	100	✓		80.0-120		07/02/2017 19:02	WG994563

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

*Handwritten signature and date: 7/27/17*

K8-062617

## SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 12:30

L918687

## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	97500		2710	20000	1	06/30/2017 12:25	<a href="#">WG994295</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	14700		51.9	1000	1	06/28/2017 01:27	<a href="#">WG993484</a>
Nitrate	307		22.7	100	1	06/28/2017 01:27	<a href="#">WG993484</a>
Sulfate	25800		77.4	5000	1	06/28/2017 01:27	<a href="#">WG993484</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	6450		102	1000	1	06/30/2017 22:08	<a href="#">WG994361</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	41.1	J J	15.0	100	1	06/30/2017 20:49	<a href="#">WG994449</a>
Manganese	296		0.250	5.00	1	06/30/2017 20:49	<a href="#">WG994449</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	72.7		0.287	0.678	1	06/28/2017 13:31	<a href="#">WG993522</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:31	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:31	<a href="#">WG993522</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.07	J J	1.05	25.0	1	07/02/2017 19:20	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:20	<a href="#">WG994563</a>
Benzene	0.246	J J	0.0896	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Carbon disulfide	U	UJ JO	0.101	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:20	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 19:20	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:20	<a href="#">WG994563</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 12:30

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:20	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:20	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:20	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:20	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:20	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:20	WG994563
1,1-Dichloroethene	1.34		0.188	0.500	1	07/02/2017 19:20	WG994563
cis-1,2-Dichloroethene	140		0.0933	0.500	1	07/02/2017 19:20	WG994563
trans-1,2-Dichloroethene	0.750		0.152	0.500	1	07/02/2017 19:20	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:20	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:20	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:20	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:20	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:20	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:20	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:20	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:20	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:20	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:20	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:20	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 19:20	WG994563
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 19:20	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:20	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:20	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:20	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:20	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:20	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:20	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 19:20	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:20	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 19:20	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:20	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:20	WG994563
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:20	WG994563
Tetrachloroethene	67.9		0.199	0.500	1	07/02/2017 19:20	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 19:20	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:20	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:20	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:20	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:20	WG994563
Trichloroethene	28.7		0.153	0.500	1	07/02/2017 19:20	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:20	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:20	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:20	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:20	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:20	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:20	WG994563
Vinyl chloride	0.456	J ↓	0.118	0.500	1	07/02/2017 19:20	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:20	WG994563
(S) Toluene-d8	105	✓		80.0-120		07/02/2017 19:20	WG994563
(S) Dibromofluoromethane	94.8	✓		76.0-123		07/02/2017 19:20	WG994563
(S) 4-Bromofluorobenzene	97.1	✓		80.0-120		07/02/2017 19:20	WG994563

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

J 7/12/17



Collected date/time: 06/26/17 14:50

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Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	904000		2710	20000	1	06/30/2017 21:41	<a href="#">WG994297</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	11000		51.9	1000	1	06/28/2017 02:39	<a href="#">WG993484</a>
Nitrate	U		22.7	100	1	06/28/2017 02:39	<a href="#">WG993484</a>
Sulfate	47200		77.4	5000	1	06/28/2017 02:39	<a href="#">WG993484</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	11000		204	2000	<u>2</u>	07/01/2017 12:57	<a href="#">WG994888</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	3320		15.0	100	1	06/30/2017 21:10	<a href="#">WG994449</a>
Manganese	6320		0.250	5.00	1	06/30/2017 21:10	<a href="#">WG994449</a>

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	7250		5.74	13.6	20	06/28/2017 14:23	<a href="#">WG993867</a>
Ethane	U		0.296	1.29	1	06/28/2017 13:05	<a href="#">WG993522</a>
Ethene	U		0.422	1.27	1	06/28/2017 13:05	<a href="#">WG993522</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 19:38	<a href="#">WG994563</a>
Acrylonitrile	U		0.873	5.00	1	07/02/2017 19:38	<a href="#">WG994563</a>
Benzene	U		0.0896	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromobenzene	U		0.133	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromochloromethane	U		0.145	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromoform	U		0.186	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Bromomethane	U		0.157	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Carbon disulfide	U	<i>UJ JO</i>	0.101	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chlorobenzene	U		0.140	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloroethane	U		0.141	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloroform	U		0.0860	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Chloromethane	U		0.153	1.25	1	07/02/2017 19:38	<a href="#">WG994563</a>
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 19:38	<a href="#">WG994563</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>
Dibromomethane	U		0.117	0.500	1	07/02/2017 19:38	<a href="#">WG994563</a>

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M15-062617

SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 14:50

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 19:38	WG994563	Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 19:38	WG994563	Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 19:38	WG994563	Ss
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 19:38	WG994563	Cn
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 19:38	WG994563	Si
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 19:38	WG994563	Qc
1,1-Dichloroethene	0.508		0.188	0.500	1	07/02/2017 19:38	WG994563	Gl
cis-1,2-Dichloroethene	25.8		0.0933	0.500	1	07/02/2017 19:38	WG994563	Al
trans-1,2-Dichloroethene	0.523		0.152	0.500	1	07/02/2017 19:38	WG994563	Sc
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 19:38	WG994563	
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 19:38	WG994563	
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 19:38	WG994563	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 19:38	WG994563	
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 19:38	WG994563	
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 19:38	WG994563	
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 19:38	WG994563	
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 19:38	WG994563	
Ethylbenzene	U		0.158	0.500	1	07/02/2017 19:38	WG994563	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 19:38	WG994563	
2-Hexanone	U		0.757	5.00	1	07/02/2017 19:38	WG994563	
n-Hexane	U		0.305	5.00	1	07/02/2017 19:38	WG994563	
Iodomethane	U	UJ JO J3	0.377	10.0	1	07/02/2017 19:38	WG994563	
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 19:38	WG994563	
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 19:38	WG994563	
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 19:38	WG994563	
Methylene Chloride	U		1.07	2.50	1	07/02/2017 19:38	WG994563	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 19:38	WG994563	
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 19:38	WG994563	
Naphthalene	U		0.174	2.50	1	07/02/2017 19:38	WG994563	
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 19:38	WG994563	
Styrene	U		0.117	0.500	1	07/02/2017 19:38	WG994563	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 19:38	WG994563	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 19:38	WG994563	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 19:38	WG994563	
Tetrachloroethene	0.233	J J	0.199	0.500	1	07/02/2017 19:38	WG994563	
Toluene	U		0.412	0.500	1	07/02/2017 19:38	WG994563	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 19:38	WG994563	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 19:38	WG994563	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 19:38	WG994563	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 19:38	WG994563	
Trichloroethene	1.80		0.153	0.500	1	07/02/2017 19:38	WG994563	
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 19:38	WG994563	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 19:38	WG994563	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 19:38	WG994563	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 19:38	WG994563	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 19:38	WG994563	
Vinyl acetate	U		0.645	5.00	1	07/02/2017 19:38	WG994563	
Vinyl chloride	15.0		0.118	0.500	1	07/02/2017 19:38	WG994563	
Xylenes, Total	U		0.316	1.50	1	07/02/2017 19:38	WG994563	
(S) Toluene-d8	107	✓		80.0-120		07/02/2017 19:38	WG994563	
(S) Dibromofluoromethane	96.5	✓		76.0-123		07/02/2017 19:38	WG994563	
(S) 4-Bromofluorobenzene	99.9	✓		80.0-120		07/02/2017 19:38	WG994563	

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SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 00:00

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/02/2017 13:20	WG994563
Acrylonitrile	U		0.873	5.00	1	07/02/2017 13:20	WG994563
Benzene	U		0.0896	0.500	1	07/02/2017 13:20	WG994563
Bromobenzene	U		0.133	0.500	1	07/02/2017 13:20	WG994563
Bromodichloromethane	U		0.0800	0.500	1	07/02/2017 13:20	WG994563
Bromochloromethane	U		0.145	0.500	1	07/02/2017 13:20	WG994563
Bromoform	U		0.186	0.500	1	07/02/2017 13:20	WG994563
Bromomethane	U		0.157	2.50	1	07/02/2017 13:20	WG994563
n-Butylbenzene	U		0.143	0.500	1	07/02/2017 13:20	WG994563
sec-Butylbenzene	U		0.134	0.500	1	07/02/2017 13:20	WG994563
tert-Butylbenzene	U		0.183	0.500	1	07/02/2017 13:20	WG994563
Carbon disulfide	U	VS JO	0.101	0.500	1	07/02/2017 13:20	WG994563
Carbon tetrachloride	U		0.159	0.500	1	07/02/2017 13:20	WG994563
Chlorobenzene	U		0.140	0.500	1	07/02/2017 13:20	WG994563
Chlorodibromomethane	U		0.128	0.500	1	07/02/2017 13:20	WG994563
Chloroethane	U		0.141	2.50	1	07/02/2017 13:20	WG994563
Chloroform	U		0.0860	0.500	1	07/02/2017 13:20	WG994563
Chloromethane	U		0.153	1.25	1	07/02/2017 13:20	WG994563
2-Chlorotoluene	U		0.111	0.500	1	07/02/2017 13:20	WG994563
4-Chlorotoluene	U		0.0972	0.500	1	07/02/2017 13:20	WG994563
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/02/2017 13:20	WG994563
1,2-Dibromoethane	U		0.193	0.500	1	07/02/2017 13:20	WG994563
Dibromomethane	U		0.117	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichlorobenzene	U		0.101	0.500	1	07/02/2017 13:20	WG994563
1,3-Dichlorobenzene	U		0.130	0.500	1	07/02/2017 13:20	WG994563
1,4-Dichlorobenzene	U		0.121	0.500	1	07/02/2017 13:20	WG994563
Dichlorodifluoromethane	U		0.127	2.50	1	07/02/2017 13:20	WG994563
1,1-Dichloroethane	U		0.114	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichloroethane	U		0.108	0.500	1	07/02/2017 13:20	WG994563
1,1-Dichloroethene	U		0.188	0.500	1	07/02/2017 13:20	WG994563
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/02/2017 13:20	WG994563
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/02/2017 13:20	WG994563
1,2-Dichloropropane	U		0.190	0.500	1	07/02/2017 13:20	WG994563
1,1-Dichloropropene	U		0.128	0.500	1	07/02/2017 13:20	WG994563
1,3-Dichloropropane	U		0.147	1.00	1	07/02/2017 13:20	WG994563
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/02/2017 13:20	WG994563
trans-1,3-Dichloropropene	U		0.222	1.00	1	07/02/2017 13:20	WG994563
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/02/2017 13:20	WG994563
2,2-Dichloropropane	U		0.0929	0.500	1	07/02/2017 13:20	WG994563
Di-isopropyl ether	U		0.0924	0.500	1	07/02/2017 13:20	WG994563
Ethylbenzene	U		0.158	0.500	1	07/02/2017 13:20	WG994563
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/02/2017 13:20	WG994563
2-Hexanone	U		0.757	5.00	1	07/02/2017 13:20	WG994563
n-Hexane	U		0.305	5.00	1	07/02/2017 13:20	WG994563
Iodomethane	U	VS JO J3	0.377	10.0	1	07/02/2017 13:20	WG994563
Isopropylbenzene	U		0.126	0.500	1	07/02/2017 13:20	WG994563
p-Isopropyltoluene	U		0.138	0.500	1	07/02/2017 13:20	WG994563
2-Butanone (MEK)	U		1.28	5.00	1	07/02/2017 13:20	WG994563
Methylene Chloride	U		1.07	2.50	1	07/02/2017 13:20	WG994563
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/02/2017 13:20	WG994563
Methyl tert-butyl ether	U		0.102	0.500	1	07/02/2017 13:20	WG994563
Naphthalene	U		0.174	2.50	1	07/02/2017 13:20	WG994563
n-Propylbenzene	U		0.162	0.500	1	07/02/2017 13:20	WG994563
Styrene	U		0.117	0.500	1	07/02/2017 13:20	WG994563
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/02/2017 13:20	WG994563
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/02/2017 13:20	WG994563

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

YC 7/27/17

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SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.



Collected date/time: 06/26/17 00:00

L918687

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/02/2017 13:20	WG994563
Tetrachloroethene	U		0.199	0.500	1	07/02/2017 13:20	WG994563
Toluene	U		0.412	0.500	1	07/02/2017 13:20	WG994563
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/02/2017 13:20	WG994563
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/02/2017 13:20	WG994563
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/02/2017 13:20	WG994563
1,1,2-Trichloroethane	U		0.186	0.500	1	07/02/2017 13:20	WG994563
Trichloroethene	U		0.153	0.500	1	07/02/2017 13:20	WG994563
Trichlorofluoromethane	U		0.130	2.50	1	07/02/2017 13:20	WG994563
1,2,3-Trichloropropane	U		0.247	2.50	1	07/02/2017 13:20	WG994563
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/02/2017 13:20	WG994563
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/02/2017 13:20	WG994563
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/02/2017 13:20	WG994563
Vinyl acetate	U		0.645	5.00	1	07/02/2017 13:20	WG994563
Vinyl chloride	U		0.118	0.500	1	07/02/2017 13:20	WG994563
Xylenes, Total	U		0.316	1.50	1	07/02/2017 13:20	WG994563
(S) Toluene-d8	105	✓		80.0-120		07/02/2017 13:20	WG994563
(S) Dibromofluoromethane	96.1	✓		76.0-123		07/02/2017 13:20	WG994563
(S) 4-Bromofluorobenzene	101	✓		80.0-120		07/02/2017 13:20	WG994563

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

*Handwritten signature and date: JL 7/27/17*

July 07, 2017

## PES Environmental, Inc.- WA

Sample Delivery Group: L919100  
Samples Received: 06/28/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>4</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>5</b>	<b>5</b> Sr
MW108-062717 L919100-01	<b>5</b>	
MW109-062717 L919100-02	<b>7</b>	
MW110-062717 L919100-03	<b>9</b>	
N7-062717 L919100-04	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>13</b>	<b>6</b> Qc
Wet Chemistry by Method 2320 B-2011	<b>13</b>	
Wet Chemistry by Method 9056A	<b>14</b>	<b>7</b> Gl
Wet Chemistry by Method 9060A	<b>18</b>	<b>8</b> Al
Metals (ICPMS) by Method 6020A	<b>21</b>	
Volatile Organic Compounds (GC) by Method RSK175	<b>22</b>	
Volatile Organic Compounds (GC/MS) by Method 8260C	<b>24</b>	<b>9</b> Sc
<b>Gl: Glossary of Terms</b>	<b>28</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>29</b>	
<b>Sc: Chain of Custody</b>	<b>30</b>	

# SAMPLE SUMMARY



## MW108-062717 L919100-01 GW

Collected by  
Shannon McKernan

Collected date/time  
06/27/17 09:00

Received date/time  
06/28/17 12:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG996022	1	07/06/17 20:53	07/06/17 20:53	MCG
Wet Chemistry by Method 9056A	WG993859	1	06/29/17 03:21	06/29/17 03:21	DR
Wet Chemistry by Method 9056A	WG994712	5	07/01/17 19:32	07/01/17 19:32	CSU
Wet Chemistry by Method 9060A	WG994888	1	07/01/17 19:32	07/01/17 19:32	SJM
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 20:57	LAT
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 23:30	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993916	1	07/05/17 11:16	07/05/17 11:16	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG995826	5	07/05/17 14:58	07/05/17 14:58	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	1	07/04/17 12:33	07/04/17 12:33	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	10	07/05/17 11:48	07/05/17 11:48	LRL

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

## MW109-062717 L919100-02 GW

Collected by  
Shannon McKernan

Collected date/time  
06/27/17 10:50

Received date/time  
06/28/17 12:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG996022	1	07/06/17 20:59	07/06/17 20:59	MCG
Wet Chemistry by Method 9056A	WG993859	1	06/29/17 04:08	06/29/17 04:08	DR
Wet Chemistry by Method 9060A	WG995857	2	07/06/17 10:55	07/06/17 10:55	CSU
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 21:46	LAT
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/06/17 00:06	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993916	1	07/05/17 11:19	07/05/17 11:19	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG995826	5	07/05/17 15:00	07/05/17 15:00	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	1	07/04/17 12:58	07/04/17 12:58	JHH

7  
Gl

8  
Al

9  
Sc

## MW110-062717 L919100-03 GW

Collected by  
Shannon McKernan

Collected date/time  
06/27/17 12:35

Received date/time  
06/28/17 12:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG996022	1	07/06/17 21:09	07/06/17 21:09	MCG
Wet Chemistry by Method 9056A	WG993859	1	06/29/17 04:24	06/29/17 04:24	DR
Wet Chemistry by Method 9056A	WG994713	10	07/01/17 16:31	07/01/17 16:31	SAM
Wet Chemistry by Method 9060A	WG995102	1	07/03/17 19:19	07/03/17 19:19	CSU
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 21:50	LAT
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/06/17 00:11	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993916	1	07/05/17 11:21	07/05/17 11:21	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	1	07/04/17 13:23	07/04/17 13:23	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	50	07/05/17 12:02	07/05/17 12:02	LRL

## N7-062717 L919100-04 GW

Collected by  
Shannon McKernan

Collected date/time  
06/27/17 15:10

Received date/time  
06/28/17 12:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG996022	1	07/06/17 21:37	07/06/17 21:37	MCG
Wet Chemistry by Method 9056A	WG993859	1	06/29/17 05:12	06/29/17 05:12	DR
Wet Chemistry by Method 9060A	WG995102	1	07/03/17 19:30	07/03/17 19:30	CSU
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 21:53	LAT
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/06/17 00:16	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993916	1	07/05/17 11:23	07/05/17 11:23	AMC
Volatile Organic Compounds (GC) by Method RSK175	WG995826	20	07/05/17 15:02	07/05/17 15:02	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	1	07/04/17 13:48	07/04/17 13:48	JHH
Volatile Organic Compounds (GC/MS) by Method 8260C	WG995407	10	07/05/17 12:15	07/05/17 12:15	LRL



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.

Brian Ford  
Technical Service Representative

### Sample Handling and Receiving

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VOC pH outside of method requirement.

<u>ESC Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
<a href="#">L919100-03</a>	<a href="#">MW110-062717</a>	8260C

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	679000		2710	20000	1	07/06/2017 20:53	<a href="#">WG996022</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	20600		51.9	1000	1	06/29/2017 03:21	<a href="#">WG993859</a>
Nitrate	U		22.7	100	1	06/29/2017 03:21	<a href="#">WG993859</a>
Sulfate	101000		387	25000	5	07/01/2017 19:32	<a href="#">WG994712</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	8620		102	1000	1	07/01/2017 19:32	<a href="#">WG994888</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	21800	<u>V</u>	15.0	100	1	07/05/2017 23:30	<a href="#">WG995343</a>
Manganese	2200	<u>V</u>	0.250	5.00	1	07/05/2017 20:57	<a href="#">WG995343</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	3940		1.44	3.39	5	07/05/2017 14:58	<a href="#">WG995826</a>
Ethane	47.8		0.296	1.29	1	07/05/2017 11:16	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:16	<a href="#">WG993916</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	2.03	<u>J</u>	1.05	25.0	1	07/04/2017 12:33	<a href="#">WG995407</a>
Acrylonitrile	U		0.873	5.00	1	07/04/2017 12:33	<a href="#">WG995407</a>
Benzene	1.26		0.0896	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Bromobenzene	U		0.133	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Bromochloromethane	U		0.145	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Bromoform	U		0.186	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Bromomethane	U		0.157	2.50	1	07/04/2017 12:33	<a href="#">WG995407</a>
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Carbon disulfide	U		0.101	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Chlorobenzene	U		0.140	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Chloroethane	U		0.141	2.50	1	07/04/2017 12:33	<a href="#">WG995407</a>
Chloroform	U		0.0860	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Chloromethane	U		0.153	1.25	1	07/04/2017 12:33	<a href="#">WG995407</a>
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 12:33	<a href="#">WG995407</a>
1,2-Dibromoethane	U	<u>JO J4</u>	0.193	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>
Dibromomethane	U		0.117	0.500	1	07/04/2017 12:33	<a href="#">WG995407</a>





Collected date/time: 06/27/17 09:00

L919100

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 12:33	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 12:33	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 12:33	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 12:33	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 12:33	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 12:33	WG995407
1,1-Dichloroethene	0.512		0.188	0.500	1	07/04/2017 12:33	WG995407
cis-1,2-Dichloroethene	165		0.0933	0.500	1	07/04/2017 12:33	WG995407
trans-1,2-Dichloroethene	0.748		0.152	0.500	1	07/04/2017 12:33	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 12:33	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 12:33	WG995407
1,3-Dichloropropane	U	JO J4	0.147	1.00	1	07/04/2017 12:33	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 12:33	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 12:33	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 12:33	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 12:33	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 12:33	WG995407
Ethylbenzene	U	JO J4	0.158	0.500	1	07/04/2017 12:33	WG995407
Hexachloro-1,3-butadiene	U	JO	0.157	1.00	1	07/04/2017 12:33	WG995407
2-Hexanone	U	JO	0.757	5.00	1	07/04/2017 12:33	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 12:33	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 12:33	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 12:33	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 12:33	WG995407
2-Butanone (MEK)	U	JO	1.28	5.00	1	07/04/2017 12:33	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 12:33	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 12:33	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 12:33	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 12:33	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 12:33	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 12:33	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 12:33	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 12:33	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 12:33	WG995407
Tetrachloroethene	194		1.99	5.00	10	07/05/2017 11:48	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 12:33	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 12:33	WG995407
1,2,4-Trichlorobenzene	U	JO	0.355	0.500	1	07/04/2017 12:33	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 12:33	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 12:33	WG995407
Trichloroethene	22.1		0.153	0.500	1	07/04/2017 12:33	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 12:33	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 12:33	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 12:33	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 12:33	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 12:33	WG995407
Vinyl acetate	U	JO J4	0.645	5.00	1	07/04/2017 12:33	WG995407
Vinyl chloride	52.8		0.118	0.500	1	07/04/2017 12:33	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 12:33	WG995407
(S) Toluene-d8	99.5			80.0-120		07/05/2017 11:48	WG995407
(S) Toluene-d8	100			80.0-120		07/04/2017 12:33	WG995407
(S) Dibromofluoromethane	87.7			76.0-123		07/05/2017 11:48	WG995407
(S) Dibromofluoromethane	113			76.0-123		07/04/2017 12:33	WG995407
(S) 4-Bromofluorobenzene	112			80.0-120		07/05/2017 11:48	WG995407
(S) 4-Bromofluorobenzene	107			80.0-120		07/04/2017 12:33	WG995407

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	693000		2710	20000	1	07/06/2017 20:59	<a href="#">WG996022</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	13300		51.9	1000	1	06/29/2017 04:08	<a href="#">WG993859</a>
Nitrate	U		22.7	100	1	06/29/2017 04:08	<a href="#">WG993859</a>
Sulfate	42500		77.4	5000	1	06/29/2017 04:08	<a href="#">WG993859</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	12200		204	2000	2	07/06/2017 10:55	<a href="#">WG995857</a>

## Metals (ICPMS) by Method 6020A

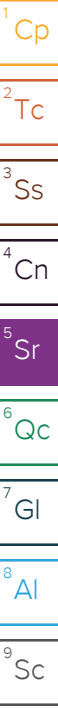
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	14600		15.0	100	1	07/06/2017 00:06	<a href="#">WG995343</a>
Manganese	3900		0.250	5.00	1	07/05/2017 21:46	<a href="#">WG995343</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	2540		1.44	3.39	5	07/05/2017 15:00	<a href="#">WG995826</a>
Ethane	8.65		0.296	1.29	1	07/05/2017 11:19	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:19	<a href="#">WG993916</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.20	J	1.05	25.0	1	07/04/2017 12:58	<a href="#">WG995407</a>
Acrylonitrile	U		0.873	5.00	1	07/04/2017 12:58	<a href="#">WG995407</a>
Benzene	U		0.0896	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Bromobenzene	U		0.133	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Bromochloromethane	U		0.145	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Bromoform	U		0.186	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Bromomethane	U		0.157	2.50	1	07/04/2017 12:58	<a href="#">WG995407</a>
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Carbon disulfide	U		0.101	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Chlorobenzene	U		0.140	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Chloroethane	U		0.141	2.50	1	07/04/2017 12:58	<a href="#">WG995407</a>
Chloroform	U		0.0860	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Chloromethane	U		0.153	1.25	1	07/04/2017 12:58	<a href="#">WG995407</a>
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 12:58	<a href="#">WG995407</a>
1,2-Dibromoethane	U	JO J4	0.193	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>
Dibromomethane	U		0.117	0.500	1	07/04/2017 12:58	<a href="#">WG995407</a>





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 12:58	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 12:58	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 12:58	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 12:58	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 12:58	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 12:58	WG995407
1,1-Dichloroethene	0.583		0.188	0.500	1	07/04/2017 12:58	WG995407
cis-1,2-Dichloroethene	163		0.0933	0.500	1	07/04/2017 12:58	WG995407
trans-1,2-Dichloroethene	1.17		0.152	0.500	1	07/04/2017 12:58	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 12:58	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 12:58	WG995407
1,3-Dichloropropane	U	JO J4	0.147	1.00	1	07/04/2017 12:58	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 12:58	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 12:58	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 12:58	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 12:58	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 12:58	WG995407
Ethylbenzene	U	JO J4	0.158	0.500	1	07/04/2017 12:58	WG995407
Hexachloro-1,3-butadiene	U	JO	0.157	1.00	1	07/04/2017 12:58	WG995407
2-Hexanone	U	JO	0.757	5.00	1	07/04/2017 12:58	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 12:58	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 12:58	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 12:58	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 12:58	WG995407
2-Butanone (MEK)	U	JO	1.28	5.00	1	07/04/2017 12:58	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 12:58	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 12:58	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 12:58	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 12:58	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 12:58	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 12:58	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 12:58	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 12:58	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 12:58	WG995407
Tetrachloroethene	9.69	JO	0.199	0.500	1	07/04/2017 12:58	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 12:58	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 12:58	WG995407
1,2,4-Trichlorobenzene	U	JO	0.355	0.500	1	07/04/2017 12:58	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 12:58	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 12:58	WG995407
Trichloroethene	141		0.153	0.500	1	07/04/2017 12:58	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 12:58	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 12:58	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 12:58	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 12:58	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 12:58	WG995407
Vinyl acetate	U	JO J4	0.645	5.00	1	07/04/2017 12:58	WG995407
Vinyl chloride	6.06		0.118	0.500	1	07/04/2017 12:58	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 12:58	WG995407
(S) Toluene-d8	99.8			80.0-120		07/04/2017 12:58	WG995407
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 12:58	WG995407
(S) 4-Bromofluorobenzene	108			80.0-120		07/04/2017 12:58	WG995407

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	516000		2710	20000	1	07/06/2017 21:09	<a href="#">WG996022</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	27000		51.9	1000	1	06/29/2017 04:24	<a href="#">WG993859</a>
Nitrate	U		22.7	100	1	06/29/2017 04:24	<a href="#">WG993859</a>
Sulfate	160000		774	50000	10	07/01/2017 16:31	<a href="#">WG994713</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	4910		102	1000	1	07/03/2017 19:19	<a href="#">WG995102</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	115	<u>B</u>	15.0	100	1	07/06/2017 00:11	<a href="#">WG995343</a>
Manganese	2130		0.250	5.00	1	07/05/2017 21:50	<a href="#">WG995343</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	95.5		0.287	0.678	1	07/05/2017 11:21	<a href="#">WG993916</a>
Ethane	17.4		0.296	1.29	1	07/05/2017 11:21	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:21	<a href="#">WG993916</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/04/2017 13:23	<a href="#">WG995407</a>
Acrylonitrile	U		0.873	5.00	1	07/04/2017 13:23	<a href="#">WG995407</a>
Benzene	U		0.0896	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromobenzene	U		0.133	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromochloromethane	U		0.145	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromoform	U		0.186	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromomethane	U		0.157	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Carbon disulfide	U		0.101	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chlorobenzene	U		0.140	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloroethane	U		0.141	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloroform	U		0.0860	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloromethane	U		0.153	1.25	1	07/04/2017 13:23	<a href="#">WG995407</a>
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
1,2-Dibromoethane	U	<u>JO J4</u>	0.193	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Dibromomethane	U		0.117	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 13:23	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 13:23	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 13:23	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 13:23	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 13:23	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 13:23	WG995407
1,1-Dichloroethene	5.30		0.188	0.500	1	07/04/2017 13:23	WG995407
cis-1,2-Dichloroethene	1120		4.66	25.0	50	07/05/2017 12:02	WG995407
trans-1,2-Dichloroethene	2.66		0.152	0.500	1	07/04/2017 13:23	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 13:23	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 13:23	WG995407
1,3-Dichloropropane	U	JO J4	0.147	1.00	1	07/04/2017 13:23	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 13:23	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 13:23	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 13:23	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 13:23	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 13:23	WG995407
Ethylbenzene	U	JO J4	0.158	0.500	1	07/04/2017 13:23	WG995407
Hexachloro-1,3-butadiene	U	JO	0.157	1.00	1	07/04/2017 13:23	WG995407
2-Hexanone	U	JO	0.757	5.00	1	07/04/2017 13:23	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 13:23	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 13:23	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 13:23	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 13:23	WG995407
2-Butanone (MEK)	U	JO	1.28	5.00	1	07/04/2017 13:23	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 13:23	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 13:23	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 13:23	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 13:23	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 13:23	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 13:23	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 13:23	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 13:23	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 13:23	WG995407
Tetrachloroethene	259		9.95	25.0	50	07/05/2017 12:02	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 13:23	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 13:23	WG995407
1,2,4-Trichlorobenzene	U	JO	0.355	0.500	1	07/04/2017 13:23	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 13:23	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 13:23	WG995407
Trichloroethene	176		0.153	0.500	1	07/04/2017 13:23	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 13:23	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 13:23	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 13:23	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 13:23	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 13:23	WG995407
Vinyl acetate	U	JO J4	0.645	5.00	1	07/04/2017 13:23	WG995407
Vinyl chloride	152		0.118	0.500	1	07/04/2017 13:23	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 13:23	WG995407
(S) Toluene-d8	100			80.0-120		07/05/2017 12:02	WG995407
(S) Toluene-d8	100			80.0-120		07/04/2017 13:23	WG995407
(S) Dibromofluoromethane	89.2			76.0-123		07/05/2017 12:02	WG995407
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 13:23	WG995407
(S) 4-Bromofluorobenzene	111			80.0-120		07/05/2017 12:02	WG995407
(S) 4-Bromofluorobenzene	106			80.0-120		07/04/2017 13:23	WG995407

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	235000		2710	20000	1	07/06/2017 21:37	<a href="#">WG996022</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	8760		51.9	1000	1	06/29/2017 05:12	<a href="#">WG993859</a>
Nitrate	6290		22.7	100	1	06/29/2017 05:12	<a href="#">WG993859</a>
Sulfate	48400		77.4	5000	1	06/29/2017 05:12	<a href="#">WG993859</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	2710		102	1000	1	07/03/2017 19:30	<a href="#">WG995102</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	1450		15.0	100	1	07/06/2017 00:16	<a href="#">WG995343</a>
Manganese	3310		0.250	5.00	1	07/05/2017 21:53	<a href="#">WG995343</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	8430		5.74	13.6	20	07/05/2017 15:02	<a href="#">WG995826</a>
Ethane	U		0.296	1.29	1	07/05/2017 11:23	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:23	<a href="#">WG993916</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.41	J	1.05	25.0	1	07/04/2017 13:48	<a href="#">WG995407</a>
Acrylonitrile	U		0.873	5.00	1	07/04/2017 13:48	<a href="#">WG995407</a>
Benzene	U		0.0896	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Bromobenzene	U		0.133	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Bromochloromethane	U		0.145	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Bromoform	U		0.186	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Bromomethane	U		0.157	2.50	1	07/04/2017 13:48	<a href="#">WG995407</a>
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Carbon disulfide	U		0.101	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Chlorobenzene	U		0.140	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Chloroethane	0.313	J	0.141	2.50	1	07/04/2017 13:48	<a href="#">WG995407</a>
Chloroform	U		0.0860	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Chloromethane	U		0.153	1.25	1	07/04/2017 13:48	<a href="#">WG995407</a>
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 13:48	<a href="#">WG995407</a>
1,2-Dibromoethane	U	JO J4	0.193	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>
Dibromomethane	U		0.117	0.500	1	07/04/2017 13:48	<a href="#">WG995407</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 13:48	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 13:48	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 13:48	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 13:48	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 13:48	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 13:48	WG995407
1,1-Dichloroethene	1.00		0.188	0.500	1	07/04/2017 13:48	WG995407
cis-1,2-Dichloroethene	153		0.933	5.00	10	07/05/2017 12:15	WG995407
trans-1,2-Dichloroethene	0.955		0.152	0.500	1	07/04/2017 13:48	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 13:48	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 13:48	WG995407
1,3-Dichloropropane	U	JO J4	0.147	1.00	1	07/04/2017 13:48	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 13:48	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 13:48	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 13:48	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 13:48	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 13:48	WG995407
Ethylbenzene	U	JO J4	0.158	0.500	1	07/04/2017 13:48	WG995407
Hexachloro-1,3-butadiene	U	JO	0.157	1.00	1	07/04/2017 13:48	WG995407
2-Hexanone	U	JO	0.757	5.00	1	07/04/2017 13:48	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 13:48	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 13:48	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 13:48	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 13:48	WG995407
2-Butanone (MEK)	U	JO	1.28	5.00	1	07/04/2017 13:48	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 13:48	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 13:48	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 13:48	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 13:48	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 13:48	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 13:48	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 13:48	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 13:48	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 13:48	WG995407
Tetrachloroethene	205		1.99	5.00	10	07/05/2017 12:15	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 13:48	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 13:48	WG995407
1,2,4-Trichlorobenzene	U	JO	0.355	0.500	1	07/04/2017 13:48	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 13:48	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 13:48	WG995407
Trichloroethene	85.1		0.153	0.500	1	07/04/2017 13:48	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 13:48	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 13:48	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 13:48	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 13:48	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 13:48	WG995407
Vinyl acetate	U	JO J4	0.645	5.00	1	07/04/2017 13:48	WG995407
Vinyl chloride	0.386	J	0.118	0.500	1	07/04/2017 13:48	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 13:48	WG995407
(S) Toluene-d8	99.0			80.0-120		07/04/2017 13:48	WG995407
(S) Toluene-d8	98.9			80.0-120		07/05/2017 12:15	WG995407
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 13:48	WG995407
(S) Dibromofluoromethane	88.7			76.0-123		07/05/2017 12:15	WG995407
(S) 4-Bromofluorobenzene	110			80.0-120		07/04/2017 13:48	WG995407
(S) 4-Bromofluorobenzene	110			80.0-120		07/05/2017 12:15	WG995407

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3231561-3 07/06/17 18:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	3220	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L919100-04 Original Sample (OS) • Duplicate (DUP)

(OS) L919100-04 07/06/17 21:37 • (DUP) R3231561-7 07/06/17 21:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	235000	235000	1	0.000		20

L919761-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919761-01 07/06/17 19:05 • (DUP) R3231561-4 07/06/17 19:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	83600	84000	1	0.000		20

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

(LCS) R3231561-5 07/06/17 19:47 • (LCSD) R3231561-6 07/06/17 21:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	107000	108000	107	108	85.0-115			1.00	20





Method Blank (MB)

(MB) R3229658-1 06/28/17 06:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	316	J	77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L918989-03 Original Sample (OS) • Duplicate (DUP)

(OS) L918989-03 06/28/17 19:23 • (DUP) R3229658-4 06/28/17 19:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	77900	78300	1	0		15
Sulfate	42300	42700	1	1		15

L919026-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919026-01 06/28/17 22:50 • (DUP) R3229658-5 06/28/17 23:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	63400	63300	1	0		15

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

(LCS) R3229658-2 06/28/17 06:52 • (LCSD) R3229658-3 06/28/17 07:08

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39700	39800	99	99	80-120			0	15
Nitrate	8000	8120	8160	102	102	80-120			0	15
Sulfate	40000	40000	40300	100	101	80-120			1	15

L919026-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L919026-01 06/28/17 22:50 • (MS) R3229658-6 06/28/17 23:22

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	63400	109000	92	1	80-120	E



L919100-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919100-03 06/29/17 04:24 • (MS) R3229658-7 06/29/17 04:40 • (MSD) R3229658-8 06/29/17 04:56

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Chloride	50000	27000	75300	75000	97	96	1	80-120			0	15

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230717-1 07/01/17 08:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L919039-05 Original Sample (OS) • Duplicate (DUP)

(OS) L919039-05 07/01/17 11:50 • (DUP) R3230717-4 07/01/17 12:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	5640	5590	1	1		15

L919039-09 Original Sample (OS) • Duplicate (DUP)

(OS) L919039-09 07/01/17 14:19 • (DUP) R3230717-6 07/01/17 14:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	26000	25900	1	0		15

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

(LCS) R3230717-2 07/01/17 08:15 • (LCSD) R3230717-3 07/01/17 08:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	38800	38700	97	97	80-120			0	15

L919039-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L919039-06 07/01/17 12:20 • (MS) R3230717-5 07/01/17 12:35

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50000	6720	57000	101	1	80-120	



Method Blank (MB)

(MB) R3230924-1 07/01/17 14:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		77.4	5000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

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

(LCS) R3230924-2 07/01/17 14:47 • (LCSD) R3230924-3 07/01/17 14:59

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Sulfate	40000	41000	40800	102	102	80-120			0	15

L919204-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919204-02 07/01/17 21:28 • (MS) R3230924-7 07/01/17 21:41 • (MSD) R3230924-8 07/01/17 21:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50000	ND	50400	50300	101	101	1	80-120			0	15

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230519-1 07/01/17 09:22

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	202	J	102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L919100-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919100-01 07/01/17 19:32 • (DUP) R3230519-7 07/01/17 19:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	8620	8630	1	0		20

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

(LCS) R3230519-2 07/01/17 12:35 • (LCSD) R3230519-4 07/01/17 15:02

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	74500	74100	99	99	85-115			0	20

7 Gl

8 Al

L919056-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919056-02 07/01/17 16:23 • (MS) R3230519-5 07/01/17 16:37 • (MSD) R3230519-6 07/01/17 16:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	5820	55500	55600	99	100	1	80-120			0	20

9 Sc



Method Blank (MB)

(MB) R3231083-1 07/03/17 15:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

L918989-02 Original Sample (OS) • Duplicate (DUP)

(OS) L918989-02 07/03/17 22:08 • (DUP) R3231083-7 07/03/17 22:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	ND	344	1	0		20

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

(LCS) R3231083-2 07/03/17 16:30 • (LCSD) R3231083-5 07/03/17 18:32

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	72600	72400	97	97	85-115			0	20

L919032-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919032-02 07/03/17 17:16 • (MS) R3231083-3 07/03/17 17:30 • (MSD) R3231083-4 07/03/17 17:44

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	1670	50800	50600	98	98	1	80-120			0	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

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

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	219	J	102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	4160	4210	1	1		20

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	4740	4780	1	1		20

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

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

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	74700	74300	100	99	85-115			1	20

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

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

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	13300	63200	62900	100	99	1	80-120			0	20



Method Blank (MB)

(MB) R3231167-7 07/05/17 20:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Manganese	U		0.250	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Method Blank (MB)

(MB) R3231189-1 07/05/17 23:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	20.0	J	15.0	100

<sup>6</sup> Qc

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

(LCS) R3231167-8 07/05/17 20:50 • (LCSD) R3231167-9 07/05/17 20:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Manganese	50.0	54.9	54.6	110	109	80-120			1	20

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3231189-2 07/05/17 23:19 • (LCSD) R3231189-3 07/05/17 23:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	5660	5690	113	114	80-120			0	20

<sup>9</sup> Sc

L919100-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919100-01 07/05/17 20:57 • (MS) R3231167-11 07/05/17 21:04 • (MSD) R3231167-12 07/05/17 21:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Manganese	50.0	2200	2250	2230	84	55	1	75-125		J	1	20

L919100-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919100-01 07/05/17 23:30 • (MS) R3231189-5 07/05/17 23:41 • (MSD) R3231189-6 07/05/17 23:46

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	21800	25000	25800	64	79	1	75-125	J		3	20





Method Blank (MB)

(MB) R3230960-1 07/05/17 10:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918982-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918982-01 07/05/17 10:37 • (DUP) R3230960-2 07/05/17 11:13

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

L919503-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919503-01 07/05/17 11:38 • (DUP) R3230960-3 07/05/17 12:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	3250	3450	1	5.86	E	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) R3230960-4 07/05/17 12:06 • (LCSD) R3230960-5 07/05/17 12:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	73.8	71.1	109	105	70.0-130			3.72	20
Ethane	129	140	125	109	97.2	70.0-130			11.1	20
Ethene	127	134	119	106	94.1	70.0-130			11.5	20



Method Blank (MB)

(MB) R3231080-1 07/05/17 14:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		0.287	0.678

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

L919403-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919403-01 07/05/17 15:05 • (DUP) R3231080-2 07/05/17 15:14

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	11800	11400	20	3.29		20

<sup>4</sup> Cn

<sup>5</sup> Sr

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

(LCS) R3231080-3 07/05/17 15:18 • (LCSD) R3231080-4 07/05/17 15:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	71.4	70.9	105	105	70.0-130			0.650	20

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230933-3 07/04/17 07:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
2-Chlorotoluene	U		0.111	0.500
Chloroform	U		0.0860	0.500
4-Chlorotoluene	U		0.0972	0.500
Chloromethane	U		0.153	1.25
Dibromomethane	U		0.117	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,1-Dichloropropene	U		0.128	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500
cis-1,3-Dichloropropene	U		0.0976	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3230933-3 07/04/17 07:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
trans-1,3-Dichloropropene	U		0.222	0.500
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
2-Hexanone	U		0.757	5.00
Isopropylbenzene	U		0.126	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
1,2,3-Trichloropropane	U		0.247	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,1,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
Xylenes, Total	U		0.316	1.50
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
(S) Toluene-d8	102			80.0-120
(S) Dibromofluoromethane	116			76.0-123
(S) 4-Bromofluorobenzene	107			80.0-120

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



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

(LCS) R3230933-1 07/04/17 05:05 • (LCSD) R3230933-2 07/04/17 05:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	125	140	144	112	115	60.0-142			2.36	20
Bromobenzene	25.0	22.5	22.0	89.9	88.1	79.0-120			1.98	20
2-Chlorotoluene	25.0	22.6	22.5	90.6	90.0	74.0-122			0.610	20
4-Chlorotoluene	25.0	22.0	22.0	88.1	88.1	79.0-120			0.0500	20
Dibromomethane	25.0	24.3	24.5	97.2	97.9	78.0-120			0.700	20
1,1-Dichloropropene	25.0	25.3	25.6	101	102	71.0-129			1.32	20
1,3-Dichloropropane	25.0	19.2	19.4	76.8	77.4	80.0-121	J4	J4	0.790	20
Acetone	125	125	143	99.8	114	10.0-160			13.5	23
Benzene	25.0	25.4	25.8	102	103	69.0-123			1.30	20
trans-1,4-Dichloro-2-butene	25.0	21.8	21.5	87.0	86.0	55.0-134			1.22	20
2,2-Dichloropropane	25.0	23.5	24.4	94.1	97.7	60.0-125			3.74	20
Bromodichloromethane	25.0	24.1	23.8	96.4	95.2	76.0-120			1.32	20
Di-isopropyl ether	25.0	27.3	27.8	109	111	59.0-133			1.71	20
Bromochloromethane	25.0	25.1	25.4	100	102	76.0-122			1.39	20
Bromoform	25.0	25.7	25.4	103	102	67.0-132			1.02	20
Hexachloro-1,3-butadiene	25.0	19.1	20.0	76.3	80.2	64.0-131			4.97	20
Bromomethane	25.0	29.0	28.2	116	113	18.0-160			2.74	20
n-Hexane	25.0	24.6	24.2	98.4	96.8	56.0-124			1.67	20
Iodomethane	125	125	128	100	103	57.0-140			2.47	20
n-Butylbenzene	25.0	21.6	22.0	86.6	88.0	72.0-126			1.68	20
sec-Butylbenzene	25.0	22.2	22.5	88.9	90.1	74.0-121			1.34	20
tert-Butylbenzene	25.0	22.0	22.1	87.8	88.5	75.0-122			0.810	20
Carbon disulfide	25.0	27.7	28.6	111	115	55.0-127			3.48	20
Carbon tetrachloride	25.0	24.5	24.7	98.1	98.7	63.0-122			0.650	20
Chlorobenzene	25.0	20.0	20.9	80.0	83.6	79.0-121			4.36	20
Chlorodibromomethane	25.0	20.6	21.1	82.5	84.2	75.0-125			2.09	20
Chloroethane	25.0	23.6	23.9	94.3	95.5	47.0-152			1.26	20
Chloroform	25.0	25.6	26.1	102	104	72.0-121			1.95	20
1,1,1,2-Tetrachloroethane	25.0	21.9	23.2	87.8	92.9	75.0-122			5.65	20
Chloromethane	25.0	22.5	23.2	90.1	92.9	48.0-139			3.07	20
1,2-Dibromo-3-Chloropropane	25.0	23.4	25.0	93.5	100	64.0-127			6.69	20
1,2-Dibromoethane	25.0	18.6	19.2	74.4	76.8	77.0-123	J4	J4	3.23	20
1,2-Dichlorobenzene	25.0	21.7	21.8	86.8	87.4	80.0-120			0.630	20
1,3-Dichlorobenzene	25.0	21.6	21.8	86.3	87.2	72.0-123			1.04	20
1,4-Dichlorobenzene	25.0	21.4	21.6	85.5	86.4	77.0-120			1.03	20
Dichlorodifluoromethane	25.0	23.8	23.5	95.2	93.9	49.0-155			1.38	20
1,2,3-Trichloropropane	25.0	24.3	23.6	97.1	94.5	72.0-124			2.68	20
1,1-Dichloroethane	25.0	26.8	27.5	107	110	70.0-126			2.70	20
1,2,3-Trimethylbenzene	25.0	22.2	22.6	88.8	90.3	75.0-120			1.65	20
1,2-Dichloroethane	25.0	25.5	25.8	102	103	67.0-126			1.14	20

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



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

(LCS) R3230933-1 07/04/17 05:05 • (LCSD) R3230933-2 07/04/17 05:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethene	25.0	25.1	26.0	100	104	64.0-129			3.40	20
cis-1,2-Dichloroethene	25.0	25.1	25.7	100	103	73.0-120			2.21	20
Vinyl acetate	125	51.9	54.9	41.5	43.9	46.0-160	J4	J4	5.55	20
trans-1,2-Dichloroethene	25.0	24.9	25.7	99.5	103	71.0-121			3.33	20
1,2-Dichloropropane	25.0	25.4	25.5	101	102	75.0-125			0.550	20
Xylenes, Total	75.0	61.7	64.8	82.3	86.4	77.0-120			4.90	20
cis-1,3-Dichloropropene	25.0	21.3	22.2	85.3	88.7	79.0-123			3.96	20
trans-1,3-Dichloropropene	25.0	21.4	21.6	85.8	86.4	74.0-127			0.710	20
Ethylbenzene	25.0	19.2	20.1	76.7	80.5	77.0-120	J4		4.77	20
2-Hexanone	125	96.5	101	77.2	80.5	58.0-147			4.16	20
Isopropylbenzene	25.0	21.5	21.8	85.9	87.1	75.0-120			1.43	20
p-Isopropyltoluene	25.0	21.7	21.9	86.6	87.5	74.0-126			0.970	20
2-Butanone (MEK)	125	92.4	97.5	73.9	78.0	37.0-158			5.34	20
Methylene Chloride	25.0	25.7	26.1	103	105	66.0-121			1.51	20
4-Methyl-2-pentanone (MIBK)	125	106	110	84.8	88.0	59.0-143			3.77	20
Methyl tert-butyl ether	25.0	26.5	26.5	106	106	64.0-123			0.210	20
Naphthalene	25.0	21.1	22.2	84.3	88.9	62.0-128			5.32	20
n-Propylbenzene	25.0	21.8	21.9	87.4	87.4	79.0-120			0.0200	20
Styrene	25.0	22.1	21.9	88.4	87.6	78.0-124			0.890	20
1,1,2,2-Tetrachloroethane	25.0	21.6	21.5	86.4	86.2	71.0-122			0.280	20
Tetrachloroethene	25.0	19.3	20.4	77.0	81.4	70.0-127			5.53	20
Toluene	25.0	20.6	21.4	82.5	85.7	77.0-120			3.87	20
1,1,2-Trichlorotrifluoroethane	25.0	26.7	26.9	107	107	61.0-136			0.700	20
1,2,3-Trichlorobenzene	25.0	19.7	20.8	78.7	83.1	61.0-133			5.47	20
1,2,4-Trichlorobenzene	25.0	18.7	20.0	74.8	79.9	69.0-129			6.51	20
1,1,1-Trichloroethane	25.0	25.1	25.5	100	102	68.0-122			1.43	20
1,1,2-Trichloroethane	25.0	20.4	20.0	81.5	79.9	78.0-120			2.09	20
Trichloroethene	25.0	24.9	24.9	99.7	99.4	78.0-120			0.280	20
Trichlorofluoromethane	25.0	23.4	23.8	93.5	95.3	56.0-137			1.95	20
1,2,4-Trimethylbenzene	25.0	22.7	22.9	90.7	91.7	75.0-120			1.10	20
1,3,5-Trimethylbenzene	25.0	22.2	22.4	88.6	89.5	75.0-120			1.02	20
Vinyl chloride	25.0	24.2	24.8	96.8	99.1	64.0-133			2.32	20
(S) Toluene-d8				100	104	80.0-120				
(S) Dibromofluoromethane				115	116	76.0-123				
(S) 4-Bromofluorobenzene				109	107	80.0-120				

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



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
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.
JO	JO: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.
V	The sample concentration is too high to evaluate accurate spike recoveries.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

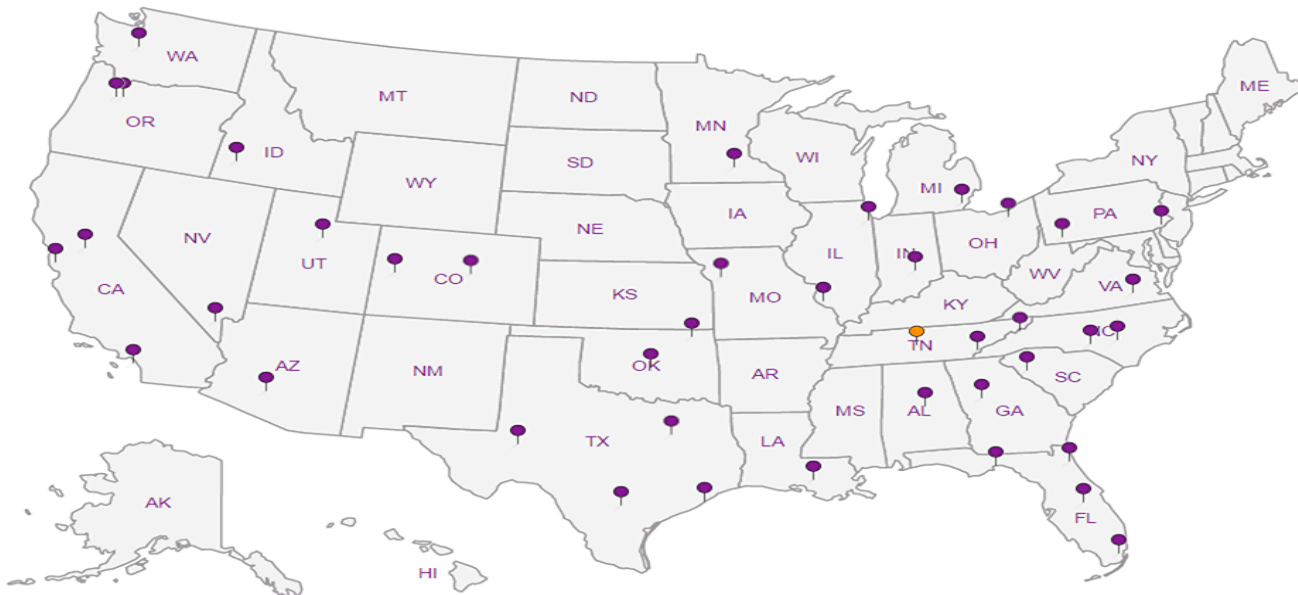
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



**PES Environmental, Inc.- WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Report to:  
**Bill Haldeman**

Email To: bhaldean@pesenv.com

Project  
Description: **American Linen Supply**

City/State  
Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
Fax: **206-529-3985**

Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  
*[Signature]*

**Rush?** (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #  
Date Results Needed

Immediately Packed on Ice N  Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative					Remarks	Sample # (lab only)		
							*Alk, Cl, NO3, SO4	250mlHDPE-NoPres	NWTPHGX	40mlAmb-HCl	TOC			250mlAmb-HCl	Total Fe Mn
MW108-062717	GRAB	GW	45	6/27/17	09:00	9	X	X	X	X	X	X	X	X	01
MW109-062717	↓	GW	40	↓	10:50	9	X	X	X	X	X	X	X	X	02
MW110-062717	↓	GW	40	↓	12:35	9	X	X	X	X	X	X	X	X	03
N7-062717	↓	GW	28.5	↓	15:10	9	X	X	X	X	X	X	X	X	04
		GW													
		GW													
		GW													
		GW													
		GW													
		GW													

Chain of Custody Page \_\_\_ of \_\_\_



L.A.B S.C.I.E.N.C.E.S

**YOUR LAB OF CHOICE**

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



L# **919100**  
**G207**

Acctnum: **PESENVSWA**  
Template: **T124201**  
Prelogin: **P603202**  
TSR: **110 - Brian Ford**  
PB: **5-31-17**

Shipped Via: **FedEX Ground**

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Samples returned via:  
UPS  FedEx  Courier \_\_\_\_\_

Tracking #

**Sample Receipt Checklist**  
 COC Seal Present/Intact:  NF  Y  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 If Applicable  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N

Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>6/27/17</b>	Time: <b>1525</b>	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	HCL / MeOH TBR	Bottles Received:	if preservation required by Login: Date/Time
Relinquished by: (Signature) <i>[Signature]</i>	Date: <b>6/27/17</b>	Time: <b>1600</b>	Received by: (Signature) <i>[Signature]</i>	Temp: <b>4.0</b> °C	<b>36</b>		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: <b>6-28-17</b>	Time: <b>1230</b>	Hold:	Condition: NCF / OK

## MEMORANDUM

**TO:** Project File **DATE:** July 26, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 27, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L919100

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Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 27, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L919100. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L919100 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 4.0 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

All samples were analyzed for dissolved gases within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

All samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

All samples were analyzed within the USEPA recommended holding time of 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues were noted by ESC for 1,2-dibromoethane, 1,3-dichloropropane, ethylbenzene, hexachloro-1,3-butadiene, 2-hexanone, 2-butanone (MEK), 1,2,4-trichlorobenzene, and vinyl acetate associated with analytical batch WG995407 (analyzed on July 4, 2017). These results are qualified by the laboratory “J0” to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All associated sample results for these compounds are estimated and qualified (UJ or J).**

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

#### *Method RSK-175:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blanks at or above the RDL.

#### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of iron was detected in one of the method blanks between the RDL and MDL. No action was necessary as associated iron sample results are significantly greater than the detection in the blank.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussions:

- A low level of alkalinity was measured in the method blank between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity sample results are significantly greater than the detection in the blank.
- A low level of sulfate was detected in one of the method blanks between the RDL and MDL. No action was necessary as associated sulfate sample results are significantly greater than the detection in the blank.
- A low level of TOC was measured in two of the method blanks between the RDL and MDL. No action was necessary as associated TOC sample results are significantly greater than the detection in the blank.

### **Trip Blank Results**

*USEPA Method 8260C:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*Method RSK-175:*

Samples were analyzed in multiple analytical batches. Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client sample and sample N7-062717 within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit. For nitrate refer to LCS/LCSD results for precision data.

*EPA Method 9060A:* A laboratory duplicate sample analyses was performed on non-client samples and sample MW108-062717 within each of the analytical batches. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

## **Laboratory Control Samples**

### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG995407) spike compound (1,3-dichloropropane, 1,2-dibromoethane, and vinyl acetate) percent recoveries are slightly below laboratory acceptance criteria and qualified by the laboratory (J4). **All associated results for these compounds are estimated (UJ or J) due to slightly low LCS/LCSD recoveries.**
- LCS (Batch WG995407) spike compound (ethylbenzene) percent recovery is slightly below laboratory acceptance criteria and qualified by the laboratory (J4). No action was taken on this basis as LCSD percent recovery results are within.

### *Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

### *USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water. No data qualifications were warranted.

### *General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

## **Matrix Spike/Matrix Spike Duplicates**

### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### *Method RSK-175:*

MS/MSD analysis was not performed on samples submitted for dissolved gases. Refer to LCS/LCSD results for additional information on accuracy and precision.

### *USEPA Method 6020:*

Matrix spike analysis was performed on non-client samples and on sample MW108-062717. Manganese and iron sample amounts are greater than four times the spike amount and the spike recoveries were not within acceptance criteria. No action was taken other than to note this.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis for chloride and sulfate were performed on a non-client sample and on sample MW110-062717 within the analytical batches. MS % Rs and MS/MSD % Rs and RPDs for chloride and sulfate were within the laboratory control criteria for water. Refer to LCS/LCSD results for additional information for nitrate.

*EPA Method 9060A:* MS/MSD analyses for TOC were performed on non-client samples within the analytical batches. MS/MSD % Rs and RPDs for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Collected date/time: 06/27/17 09:00

L919100

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	679000		2710	20000	1	07/06/2017 20:53	WG996022

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	20600		51.9	1000	1	06/29/2017 03:21	WG993859
Nitrate	U		22.7	100	1	06/29/2017 03:21 <i>ok</i>	WG993859
Sulfate	101000		387	25000	<u>5</u>	07/01/2017 19:32	WG994712

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	8620		102	1000	1	07/01/2017 19:32	WG994888

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	21800	<u>V</u>	15.0	100	1	07/05/2017 23:30	WG995343
Manganese	2200	<u>V</u>	0.250	5.00	1	07/05/2017 20:57	WG995343

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	3940		1.44	3.39	<u>5</u>	07/05/2017 14:58	WG995826
Ethane	47.8		0.296	1.29	1	07/05/2017 11:16	WG993916
Ethene	U		0.422	1.27	1	07/05/2017 11:16	WG993916

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	2.03	<u>J</u> <u>J</u>	1.05	25.0	1	07/04/2017 12:33	WG995407
Acrylonitrile	U		0.873	5.00	1	07/04/2017 12:33	WG995407
Benzene	1.26		0.0896	0.500	1	07/04/2017 12:33	WG995407
Bromobenzene	U		0.133	0.500	1	07/04/2017 12:33	WG995407
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 12:33	WG995407
Bromochloromethane	U		0.145	0.500	1	07/04/2017 12:33	WG995407
Bromoform	U		0.186	0.500	1	07/04/2017 12:33	WG995407
Bromomethane	U		0.157	2.50	1	07/04/2017 12:33	WG995407
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 12:33	WG995407
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 12:33	WG995407
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 12:33	WG995407
Carbon disulfide	U		0.101	0.500	1	07/04/2017 12:33	WG995407
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 12:33	WG995407
Chlorobenzene	U		0.140	0.500	1	07/04/2017 12:33	WG995407
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 12:33	WG995407
Chloroethane	U		0.141	2.50	1	07/04/2017 12:33	WG995407
Chloroform	U		0.0860	0.500	1	07/04/2017 12:33	WG995407
Chloromethane	U		0.153	1.25	1	07/04/2017 12:33	WG995407
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 12:33	WG995407
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 12:33	WG995407
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 12:33	WG995407
1,2-Dibromoethane	U	<u>UJ</u> <u>JO J4</u>	0.193	0.500	1	07/04/2017 12:33	WG995407
Dibromomethane	U		0.117	0.500	1	07/04/2017 12:33	WG995407

*Jc 7/13/17*



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 12:33	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 12:33	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 12:33	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 12:33	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 12:33	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 12:33	WG995407
1,1-Dichloroethene	0.512		0.188	0.500	1	07/04/2017 12:33	WG995407
cis-1,2-Dichloroethene	165		0.0933	0.500	1	07/04/2017 12:33	WG995407
trans-1,2-Dichloroethene	0.748		0.152	0.500	1	07/04/2017 12:33	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 12:33	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 12:33	WG995407
1,3-Dichloropropane	U	VJ JO J4	0.147	1.00	1	07/04/2017 12:33	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 12:33	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 12:33	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 12:33	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 12:33	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 12:33	WG995407
Ethylbenzene	U	VJ JO J4	0.158	0.500	1	07/04/2017 12:33	WG995407
Hexachloro-1,3-butadiene	U	VJ JO	0.157	1.00	1	07/04/2017 12:33	WG995407
2-Hexanone	U	VJ JO	0.757	5.00	1	07/04/2017 12:33	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 12:33	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 12:33	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 12:33	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 12:33	WG995407
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	07/04/2017 12:33	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 12:33	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 12:33	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 12:33	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 12:33	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 12:33	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 12:33	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 12:33	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 12:33	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 12:33	WG995407
Tetrachloroethene	194		1.99	5.00	10	07/05/2017 11:48	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 12:33	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 12:33	WG995407
1,2,4-Trichlorobenzene	U	VJ JO	0.355	0.500	1	07/04/2017 12:33	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 12:33	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 12:33	WG995407
Trichloroethene	22.1		0.153	0.500	1	07/04/2017 12:33	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 12:33	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 12:33	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 12:33	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 12:33	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 12:33	WG995407
Vinyl acetate	U	VJ JO J4	0.645	5.00	1	07/04/2017 12:33	WG995407
Vinyl chloride	52.8		0.118	0.500	1	07/04/2017 12:33	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 12:33	WG995407
(S) Toluene-d8	99.5 ✓			80.0-120		07/05/2017 11:48	WG995407
(S) Toluene-d8	100 ✓			80.0-120		07/04/2017 12:33	WG995407
(S) Dibromofluoromethane	87.7 ✓			76.0-123		07/05/2017 11:48	WG995407
(S) Dibromofluoromethane	113 ✓			76.0-123		07/04/2017 12:33	WG995407
(S) 4-Bromofluorobenzene	112 ✓			80.0-120		07/05/2017 11:48	WG995407
(S) 4-Bromofluorobenzene	107 ✓			80.0-120		07/04/2017 12:33	WG995407

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

*Jc 7/30/17*



Collected date/time: 06/27/17 10:50

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	ug/l		ug/l	ug/l		date / time	
Alkalinity	693000		2710	20000	1	07/06/2017 20:59	WG996022

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	ug/l		ug/l	ug/l		date / time	
Chloride	13300		51.9	1000	1	06/29/2017 04:08	WG993859
Nitrate	U		22.7	100	1	06/29/2017 04:08	WG993859
Sulfate	42500		77.4	5000	1	06/29/2017 04:08	WG993859

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	12200		204	2000	2	07/06/2017 10:55	WG995857

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	ug/l		ug/l	ug/l		date / time	
Iron	14600		15.0	100	1	07/06/2017 00:06	WG995343
Manganese	3900		0.250	5.00	1	07/05/2017 21:46	WG995343

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	ug/l		ug/l	ug/l		date / time	
Methane	2540		1.44	3.39	5	07/05/2017 15:00	WG995826
Ethane	8.65		0.296	1.29	1	07/05/2017 11:19	WG993916
Ethene	U		0.422	1.27	1	07/05/2017 11:19	WG993916

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	1.20	J J	1.05	25.0	1	07/04/2017 12:58	WG995407
Acrylonitrile	U		0.873	5.00	1	07/04/2017 12:58	WG995407
Benzene	U		0.0896	0.500	1	07/04/2017 12:58	WG995407
Bromobenzene	U		0.133	0.500	1	07/04/2017 12:58	WG995407
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 12:58	WG995407
Bromochloromethane	U		0.145	0.500	1	07/04/2017 12:58	WG995407
Bromoform	U		0.186	0.500	1	07/04/2017 12:58	WG995407
Bromomethane	U		0.157	2.50	1	07/04/2017 12:58	WG995407
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 12:58	WG995407
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 12:58	WG995407
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 12:58	WG995407
Carbon disulfide	U		0.101	0.500	1	07/04/2017 12:58	WG995407
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 12:58	WG995407
Chlorobenzene	U		0.140	0.500	1	07/04/2017 12:58	WG995407
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 12:58	WG995407
Chloroethane	U		0.141	2.50	1	07/04/2017 12:58	WG995407
Chloroform	U		0.0860	0.500	1	07/04/2017 12:58	WG995407
Chloromethane	U		0.153	1.25	1	07/04/2017 12:58	WG995407
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 12:58	WG995407
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 12:58	WG995407
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 12:58	WG995407
1,2-Dibromoethane	U	US JO J4	0.193	0.500	1	07/04/2017 12:58	WG995407
Dibromomethane	U		0.117	0.500	1	07/04/2017 12:58	WG995407

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Collected date/time: 06/27/17 10:50

L919100

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 12:58	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 12:58	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 12:58	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 12:58	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 12:58	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 12:58	WG995407
1,1-Dichloroethene	0.583		0.188	0.500	1	07/04/2017 12:58	WG995407
cis-1,2-Dichloroethene	163		0.0933	0.500	1	07/04/2017 12:58	WG995407
trans-1,2-Dichloroethene	1.17		0.152	0.500	1	07/04/2017 12:58	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 12:58	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 12:58	WG995407
1,3-Dichloropropane	U	VJ JO J4	0.147	1.00	1	07/04/2017 12:58	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 12:58	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 12:58	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 12:58	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 12:58	WG995407
Diisopropyl ether	U		0.0924	0.500	1	07/04/2017 12:58	WG995407
Ethylbenzene	U	VJ JO J4	0.158	0.500	1	07/04/2017 12:58	WG995407
Hexachloro-1,3-butadiene	U	VJ JO	0.157	1.00	1	07/04/2017 12:58	WG995407
2-Hexanone	U	VJ JO	0.757	5.00	1	07/04/2017 12:58	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 12:58	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 12:58	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 12:58	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 12:58	WG995407
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	07/04/2017 12:58	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 12:58	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 12:58	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 12:58	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 12:58	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 12:58	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 12:58	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 12:58	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 12:58	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 12:58	WG995407
Tetrachloroethene	9.69	J JO	0.199	0.500	1	07/04/2017 12:58	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 12:58	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 12:58	WG995407
1,2,4-Trichlorobenzene	U	VJ JO	0.355	0.500	1	07/04/2017 12:58	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 12:58	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 12:58	WG995407
Trichloroethene	141		0.153	0.500	1	07/04/2017 12:58	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 12:58	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 12:58	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 12:58	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 12:58	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 12:58	WG995407
Vinyl acetate	U	VJ JO J4	0.645	5.00	1	07/04/2017 12:58	WG995407
Vinyl chloride	6.06		0.118	0.500	1	07/04/2017 12:58	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 12:58	WG995407
(S) Toluene-d8	99.8			80.0-120		07/04/2017 12:58	WG995407
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 12:58	WG995407
(S) 4-Bromofluorobenzene	108			80.0-120		07/04/2017 12:58	WG995407

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

*Handwritten signature and date: J 7/30/17*



Collected date/time: 06/27/17 12:35

L919100

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	516000		2710	20000	1	07/06/2017 21:09	<a href="#">WG996022</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	27000		51.9	1000	1	06/29/2017 04:24	<a href="#">WG993859</a>
Nitrate	U		22.7	100	1	06/29/2017 04:24	<a href="#">WG993859</a>
Sulfate	160000		774	50000	10	07/01/2017 16:31	<a href="#">WG994713</a>

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Si

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	4910		102	1000	1	07/03/2017 19:19	<a href="#">WG995102</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	115	B	15.0	100	1	07/06/2017 00:11	<a href="#">WG995343</a>
Manganese	2130		0.250	5.00	1	07/05/2017 21:50	<a href="#">WG995343</a>

<sup>8</sup> Al

<sup>9</sup> Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	95.5		0.287	0.678	1	07/05/2017 11:21	<a href="#">WG993916</a>
Ethane	17.4		0.296	1.29	1	07/05/2017 11:21	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:21	<a href="#">WG993916</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		1.05	25.0	1	07/04/2017 13:23	<a href="#">WG995407</a>
Acrylonitrile	U		0.873	5.00	1	07/04/2017 13:23	<a href="#">WG995407</a>
Benzene	U		0.0896	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromobenzene	U		0.133	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromochloromethane	U		0.145	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromoform	U		0.186	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Bromomethane	U		0.157	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Carbon disulfide	U		0.101	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chlorobenzene	U		0.140	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloroethane	U		0.141	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloroform	U		0.0860	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Chloromethane	U		0.153	1.25	1	07/04/2017 13:23	<a href="#">WG995407</a>
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 13:23	<a href="#">WG995407</a>
1,2-Dibromoethane	U	VJ JO J4	0.193	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>
Dibromomethane	U		0.117	0.500	1	07/04/2017 13:23	<a href="#">WG995407</a>

*Handwritten signature and date: Jc 7/30/17*

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
	ug/l		ug/l	ug/l			
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 13:23	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 13:23	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 13:23	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 13:23	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 13:23	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 13:23	WG995407
1,1-Dichloroethene	5.30		0.188	0.500	1	07/04/2017 13:23	WG995407
cis-1,2-Dichloroethene	1120		4.66	25.0	50	07/05/2017 12:02	WG995407
trans-1,2-Dichloroethene	2.66		0.152	0.500	1	07/04/2017 13:23	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 13:23	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 13:23	WG995407
1,3-Dichloropropane	U	VJ JO J4	0.147	1.00	1	07/04/2017 13:23	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 13:23	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 13:23	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 13:23	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 13:23	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 13:23	WG995407
Ethylbenzene	U	VJ JO J4	0.158	0.500	1	07/04/2017 13:23	WG995407
Hexachloro-1,3-butadiene	U	VJ JO	0.157	1.00	1	07/04/2017 13:23	WG995407
2-Hexanone	U	VJ JO	0.757	5.00	1	07/04/2017 13:23	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 13:23	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 13:23	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 13:23	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 13:23	WG995407
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	07/04/2017 13:23	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 13:23	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 13:23	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 13:23	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 13:23	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 13:23	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 13:23	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 13:23	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 13:23	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 13:23	WG995407
Tetrachloroethene	259		9.95	25.0	50	07/05/2017 12:02	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 13:23	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 13:23	WG995407
1,2,4-Trichlorobenzene	U	VJ JO	0.355	0.500	1	07/04/2017 13:23	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 13:23	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 13:23	WG995407
Trichloroethene	176		0.153	0.500	1	07/04/2017 13:23	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 13:23	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 13:23	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 13:23	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 13:23	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 13:23	WG995407
Vinyl acetate	U	VJ JO J4	0.645	5.00	1	07/04/2017 13:23	WG995407
Vinyl chloride	152		0.118	0.500	1	07/04/2017 13:23	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 13:23	WG995407
(S) Toluene-d8	100 ✓			80.0-120		07/05/2017 12:02	WG995407
(S) Toluene-d8	100 ✓			80.0-120		07/04/2017 13:23	WG995407
(S) Dibromofluoromethane	89.2 ✓			76.0-123		07/05/2017 12:02	WG995407
(S) Dibromofluoromethane	117 ✓			76.0-123 ✓		07/04/2017 13:23	WG995407
(S) 4-Bromofluorobenzene	111 ✓			80.0-120		07/05/2017 12:02	WG995407
(S) 4-Bromofluorobenzene	106 ✓			80.0-120		07/04/2017 13:23	WG995407

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*JC*  
7/30/17

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	235000		2710	20000	1	07/06/2017 21:37	WG996022

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	8760		51.9	1000	1	06/29/2017 05:12	WG993859
Nitrate	6290		22.7	100	1	06/29/2017 05:12	WG993859
Sulfate	48400		77.4	5000	1	06/29/2017 05:12	WG993859

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	2710		102	1000	1	07/03/2017 19:30	WG995102

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	1450		15.0	100	1	07/06/2017 00:16	WG995343
Manganese	3310		0.250	5.00	1	07/05/2017 21:53	WG995343

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	8430		5.74	13.6	20	07/05/2017 15:02	WG995826
Ethane	U		0.296	1.29	1	07/05/2017 11:23	WG993916
Ethene	U		0.422	1.27	1	07/05/2017 11:23	WG993916

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	1.41	J	1.05	25.0	1	07/04/2017 13:48	WG995407
Acrylonitrile	U		0.873	5.00	1	07/04/2017 13:48	WG995407
Benzene	U		0.0896	0.500	1	07/04/2017 13:48	WG995407
Bromobenzene	U		0.133	0.500	1	07/04/2017 13:48	WG995407
Bromodichloromethane	U		0.0800	0.500	1	07/04/2017 13:48	WG995407
Bromochloromethane	U		0.145	0.500	1	07/04/2017 13:48	WG995407
Bromoform	U		0.186	0.500	1	07/04/2017 13:48	WG995407
Bromomethane	U		0.157	2.50	1	07/04/2017 13:48	WG995407
n-Butylbenzene	U		0.143	0.500	1	07/04/2017 13:48	WG995407
sec-Butylbenzene	U		0.134	0.500	1	07/04/2017 13:48	WG995407
tert-Butylbenzene	U		0.183	0.500	1	07/04/2017 13:48	WG995407
Carbon disulfide	U		0.101	0.500	1	07/04/2017 13:48	WG995407
Carbon tetrachloride	U		0.159	0.500	1	07/04/2017 13:48	WG995407
Chlorobenzene	U		0.140	0.500	1	07/04/2017 13:48	WG995407
Chlorodibromomethane	U		0.128	0.500	1	07/04/2017 13:48	WG995407
Chloroethane	0.313	J	0.141	2.50	1	07/04/2017 13:48	WG995407
Chloroform	U		0.0860	0.500	1	07/04/2017 13:48	WG995407
Chloromethane	U		0.153	1.25	1	07/04/2017 13:48	WG995407
2-Chlorotoluene	U		0.111	0.500	1	07/04/2017 13:48	WG995407
4-Chlorotoluene	U		0.0972	0.500	1	07/04/2017 13:48	WG995407
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/04/2017 13:48	WG995407
1,2-Dibromoethane	U	VJ	0.193	0.500	1	07/04/2017 13:48	WG995407
Dibromomethane	U		0.117	0.500	1	07/04/2017 13:48	WG995407

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

*JC*  
7/30/17

N7-062717

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 06/27/17 15:10

L919100

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/04/2017 13:48	WG995407
1,3-Dichlorobenzene	U		0.130	0.500	1	07/04/2017 13:48	WG995407
1,4-Dichlorobenzene	U		0.121	0.500	1	07/04/2017 13:48	WG995407
Dichlorodifluoromethane	U		0.127	2.50	1	07/04/2017 13:48	WG995407
1,1-Dichloroethane	U		0.114	0.500	1	07/04/2017 13:48	WG995407
1,2-Dichloroethane	U		0.108	0.500	1	07/04/2017 13:48	WG995407
1,1-Dichloroethene	1.00		0.188	0.500	1	07/04/2017 13:48	WG995407
cis-1,2-Dichloroethene	153		0.933	5.00	10	07/05/2017 12:15	WG995407
trans-1,2-Dichloroethene	0.955		0.152	0.500	1	07/04/2017 13:48	WG995407
1,2-Dichloropropane	U		0.190	0.500	1	07/04/2017 13:48	WG995407
1,1-Dichloropropene	U		0.128	0.500	1	07/04/2017 13:48	WG995407
1,3-Dichloropropane	U	VJ JO J4	0.147	1.00	1	07/04/2017 13:48	WG995407
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/04/2017 13:48	WG995407
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/04/2017 13:48	WG995407
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/04/2017 13:48	WG995407
2,2-Dichloropropane	U		0.0929	0.500	1	07/04/2017 13:48	WG995407
Di-isopropyl ether	U		0.0924	0.500	1	07/04/2017 13:48	WG995407
Ethylbenzene	U	VJ JO J4	0.158	0.500	1	07/04/2017 13:48	WG995407
Hexachloro-1,3-butadiene	U	VJ JO	0.157	1.00	1	07/04/2017 13:48	WG995407
2-Hexanone	U	VJ JO	0.757	5.00	1	07/04/2017 13:48	WG995407
n-Hexane	U		0.305	5.00	1	07/04/2017 13:48	WG995407
Iodomethane	U		0.377	10.0	1	07/04/2017 13:48	WG995407
Isopropylbenzene	U		0.126	0.500	1	07/04/2017 13:48	WG995407
p-Isopropyltoluene	U		0.138	0.500	1	07/04/2017 13:48	WG995407
2-Butanone (MEK)	U	VJ JO	1.28	5.00	1	07/04/2017 13:48	WG995407
Methylene Chloride	U		1.07	2.50	1	07/04/2017 13:48	WG995407
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/04/2017 13:48	WG995407
Methyl tert-butyl ether	U		0.102	0.500	1	07/04/2017 13:48	WG995407
Naphthalene	U		0.174	2.50	1	07/04/2017 13:48	WG995407
n-Propylbenzene	U		0.162	0.500	1	07/04/2017 13:48	WG995407
Styrene	U		0.117	0.500	1	07/04/2017 13:48	WG995407
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/04/2017 13:48	WG995407
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/04/2017 13:48	WG995407
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/04/2017 13:48	WG995407
Tetrachloroethene	205		1.99	5.00	10	07/05/2017 12:15	WG995407
Toluene	U		0.412	0.500	1	07/04/2017 13:48	WG995407
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/04/2017 13:48	WG995407
1,2,4-Trichlorobenzene	U	VJ JO	0.355	0.500	1	07/04/2017 13:48	WG995407
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/04/2017 13:48	WG995407
1,1,2-Trichloroethane	U		0.186	0.500	1	07/04/2017 13:48	WG995407
Trichloroethene	85.1		0.153	0.500	1	07/04/2017 13:48	WG995407
Trichlorofluoromethane	U		0.130	2.50	1	07/04/2017 13:48	WG995407
1,2,3-Trichloropropane	U		0.247	2.50	1	07/04/2017 13:48	WG995407
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/04/2017 13:48	WG995407
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/04/2017 13:48	WG995407
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/04/2017 13:48	WG995407
Vinyl acetate	U	VJ JO J4	0.645	5.00	1	07/04/2017 13:48	WG995407
Vinyl chloride	0.386	V J	0.118	0.500	1	07/04/2017 13:48	WG995407
Xylenes, Total	U		0.316	1.50	1	07/04/2017 13:48	WG995407
(S) Toluene-d8	99.0			80.0-120		07/04/2017 13:48	WG995407
(S) Toluene-d8	98.9			80.0-120		07/05/2017 12:15	WG995407
(S) Dibromofluoromethane	117			76.0-123		07/04/2017 13:48	WG995407
(S) Dibromofluoromethane	88.7			76.0-123		07/05/2017 12:15	WG995407
(S) 4-Bromofluorobenzene	110			80.0-120		07/04/2017 13:48	WG995407
(S) 4-Bromofluorobenzene	110			80.0-120		07/05/2017 12:15	WG995407

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

*JL*  
7/30/17

July 10, 2017

## PES Environmental, Inc.- WA

Sample Delivery Group: L919285  
Samples Received: 06/29/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Entire Report Reviewed By:












Brian Ford  
Technical Service Representative

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





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# SAMPLE SUMMARY



## MW120-062817 L919285-01 GW

Collected by Shannon McKernan  
Collected date/time 06/28/17 10:50  
Received date/time 06/29/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG996080	1	07/06/17 11:22	07/06/17 11:22	DWR

1  
Cp

2  
Tc

3  
Ss

## MW119-062817 L919285-02 GW

Collected by Shannon McKernan  
Collected date/time 06/28/17 12:45  
Received date/time 06/29/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG996482	1	07/07/17 11:12	07/07/17 11:12	MCG
Wet Chemistry by Method 9056A	WG993864	1	07/01/17 00:05	07/01/17 00:05	SAM
Wet Chemistry by Method 9060A	WG995664	1	07/05/17 20:02	07/05/17 20:02	CSU
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/05/17 21:57	LAT
Metals (ICPMS) by Method 6020A	WG995343	1	07/05/17 08:50	07/06/17 00:22	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG993916	1	07/05/17 11:25	07/05/17 11:25	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG996080	1	07/06/17 11:37	07/06/17 11:37	DWR

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

## MW125-062817 L919285-03 GW

Collected by Shannon McKernan  
Collected date/time 06/28/17 09:10  
Received date/time 06/29/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG995181	1	07/02/17 23:28	07/02/17 23:28	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG996080	1	07/06/17 11:52	07/06/17 11:52	DWR

9  
Sc

## R-MW3-062817 L919285-04 GW

Collected by Shannon McKernan  
Collected date/time 06/28/17 14:15  
Received date/time 06/29/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG995181	1	07/02/17 23:50	07/02/17 23:50	DWR
Volatile Organic Compounds (GC/MS) by Method 8260C	WG996080	1	07/06/17 12:07	07/06/17 12:07	DWR



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

Brian Ford  
Technical Service Representative

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	3.40	<u>B J J0</u>	1.05	25.0	1	07/06/2017 11:22	<a href="#">WG996080</a>
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
Benzene	U		0.0896	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Bromoform	U		0.186	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Bromomethane	U		0.157	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Chloroethane	U		0.141	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
Chloroform	U		0.0860	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Chloromethane	U		0.153	1.25	1	07/06/2017 11:22	<a href="#">WG996080</a>
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,1-Dichloroethane	1.57		0.114	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,2-Dichloroethane	0.211	<u>J</u>	0.108	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,1-Dichloroethene	0.251	<u>J</u>	0.188	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
cis-1,2-Dichloroethene	16.0		0.0933	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,2-Dichloropropane	0.762		0.190	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
n-Hexane	U		0.305	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
Iodomethane	U		0.377	10.0	1	07/06/2017 11:22	<a href="#">WG996080</a>
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:22	<a href="#">WG996080</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Naphthalene	0.384	<u>J J0 J3</u>	0.174	2.50	1	07/06/2017 11:22	<a href="#">WG996080</a>
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
Styrene	U		0.117	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:22	<a href="#">WG996080</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	0.418	J	0.164	0.500	1	07/06/2017 11:22	WG996080
Tetrachloroethene	18.0		0.199	0.500	1	07/06/2017 11:22	WG996080
Toluene	U		0.412	0.500	1	07/06/2017 11:22	WG996080
1,2,3-Trichlorobenzene	0.456	B J J0 J3	0.164	0.500	1	07/06/2017 11:22	WG996080
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 11:22	WG996080
1,1,1-Trichloroethane	0.278	J	0.0940	0.500	1	07/06/2017 11:22	WG996080
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:22	WG996080
Trichloroethene	6.97		0.153	0.500	1	07/06/2017 11:22	WG996080
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:22	WG996080
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:22	WG996080
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:22	WG996080
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:22	WG996080
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:22	WG996080
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:22	WG996080
Vinyl chloride	0.988		0.118	0.500	1	07/06/2017 11:22	WG996080
Xylenes, Total	U		0.316	1.50	1	07/06/2017 11:22	WG996080
(S) Toluene-d8	91.1			80.0-120		07/06/2017 11:22	WG996080
(S) Dibromofluoromethane	83.0			76.0-123		07/06/2017 11:22	WG996080
(S) 4-Bromofluorobenzene	90.6			80.0-120		07/06/2017 11:22	WG996080

- 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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	360000		2710	20000	1	07/07/2017 11:12	<a href="#">WG996482</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	13700		51.9	1000	1	07/01/2017 00:05	<a href="#">WG993864</a>
Nitrate	U	Q	22.7	100	1	07/01/2017 00:05	<a href="#">WG993864</a>
Sulfate	56100		77.4	5000	1	07/01/2017 00:05	<a href="#">WG993864</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	9090		102	1000	1	07/05/2017 20:02	<a href="#">WG995664</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	5660		15.0	100	1	07/06/2017 00:22	<a href="#">WG995343</a>
Manganese	1250		0.250	5.00	1	07/05/2017 21:57	<a href="#">WG995343</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	73.5		0.287	0.678	1	07/05/2017 11:25	<a href="#">WG993916</a>
Ethane	U		0.296	1.29	1	07/05/2017 11:25	<a href="#">WG993916</a>
Ethene	U		0.422	1.27	1	07/05/2017 11:25	<a href="#">WG993916</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	3.73	B J JO	1.05	25.0	1	07/06/2017 11:37	<a href="#">WG996080</a>
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:37	<a href="#">WG996080</a>
Benzene	U		0.0896	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Bromoform	U		0.186	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Bromomethane	U		0.157	2.50	1	07/06/2017 11:37	<a href="#">WG996080</a>
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Chloroethane	U		0.141	2.50	1	07/06/2017 11:37	<a href="#">WG996080</a>
Chloroform	U		0.0860	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Chloromethane	U		0.153	1.25	1	07/06/2017 11:37	<a href="#">WG996080</a>
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:37	<a href="#">WG996080</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:37	<a href="#">WG996080</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:37	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:37	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:37	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:37	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 11:37	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 11:37	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 11:37	WG996080
cis-1,2-Dichloroethene	5.99		0.0933	0.500	1	07/06/2017 11:37	WG996080
trans-1,2-Dichloroethene	0.167	J	0.152	0.500	1	07/06/2017 11:37	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 11:37	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:37	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:37	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:37	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:37	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:37	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:37	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:37	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:37	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:37	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:37	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 11:37	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 11:37	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:37	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:37	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:37	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:37	WG996080
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:37	WG996080
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:37	WG996080
Naphthalene	U	JO J3	0.174	2.50	1	07/06/2017 11:37	WG996080
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:37	WG996080
Styrene	U		0.117	0.500	1	07/06/2017 11:37	WG996080
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:37	WG996080
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:37	WG996080
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 11:37	WG996080
Tetrachloroethene	19.0		0.199	0.500	1	07/06/2017 11:37	WG996080
Toluene	0.726		0.412	0.500	1	07/06/2017 11:37	WG996080
1,2,3-Trichlorobenzene	0.165	B J JO J3	0.164	0.500	1	07/06/2017 11:37	WG996080
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 11:37	WG996080
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 11:37	WG996080
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:37	WG996080
Trichloroethene	12.4		0.153	0.500	1	07/06/2017 11:37	WG996080
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:37	WG996080
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:37	WG996080
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:37	WG996080
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:37	WG996080
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:37	WG996080
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:37	WG996080
Vinyl chloride	U		0.118	0.500	1	07/06/2017 11:37	WG996080
Xylenes, Total	0.562	J	0.316	1.50	1	07/06/2017 11:37	WG996080
(S) Toluene-d8	92.2			80.0-120		07/06/2017 11:37	WG996080
(S) Dibromofluoromethane	83.0			76.0-123		07/06/2017 11:37	WG996080
(S) 4-Bromofluorobenzene	95.4			80.0-120		07/06/2017 11:37	WG996080

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/02/2017 23:28	WG995181
(S) a,a,a-Trifluorotoluene(FID)	92.1			77.0-122		07/02/2017 23:28	WG995181

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/06/2017 11:52	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:52	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 11:52	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:52	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:52	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:52	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 11:52	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 11:52	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:52	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:52	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:52	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:52	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:52	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:52	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:52	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 11:52	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 11:52	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 11:52	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:52	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:52	WG996080
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:52	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:52	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:52	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:52	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:52	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:52	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 11:52	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 11:52	WG996080
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/06/2017 11:52	WG996080
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 11:52	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:52	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:52	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:52	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:52	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:52	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:52	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:52	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:52	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:52	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:52	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 11:52	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 11:52	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:52	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:52	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:52	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:52	WG996080





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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:52	<a href="#">WG996080</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Naphthalene	U	<a href="#">JO J3</a>	0.174	2.50	1	07/06/2017 11:52	<a href="#">WG996080</a>
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Styrene	U		0.117	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Tetrachloroethene	U		0.199	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Toluene	U		0.412	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,2,3-Trichlorobenzene	U	<a href="#">JO J3</a>	0.164	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,2,4-Trichlorobenzene	U	<a href="#">J3</a>	0.355	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Trichloroethene	U		0.153	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:52	<a href="#">WG996080</a>
Vinyl chloride	U		0.118	0.500	1	07/06/2017 11:52	<a href="#">WG996080</a>
Xylenes, Total	U		0.316	1.50	1	07/06/2017 11:52	<a href="#">WG996080</a>
(S) Toluene-d8	92.1			80.0-120		07/06/2017 11:52	<a href="#">WG996080</a>
(S) Dibromofluoromethane	80.9			76.0-123		07/06/2017 11:52	<a href="#">WG996080</a>
(S) 4-Bromofluorobenzene	95.1			80.0-120		07/06/2017 11:52	<a href="#">WG996080</a>

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



Collected date/time: 06/28/17 14:15

L919285

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/02/2017 23:50	WG995181
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-122		07/02/2017 23:50	WG995181

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	5.00	<u>B J JO</u>	1.05	25.0	1	07/06/2017 12:07	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 12:07	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 12:07	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 12:07	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 12:07	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 12:07	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 12:07	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 12:07	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 12:07	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 12:07	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 12:07	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 12:07	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 12:07	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 12:07	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 12:07	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 12:07	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 12:07	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 12:07	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 12:07	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 12:07	WG996080
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/06/2017 12:07	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 12:07	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 12:07	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 12:07	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 12:07	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 12:07	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 12:07	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 12:07	WG996080
cis-1,2-Dichloroethene	0.735		0.0933	0.500	1	07/06/2017 12:07	WG996080
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 12:07	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 12:07	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 12:07	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 12:07	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 12:07	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 12:07	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 12:07	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 12:07	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 12:07	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 12:07	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 12:07	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 12:07	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 12:07	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 12:07	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 12:07	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 12:07	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 12:07	WG996080

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/28/17 14:15

L919285

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 12:07	<a href="#">WG996080</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Naphthalene	U	<u>JO J3</u>	0.174	2.50	1	07/06/2017 12:07	<a href="#">WG996080</a>
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Styrene	U		0.117	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Tetrachloroethene	0.834		0.199	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Toluene	U		0.412	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,2,3-Trichlorobenzene	U	<u>JO J3</u>	0.164	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,2,4-Trichlorobenzene	U	<u>J3</u>	0.355	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Trichloroethene	0.582		0.153	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Vinyl acetate	U		0.645	5.00	1	07/06/2017 12:07	<a href="#">WG996080</a>
Vinyl chloride	0.424	<u>J</u>	0.118	0.500	1	07/06/2017 12:07	<a href="#">WG996080</a>
Xylenes, Total	U		0.316	1.50	1	07/06/2017 12:07	<a href="#">WG996080</a>
(S) Toluene-d8	92.8			80.0-120		07/06/2017 12:07	<a href="#">WG996080</a>
(S) Dibromofluoromethane	80.7			76.0-123		07/06/2017 12:07	<a href="#">WG996080</a>
(S) 4-Bromofluorobenzene	94.9			80.0-120		07/06/2017 12:07	<a href="#">WG996080</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3231695-2 07/07/17 09:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Alkalinity	2860	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L920001-02 Original Sample (OS) • Duplicate (DUP)

(OS) L920001-02 07/07/17 14:32 • (DUP) R3231695-6 07/07/17 14:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	92400	94000	1	2.00		20

L919107-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919107-01 07/07/17 09:22 • (DUP) R3231695-3 07/07/17 09:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Alkalinity	145000	143000	1	2.00		20

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

(LCS) R3231695-4 07/07/17 10:44 • (LCSD) R3231695-5 07/07/17 12:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Alkalinity	100000	107000	108000	107	108	85.0-115			1.00	20



Method Blank (MB)

(MB) R3230468-1 06/30/17 16:14

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918857-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918857-01 06/30/17 17:52 • (DUP) R3230468-4 06/30/17 18:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	3210	3230	1	1		15
Nitrate	751	747	1	1		15
Sulfate	7970	8000	1	0		15

L918863-04 Original Sample (OS) • Duplicate (DUP)

(OS) L918863-04 06/30/17 20:51 • (DUP) R3230468-6 06/30/17 21:06

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	2100	2100	1	0		15
Nitrate	163	177	1	8		15
Sulfate	6990	7030	1	1		15

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

(LCS) R3230468-2 06/30/17 16:29 • (LCSD) R3230468-3 06/30/17 16:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	39900	40100	100	100	80-120			0	15
Nitrate	8000	8300	8320	104	104	80-120			0	15
Sulfate	40000	40600	40600	101	102	80-120			0	15

L918863-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L918863-01 06/30/17 18:52 • (MS) R3230468-5 06/30/17 19:36

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	50000	1030	51100	100	1	80-120	
Nitrate	5000	ND	4720	94	1	80-120	



[L919285-02](#)

L918863-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L918863-01 06/30/17 18:52 • (MS) R3230468-5 06/30/17 19:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	50000	ND	50400	99	1	80-120	

L919285-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919285-02 07/01/17 00:05 • (MS) R3230468-7 07/01/17 00:20 • (MSD) R3230468-8 07/01/17 00:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50000	13700	63100	63300	99	99	1	80-120			0	15
Nitrate	5000	U	4680	4770	94	95	1	80-120			2	15
Sulfate	50000	56100	103000	103000	95	95	1	80-120	E	E	0	15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3231265-1 07/05/17 09:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L919032-06 Original Sample (OS) • Duplicate (DUP)

(OS) L919032-06 07/05/17 11:05 • (DUP) R3231265-4 07/05/17 11:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	ND	847	1	0		20

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

(LCS) R3231265-5 07/05/17 12:04 • (LCSD) R3231265-6 07/05/17 15:11

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	74700	70400	100	94	85-115			6	20

L919032-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919032-05 07/05/17 10:26 • (MS) R3231265-2 07/05/17 10:40 • (MSD) R3231265-3 07/05/17 10:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	ND	48800	48600	98	97	1	80-120			0	20



Method Blank (MB)

(MB) R3231167-7 07/05/17 20:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Manganese	U		0.250	5.00

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

Method Blank (MB)

(MB) R3231189-1 07/05/17 23:13

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	20.0	J	15.0	100

<sup>6</sup> Qc

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

(LCS) R3231167-8 07/05/17 20:50 • (LCSD) R3231167-9 07/05/17 20:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Manganese	50.0	54.9	54.6	110	109	80-120			1	20

<sup>7</sup> Gl

<sup>8</sup> Al

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

(LCS) R3231189-2 07/05/17 23:19 • (LCSD) R3231189-3 07/05/17 23:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	5660	5690	113	114	80-120			0	20

<sup>9</sup> Sc

L919100-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919100-01 07/05/17 20:57 • (MS) R3231167-11 07/05/17 21:04 • (MSD) R3231167-12 07/05/17 21:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Manganese	50.0	2200	2250	2230	84	55	1	75-125		V	1	20

L919100-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919100-01 07/05/17 23:30 • (MS) R3231189-5 07/05/17 23:41 • (MSD) R3231189-6 07/05/17 23:46

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	21800	25000	25800	64	79	1	75-125	V		3	20





Method Blank (MB)

(MB) R3231380-2 07/02/17 08:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	92.6			77.0-122

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3231380-1 07/02/17 07:33 • (LCSD) R3231380-3 07/02/17 20:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Gasoline Range Organics-NWTPH	5500	5940	5790	108	105	72.0-134			2.54	20
(S) a,a,a-Trifluorotoluene(FID)				102	106	77.0-122				

5 Sr

6 Qc

7 Gl

L919415-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919415-03 07/03/17 17:31 • (MS) R3231380-4 07/03/17 17:53 • (MSD) R3231380-5 07/03/17 18:15

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Gasoline Range Organics-NWTPH	5500	386	1120	1010	13.3	11.3	1	23.0-159	J6	J6	10.6	20
(S) a,a,a-Trifluorotoluene(FID)					93.2	87.5		77.0-122				

8 Al

9 Sc



Method Blank (MB)

(MB) R3230960-1 07/05/17 10:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L918982-01 Original Sample (OS) • Duplicate (DUP)

(OS) L918982-01 07/05/17 10:37 • (DUP) R3230960-2 07/05/17 11:13

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

L919503-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919503-01 07/05/17 11:38 • (DUP) R3230960-3 07/05/17 12:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	3250	3450	1	5.86	E	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) R3230960-4 07/05/17 12:06 • (LCSD) R3230960-5 07/05/17 12:09

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	73.8	71.1	109	105	70.0-130			3.72	20
Ethane	129	140	125	109	97.2	70.0-130			11.1	20
Ethene	127	134	119	106	94.1	70.0-130			11.5	20



Method Blank (MB)

(MB) R3231831-3 07/06/17 10:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	2.83	J	1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3231831-3 07/06/17 10:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	0.294	J	0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	92.0			80.0-120
(S) Dibromofluoromethane	81.1			76.0-123
(S) 4-Bromofluorobenzene	93.7			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3231831-1 07/06/17 09:14 • (LCSD) R3231831-2 07/06/17 09:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	157	163	126	130	10.0-160			3.55	23
Acrylonitrile	125	107	109	85.3	86.9	60.0-142			1.95	20
Benzene	25.0	21.8	22.2	87.1	88.8	69.0-123			1.98	20
Bromobenzene	25.0	25.9	26.6	104	106	79.0-120			2.55	20
Bromodichloromethane	25.0	24.6	24.6	98.2	98.3	76.0-120			0.0200	20
Bromochloromethane	25.0	22.1	22.1	88.5	88.3	76.0-122			0.190	20
Bromoform	25.0	25.9	26.2	103	105	67.0-132			1.32	20
Bromomethane	25.0	24.4	22.7	97.4	90.7	18.0-160			7.13	20
n-Butylbenzene	25.0	24.6	24.3	98.4	97.1	72.0-126			1.32	20
sec-Butylbenzene	25.0	26.9	27.8	108	111	74.0-121			3.33	20
tert-Butylbenzene	25.0	27.3	28.3	109	113	75.0-122			3.67	20
Carbon disulfide	25.0	21.4	21.8	85.8	87.4	55.0-127			1.87	20
Carbon tetrachloride	25.0	22.6	23.2	90.5	92.6	63.0-122			2.34	20
Chlorobenzene	25.0	26.2	26.4	105	106	79.0-121			1.05	20
Chlorodibromomethane	25.0	26.1	26.5	104	106	75.0-125			1.74	20
Chloroethane	25.0	25.1	25.2	100	101	47.0-152			0.380	20
Chloroform	25.0	22.2	22.6	88.7	90.3	72.0-121			1.86	20
Chloromethane	25.0	21.6	21.5	86.5	86.1	48.0-139			0.450	20
2-Chlorotoluene	25.0	26.1	27.0	104	108	74.0-122			3.58	20
4-Chlorotoluene	25.0	25.9	26.6	104	107	79.0-120			2.83	20
1,2-Dibromo-3-Chloropropane	25.0	22.2	24.3	88.8	97.4	64.0-127			9.22	20
1,2-Dibromoethane	25.0	25.4	25.6	102	102	77.0-123			0.820	20
Dibromomethane	25.0	23.8	24.2	95.2	97.0	78.0-120			1.85	20
1,2-Dichlorobenzene	25.0	24.2	24.4	96.8	97.8	80.0-120			1.03	20
1,3-Dichlorobenzene	25.0	25.9	26.6	104	106	72.0-123			2.52	20
1,4-Dichlorobenzene	25.0	23.8	24.1	95.4	96.5	77.0-120			1.19	20
Dichlorodifluoromethane	25.0	25.1	25.4	100	102	49.0-155			1.47	20
1,1-Dichloroethane	25.0	21.3	22.0	85.2	88.0	70.0-126			3.24	20
1,2-Dichloroethane	25.0	21.4	21.8	85.5	87.1	67.0-126			1.86	20
1,1-Dichloroethene	25.0	21.8	22.2	87.1	88.7	64.0-129			1.76	20
cis-1,2-Dichloroethene	25.0	22.0	22.4	87.8	89.5	73.0-120			1.94	20
trans-1,2-Dichloroethene	25.0	22.4	23.0	89.8	92.0	71.0-121			2.41	20
1,2-Dichloropropane	25.0	23.1	23.5	92.5	94.1	75.0-125			1.78	20
1,1-Dichloropropene	25.0	22.2	23.1	88.9	92.5	71.0-129			3.99	20
1,3-Dichloropropane	25.0	24.5	24.4	98.2	97.6	80.0-121			0.560	20
cis-1,3-Dichloropropene	25.0	24.2	24.1	96.9	96.5	79.0-123			0.380	20
trans-1,3-Dichloropropene	25.0	23.9	23.8	95.7	95.2	74.0-127			0.610	20
trans-1,4-Dichloro-2-butene	25.0	24.8	25.6	99.1	103	55.0-134			3.43	20
2,2-Dichloropropane	25.0	23.1	23.6	92.4	94.2	60.0-125			1.98	20
Di-isopropyl ether	25.0	20.7	21.0	82.6	84.1	59.0-133			1.75	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3231831-1 07/06/17 09:14 • (LCSD) R3231831-2 07/06/17 09:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.8	26.4	103	105	77.0-120			2.06	20
Hexachloro-1,3-butadiene	25.0	21.4	25.3	85.5	101	64.0-131			16.7	20
2-Hexanone	125	138	134	110	107	58.0-147			3.17	20
n-Hexane	25.0	21.7	21.8	86.7	87.2	56.0-124			0.530	20
Iodomethane	125	115	117	92.3	93.6	57.0-140			1.43	20
Isopropylbenzene	25.0	26.9	27.8	108	111	75.0-120			3.33	20
p-Isopropyltoluene	25.0	27.0	27.8	108	111	74.0-126			3.00	20
2-Butanone (MEK)	125	106	103	84.6	82.3	37.0-158			2.75	20
Methylene Chloride	25.0	21.0	21.3	83.8	85.2	66.0-121			1.66	20
4-Methyl-2-pentanone (MIBK)	125	118	116	94.6	92.9	59.0-143			1.86	20
Methyl tert-butyl ether	25.0	21.4	21.7	85.5	86.7	64.0-123			1.39	20
Naphthalene	25.0	18.2	28.1	72.8	112	62.0-128		J3	42.8	20
n-Propylbenzene	25.0	26.6	27.5	106	110	79.0-120			3.22	20
Styrene	25.0	26.1	26.6	104	107	78.0-124			1.91	20
1,1,1,2-Tetrachloroethane	25.0	26.3	26.7	105	107	75.0-122			1.51	20
1,1,2,2-Tetrachloroethane	25.0	25.7	26.3	103	105	71.0-122			2.52	20
1,1,2-Trichlorotrifluoroethane	25.0	22.7	22.7	90.8	90.7	61.0-136			0.150	20
Tetrachloroethene	25.0	26.7	26.9	107	108	70.0-127			1.04	20
Toluene	25.0	24.5	24.7	98.0	98.9	77.0-120			0.940	20
1,2,3-Trichlorobenzene	25.0	16.4	28.7	65.8	115	61.0-133		J3	54.3	20
1,2,4-Trichlorobenzene	25.0	20.4	25.3	81.7	101	69.0-129		J3	21.1	20
1,1,1-Trichloroethane	25.0	23.0	23.8	91.8	95.3	68.0-122			3.75	20
1,1,2-Trichloroethane	25.0	26.0	26.1	104	104	78.0-120			0.140	20
Trichloroethene	25.0	25.2	25.7	101	103	78.0-120			1.81	20
Trichlorofluoromethane	25.0	24.0	24.1	95.9	96.4	56.0-137			0.510	20
1,2,3-Trichloropropane	25.0	25.7	25.9	103	104	72.0-124			0.960	20
1,2,4-Trimethylbenzene	25.0	25.3	25.9	101	104	75.0-120			2.27	20
1,2,3-Trimethylbenzene	25.0	24.2	24.6	96.9	98.2	75.0-120			1.32	20
1,3,5-Trimethylbenzene	25.0	26.5	27.3	106	109	75.0-120			3.20	20
Vinyl acetate	125	111	111	89.2	89.1	46.0-160			0.120	20
Vinyl chloride	25.0	23.2	23.7	92.6	94.9	64.0-133			2.44	20
Xylenes, Total	75.0	76.7	78.5	102	105	77.0-120			2.32	20
(S) Toluene-d8				91.2	91.9	80.0-120				
(S) Dibromofluoromethane				80.8	82.0	76.0-123				
(S) 4-Bromofluorobenzene				92.2	94.2	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
B	The same analyte is found in the associated blank.
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.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
Q	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
V	The sample concentration is too high to evaluate accurate spike recoveries.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

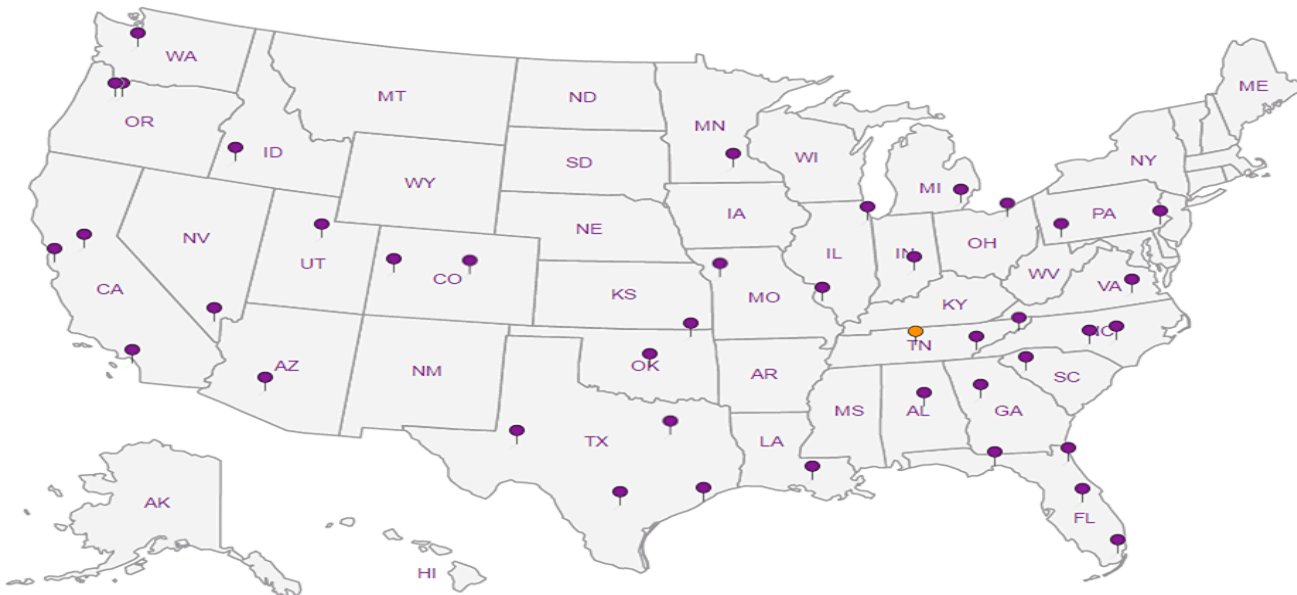
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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





**PES Environmental, Inc. - WA**

1215 Fourth Ave., Suite 1350  
Seattle, WA 98161

Billing Information:  
Attn: Accounts Payable  
1215 Fourth Ave., Ste. 1350  
Seattle, WA 98161

Pres  
Chk

Report to:  
Bill Haldeman

Email To: bhdaldeman@pesenv.com

Project  
Description: American Linen Supply

City/State  
Collected: SEATTLE, WA

Phone: 206-529-3980  
Fax: 206-529-3985

Client Project #  
1413.001.02.002

Lab Project #  
PESENVSWA-141300102

Collected by (print):  
SHANNON MCKERNAN

Site/Facility ID #  
700 DEXTER AVE N SEATTLE

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #

Date Results Needed

Immediately  
Packed on Ice N  Y

No.  
of  
Cnts

Analysis / Container / Preservative

Chain of Custody Page \_\_\_ of \_\_\_



YOUR LAB OF CHOICE  
12065 Lebaron Rd  
Mount Juliet, TN 37122  
Phone: 615-258-5858  
Phone: 800-767-5859  
Fax: 615-258-5859

L# 1919285  
A043

Accnum: PESENVSWA  
Template: T124201  
Prelogin: P603202  
TSR: 110 - Brian Ford  
PB: 5-31-17  
Shipped Via: FedEx Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	* Alk, Cl, NO3, SO4 250ml HDPE - No Pres	NWTPHGX 40ml Amb HCl	TOC 250ml Amb-HCl	Total Fe Mn 6020 250ml HDPE-HNO3	low level 8260C 40ml Amb-HCl	low level RSK175 40ml Amb-HCl	Remarks	Sample # (lab only)
MW125-062817	GRAB	GW	26	6/28/17	09:10	6								-01
MW120-062817	GRAB	GW	45	6/28/17	10:50	4								-02
MW119-062817	↓	GW	40	↓	12:45	9								-03
		GW			14:15	6								-04
MW125-062817	GRAB	GW	26	6/28/17	09:10	6								
R-MW3-062817	↓	GW	15.5	↓	14:15	6								
		GW												
		GW												
		GW												
		GW												

\* Matrix:  
SS - Soil AIR - Air F - Filter  
GW - Groundwater B - Bioassay  
WW - WasteWater  
DW - Drinking Water  
OT - Other

Remarks: \*NO3 nitrate has a 48 hour holding time

pH \_\_\_\_\_ Temp \_\_\_\_\_  
Flow \_\_\_\_\_ Other \_\_\_\_\_

Sample Receipt Checklist  
 COC Seal Present/Intact:  Y  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 If Applicable  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

Relinquished by: (Signature)	Date: 6/28/17	Time: 1500	Received by: (Signature)	Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	HCL / MeOH TBR	Bottles Received: 25	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 6-29-17	Time: 845	Hold:	Condition: NCF / <input checked="" type="checkbox"/>
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:		

## MEMORANDUM

**TO:** Project File **DATE:** July 26, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 28, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L919285

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Four (4) groundwater samples were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 28, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L919285. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L919285 is summarized below.

## **DATA QUALIFICATIONS**

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 0.2 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

All samples were analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

The sample was analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

The sample was analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

The sample was analyzed within the USEPA recommended holding time 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met with one exception:

Sample MW119-062817 nitrate analysis was performed about 12 hours past the recommended 48-hour hold time. **Sample MW119-062817 nitrate result is estimated and qualified (UJ).**

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- *USEPA Method 8260C*: Continuing calibration verification (CCV) issues were noted by ESC for acetone, naphthalene, and 1,2,3-trichlorobenzene associated with analytical batch WG996080 (analyzed on July 6, 2017). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All associated sample results for naphthalene are estimated and qualified (UJ or J). All acetone and 1,2,3-trichlorobenzene detections are qualified as not detected (U) due to blank contamination (this qualifier supersedes the calibration qualifier).** Refer to the discussion under method blanks for further details.

### **Method Blank Results**

#### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

- Low level acetone and 1,2,3-trichlorobenzene detections are reported in the method blank (WG996080). Detections are less than the RDLs but greater than the method detection limits (MDLs). Low levels of acetone and 1,2,3-trichlorobenzene were reported in samples MW120-062817 and MW119-062817. A low level of acetone was detected in sample R-MW3-062817. **Acetone and 1,2,3-trichlorobenzene detections in these three samples are qualified as non-detect (U) due to blank contamination.**

#### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

#### *Method RSK-175:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blank at or above the RDL.

#### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks below the RDL with the following exception:

- A low level of iron was detected in the method blank between the RDL and method detection limit (MDL). No action was necessary as associated iron sample results are significantly greater than the detection in the blank.

*General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- A low level of alkalinity was measured in the method blank between the RDL and MDL. No action was necessary as associated alkalinity sample results are significantly greater than the detection in the blank.

### **Trip Blank Results**

*USEPA Method 8260C and NWTPH-Gx:*

A trip blank was not collected.

### **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

### **Field Duplicate Analyses**

Field duplicates were not collected. Refer to SDGs L918687 and L919954 for field duplicate results.

### **Laboratory Duplicate Analyses**

*USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

*NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision data.

*Method RSK-175:*

Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

*USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

*General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20%.

*EPA Method 9056A:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample analyses was performed on a non-client sample. The primary/duplicate RPD for TOC analyses are within the laboratory control limit of 20%.

### **Surrogate Recoveries**

*USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

*NWTPH-Gx Method:*

The surrogate recovery results for the samples, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### **Laboratory Control Samples**

*USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water with the following discussion:

- LCS/LCSD (Batch WG996080) RPD values for compounds naphthalene, 1,2,3-trichlorobenzene, and 1,2,4-trichlorobenzene are above laboratory acceptance criteria (20%) and qualified by the laboratory (J3). No action was taken on this basis as LCS/LCSD percent recovery results are recovered wide but are within control limits.

*NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method along with each analytical batch. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

*Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

*USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water.

*General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

### **Matrix Spike/Matrix Spike Duplicates**

*USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

*NWTPH-Gx Method:*

Matrix spike analysis was performed on a non-client sample. MS/MSD % Rs were below the laboratory control criteria for water due to matrix interference. No action was taken in this case since the spike was performed on an unrelated sample and LCS/LCSD results are acceptable.

*Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information on accuracy and precision.

*USEPA Method 6020:*

MS/MSD analysis was performed on sample another client sample within the analytical batch. Manganese and iron sample amounts are greater than four times the spike amount and the spike recoveries were not within acceptance criteria. No action was taken other than to note this.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis were performed on non-client sample and on sample MW119-062817 within the analytical batches. MS % Rs and MS/MSD % Rs and RPDs were within the laboratory control criteria for water.

*EPA Method 9060A:* MS/MSD analyses for TOC were performed on a non-client sample within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.





Collected date/time: 06/28/17 10:50

L919285

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	3.40	U B J J O	1.05	25.0	1	07/06/2017 11:22	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:22	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 11:22	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:22	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:22	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:22	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 11:22	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 11:22	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:22	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:22	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:22	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:22	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:22	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:22	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:22	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 11:22	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 11:22	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 11:22	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:22	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:22	WG996080
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:22	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:22	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:22	WG996080
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:22	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:22	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:22	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:22	WG996080
1,1-Dichloroethane	1.57		0.114	0.500	1	07/06/2017 11:22	WG996080
1,2-Dichloroethane	0.211	U J J	0.108	0.500	1	07/06/2017 11:22	WG996080
1,1-Dichloroethene	0.251		0.188	0.500	1	07/06/2017 11:22	WG996080
cis-1,2-Dichloroethene	16.0		0.0933	0.500	1	07/06/2017 11:22	WG996080
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 11:22	WG996080
1,2-Dichloropropane	0.762		0.190	0.500	1	07/06/2017 11:22	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:22	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:22	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:22	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:22	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:22	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:22	WG996080
Di-Isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:22	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:22	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:22	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:22	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 11:22	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 11:22	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:22	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:22	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:22	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:22	WG996080
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:22	WG996080
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:22	WG996080
Naphthalene	0.384	U J J O J 3	0.174	2.50	1	07/06/2017 11:22	WG996080
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:22	WG996080
Styrene	U		0.117	0.500	1	07/06/2017 11:22	WG996080
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:22	WG996080
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:22	WG996080

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc



Collected date/time: 06/28/17 10:50

L919285

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,1,2-Trichlorotrifluoroethane	0.418	J	0.164	0.500	1	07/06/2017 11:22	WG996080	Cp
Tetrachloroethene	18.0	J	0.199	0.500	1	07/06/2017 11:22	WG996080	Tc
Toluene	U		0.412	0.500	1	07/06/2017 11:22	WG996080	Ss
1,2,3-Trichlorobenzene	0.456	U B J J0 J3	0.164	0.500	1	07/06/2017 11:22	WG996080	Cn
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 11:22	WG996080	Sr
1,1,1-Trichloroethane	0.278	J	0.0940	0.500	1	07/06/2017 11:22	WG996080	Qc
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:22	WG996080	Gl
Trichloroethene	6.97		0.153	0.500	1	07/06/2017 11:22	WG996080	Al
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:22	WG996080	Sc
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:22	WG996080	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:22	WG996080	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:22	WG996080	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:22	WG996080	
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:22	WG996080	
Vinyl chloride	0.988		0.118	0.500	1	07/06/2017 11:22	WG996080	
Xylenes, Total	U		0.316	1.50	1	07/06/2017 11:22	WG996080	
(S) Toluene-d8	91.1			80.0-120		07/06/2017 11:22	WG996080	
(S) Dibromofluoromethane	83.0			76.0-123		07/06/2017 11:22	WG996080	
(S) 4-Bromofluorobenzene	90.6			80.0-120		07/06/2017 11:22	WG996080	

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Alkalinity	360000		2710	20000	1	07/07/2017 11:12	WG996482

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Chloride	13700		51.9	1000	1	07/01/2017 00:05	WG993864
Nitrate	U	KS Q	22.7	100	1	07/01/2017 00:05	WG993864
Sulfate	56100		77.4	5000	1	07/01/2017 00:05	WG993864

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
TOC (Total Organic Carbon)	9090		102	1000	1	07/05/2017 20:02	WG995664

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Iron	5660		15.0	100	1	07/06/2017 00:22	WG995343
Manganese	1250		0.250	5.00	1	07/05/2017 21:57	WG995343

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Methane	73.5		0.287	0.678	1	07/05/2017 11:25	WG993916
Ethane	U		0.296	1.29	1	07/05/2017 11:25	WG993916
Ethene	U		0.422	1.27	1	07/05/2017 11:25	WG993916

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Acetone	3.73	W BJJQ	1.05	25.0	1	07/06/2017 11:37	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:37	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 11:37	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:37	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:37	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:37	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 11:37	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 11:37	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:37	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:37	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:37	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:37	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:37	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:37	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:37	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 11:37	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 11:37	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 11:37	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:37	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:37	WG996080
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:37	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:37	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:37	WG996080

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:37	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:37	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:37	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:37	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 11:37	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 11:37	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 11:37	WG996080
cis-1,2-Dichloroethene	5.99		0.0933	0.500	1	07/06/2017 11:37	WG996080
trans-1,2-Dichloroethene	0.167	J	0.152	0.500	1	07/06/2017 11:37	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 11:37	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:37	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:37	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:37	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:37	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:37	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:37	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:37	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:37	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:37	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:37	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 11:37	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 11:37	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:37	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:37	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:37	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:37	WG996080
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:37	WG996080
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:37	WG996080
Naphthalene	U	UJ JO J3	0.174	2.50	1	07/06/2017 11:37	WG996080
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:37	WG996080
Styrene	U		0.117	0.500	1	07/06/2017 11:37	WG996080
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:37	WG996080
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:37	WG996080
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 11:37	WG996080
Tetrachloroethene	19.0		0.199	0.500	1	07/06/2017 11:37	WG996080
Toluene	0.726		0.412	0.500	1	07/06/2017 11:37	WG996080
1,2,3-Trichlorobenzene	0.165	U B J J O J3	0.164	0.500	1	07/06/2017 11:37	WG996080
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 11:37	WG996080
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 11:37	WG996080
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:37	WG996080
Trichloroethene	12.4		0.153	0.500	1	07/06/2017 11:37	WG996080
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:37	WG996080
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:37	WG996080
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:37	WG996080
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:37	WG996080
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:37	WG996080
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:37	WG996080
Vinyl chloride	U		0.118	0.500	1	07/06/2017 11:37	WG996080
Xylenes, Total	0.562	J	0.316	1.50	1	07/06/2017 11:37	WG996080
(S) Toluene-d8	92.2	/		80.0-120		07/06/2017 11:37	WG996080
(S) Dibromofluoromethane	83.0	/		76.0-123		07/06/2017 11:37	WG996080
(S) 4-Bromofluorobenzene	95.4	/		80.0-120		07/06/2017 11:37	WG996080

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



Collected date/time: 06/28/17 09:10

L919285

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/02/2017 23:28	WG995181
(S) o,a,a-Trifluorotoluene(FID) 92.1				77.0-122		07/02/2017 23:28	WG995181

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/06/2017 11:52	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 11:52	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 11:52	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 11:52	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 11:52	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 11:52	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 11:52	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 11:52	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 11:52	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 11:52	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 11:52	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 11:52	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 11:52	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 11:52	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 11:52	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 11:52	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 11:52	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 11:52	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 11:52	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 11:52	WG996080
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 11:52	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 11:52	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 11:52	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 11:52	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 11:52	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 11:52	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 11:52	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 11:52	WG996080
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/06/2017 11:52	WG996080
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 11:52	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 11:52	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 11:52	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 11:52	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 11:52	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 11:52	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 11:52	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 11:52	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 11:52	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 11:52	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 11:52	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 11:52	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 11:52	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 11:52	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 11:52	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 11:52	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 11:52	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 11:52	WG996080

1 Cp

2 Tc

3 Ss

4 Cn

5 Si

6 Qc

7 GI

8 AI

9 Sc

MW125-062817

## SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/28/17 09:10

L919285

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
	ug/l		ug/l	ug/l		date / time		
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 11:52	WG996080	<sup>1</sup> Cp
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 11:52	WG996080	<sup>2</sup> Tc
Naphthalene	U	VJ JO J3	0.174	2.50	1	07/06/2017 11:52	WG996080	<sup>3</sup> Ss
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 11:52	WG996080	<sup>4</sup> Cn
Styrene	U		0.117	0.500	1	07/06/2017 11:52	WG996080	<sup>5</sup> Sr
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 11:52	WG996080	<sup>6</sup> Qc
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 11:52	WG996080	<sup>7</sup> Gl
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 11:52	WG996080	<sup>8</sup> Al
Tetrachloroethene	U		0.199	0.500	1	07/06/2017 11:52	WG996080	<sup>9</sup> Sc
Toluene	U		0.412	0.500	1	07/06/2017 11:52	WG996080	
1,2,3-Trichlorobenzene	U	VJ JO J3	0.164	0.500	1	07/06/2017 11:52	WG996080	
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 11:52	WG996080	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 11:52	WG996080	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 11:52	WG996080	
Trichloroethene	U		0.153	0.500	1	07/06/2017 11:52	WG996080	
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 11:52	WG996080	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 11:52	WG996080	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 11:52	WG996080	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 11:52	WG996080	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 11:52	WG996080	
Vinyl acetate	U		0.645	5.00	1	07/06/2017 11:52	WG996080	
Vinyl chloride	U		0.118	0.500	1	07/06/2017 11:52	WG996080	
Xylenes, Total	U		0.316	1.50	1	07/06/2017 11:52	WG996080	
(S) Toluene-d8	92.1			80.0-120		07/06/2017 11:52	WG996080	
(S) Dibromofluoromethane	80.9			76.0-123		07/06/2017 11:52	WG996080	
(S) 4-Bromofluorobenzene	95.1			80.0-120		07/06/2017 11:52	WG996080	



Collected date/time: 06/28/17 14:15

L919285

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/02/2017 23:50	WG995181
(S) a,a,a-Trifluorotoluene(FID) 93.2				77.0-122		07/02/2017 23:50	WG995181

1 Cp

2 Tc

3 Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	5.00	U B J JO	1.05	25.0	1	07/06/2017 12:07	WG996080
Acrylonitrile	U		0.873	5.00	1	07/06/2017 12:07	WG996080
Benzene	U		0.0896	0.500	1	07/06/2017 12:07	WG996080
Bromobenzene	U		0.133	0.500	1	07/06/2017 12:07	WG996080
Bromodichloromethane	U		0.0800	0.500	1	07/06/2017 12:07	WG996080
Bromochloromethane	U		0.145	0.500	1	07/06/2017 12:07	WG996080
Bromoform	U		0.186	0.500	1	07/06/2017 12:07	WG996080
Bromomethane	U		0.157	2.50	1	07/06/2017 12:07	WG996080
n-Butylbenzene	U		0.143	0.500	1	07/06/2017 12:07	WG996080
sec-Butylbenzene	U		0.134	0.500	1	07/06/2017 12:07	WG996080
tert-Butylbenzene	U		0.183	0.500	1	07/06/2017 12:07	WG996080
Carbon disulfide	U		0.101	0.500	1	07/06/2017 12:07	WG996080
Carbon tetrachloride	U		0.159	0.500	1	07/06/2017 12:07	WG996080
Chlorobenzene	U		0.140	0.500	1	07/06/2017 12:07	WG996080
Chlorodibromomethane	U		0.128	0.500	1	07/06/2017 12:07	WG996080
Chloroethane	U		0.141	2.50	1	07/06/2017 12:07	WG996080
Chloroform	U		0.0860	0.500	1	07/06/2017 12:07	WG996080
Chloromethane	U		0.153	1.25	1	07/06/2017 12:07	WG996080
2-Chlorotoluene	U		0.111	0.500	1	07/06/2017 12:07	WG996080
4-Chlorotoluene	U		0.0972	0.500	1	07/06/2017 12:07	WG996080
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/06/2017 12:07	WG996080
1,2-Dibromoethane	U		0.193	0.500	1	07/06/2017 12:07	WG996080
Dibromomethane	U		0.117	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichlorobenzene	U		0.101	0.500	1	07/06/2017 12:07	WG996080
1,3-Dichlorobenzene	U		0.130	0.500	1	07/06/2017 12:07	WG996080
1,4-Dichlorobenzene	U		0.121	0.500	1	07/06/2017 12:07	WG996080
Dichlorodifluoromethane	U		0.127	2.50	1	07/06/2017 12:07	WG996080
1,1-Dichloroethane	U		0.114	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichloroethane	U		0.108	0.500	1	07/06/2017 12:07	WG996080
1,1-Dichloroethene	U		0.188	0.500	1	07/06/2017 12:07	WG996080
cis-1,2-Dichloroethene	0.735		0.0933	0.500	1	07/06/2017 12:07	WG996080
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/06/2017 12:07	WG996080
1,2-Dichloropropane	U		0.190	0.500	1	07/06/2017 12:07	WG996080
1,1-Dichloropropene	U		0.128	0.500	1	07/06/2017 12:07	WG996080
1,3-Dichloropropane	U		0.147	1.00	1	07/06/2017 12:07	WG996080
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/06/2017 12:07	WG996080
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/06/2017 12:07	WG996080
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/06/2017 12:07	WG996080
2,2-Dichloropropane	U		0.0929	0.500	1	07/06/2017 12:07	WG996080
Di-isopropyl ether	U		0.0924	0.500	1	07/06/2017 12:07	WG996080
Ethylbenzene	U		0.158	0.500	1	07/06/2017 12:07	WG996080
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/06/2017 12:07	WG996080
2-Hexanone	U		0.757	5.00	1	07/06/2017 12:07	WG996080
n-Hexane	U		0.305	5.00	1	07/06/2017 12:07	WG996080
Iodomethane	U		0.377	10.0	1	07/06/2017 12:07	WG996080
Isopropylbenzene	U		0.126	0.500	1	07/06/2017 12:07	WG996080
p-Isopropyltoluene	U		0.138	0.500	1	07/06/2017 12:07	WG996080
2-Butanone (MEK)	U		1.28	5.00	1	07/06/2017 12:07	WG996080
Methylene Chloride	U		1.07	2.50	1	07/06/2017 12:07	WG996080

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/28/17 14:15

L919285

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/06/2017 12:07	WG996080	1 Cp
Methyl tert-butyl ether	U		0.102	0.500	1	07/06/2017 12:07	WG996080	2 Tc
Naphthalene	U	UJ JO J3	0.174	2.50	1	07/06/2017 12:07	WG996080	3 Ss
n-Propylbenzene	U		0.162	0.500	1	07/06/2017 12:07	WG996080	4 Cn
Styrene	U		0.117	0.500	1	07/06/2017 12:07	WG996080	5 Sr
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/06/2017 12:07	WG996080	6 Qc
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/06/2017 12:07	WG996080	7 Gl
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/06/2017 12:07	WG996080	8 Al
Tetrachloroethene	0.834		0.199	0.500	1	07/06/2017 12:07	WG996080	9 Sc
Toluene	U		0.412	0.500	1	07/06/2017 12:07	WG996080	
1,2,3-Trichlorobenzene	U	UJ JO J3	0.164	0.500	1	07/06/2017 12:07	WG996080	
1,2,4-Trichlorobenzene	U	J3	0.355	0.500	1	07/06/2017 12:07	WG996080	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/06/2017 12:07	WG996080	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/06/2017 12:07	WG996080	
Trichloroethene	0.582		0.153	0.500	1	07/06/2017 12:07	WG996080	
Trichlorofluoromethane	U		0.130	2.50	1	07/06/2017 12:07	WG996080	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/06/2017 12:07	WG996080	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/06/2017 12:07	WG996080	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/06/2017 12:07	WG996080	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/06/2017 12:07	WG996080	
Vinyl acetate	U		0.645	5.00	1	07/06/2017 12:07	WG996080	
Vinyl chloride	0.424	J J	0.118	0.500	1	07/06/2017 12:07	WG996080	
Xylenes, Total	U		0.316	1.50	1	07/06/2017 12:07	WG996080	
(S) Toluene-d8	92.8			80.0-120		07/06/2017 12:07	WG996080	
(S) Dibromofluoromethane	80.7			76.0-123		07/06/2017 12:07	WG996080	
(S) 4-Bromofluorobenzene	94.9			80.0-120		07/06/2017 12:07	WG996080	



July 14, 2017

## PES Environmental, Inc.- WA

Sample Delivery Group: L919954  
Samples Received: 07/01/2017  
Project Number: 1413.001.02.002  
Description: American Linen Supply  
Site: 700 DEXTER AVE N SEATTLE WA  
Report To: Bill Haldeman  
1215 Fourth Ave., Suite 1350  
Seattle, WA 98161










Entire Report Reviewed By:



Brian Ford  
Technical Service Representative

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



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# SAMPLE SUMMARY



## C10-063017 L919954-01 GW

Collected by  
Shannon McKernan

Collected date/time  
06/30/17 08:10

Received date/time  
07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997492	1	07/11/17 14:06	07/11/17 14:06	MCG
Wet Chemistry by Method 9056A	WG994932	1	07/01/17 21:04	07/01/17 21:04	SAM
Wet Chemistry by Method 9056A	WG994932	5	07/01/17 21:18	07/01/17 21:18	SAM
Wet Chemistry by Method 9060A	WG996343	1	07/07/17 03:07	07/07/17 03:07	CSU
Metals (ICPMS) by Method 6020A	WG995966	1	07/06/17 14:12	07/06/17 21:24	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG997249	5	07/13/17 17:35	07/13/17 17:35	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG995803	1	07/06/17 11:02	07/06/17 11:02	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	10	07/13/17 13:48	07/13/17 13:48	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	500	07/14/17 04:50	07/14/17 04:50	JHH

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## MW104-063017 L919954-02 GW

Collected by  
Shannon McKernan

Collected date/time  
06/30/17 10:50

Received date/time  
07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997492	1	07/11/17 14:28	07/11/17 14:28	MCG
Wet Chemistry by Method 9056A	WG994932	1	07/01/17 21:33	07/01/17 21:33	SAM
Wet Chemistry by Method 9060A	WG996343	1	07/07/17 03:19	07/07/17 03:19	CSU
Metals (ICPMS) by Method 6020A	WG995966	1	07/06/17 14:12	07/06/17 21:28	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG995803	1	07/06/17 11:05	07/06/17 11:05	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/13/17 14:05	07/13/17 14:05	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/14/17 05:07	07/14/17 05:07	JHH

## MW106-063017 L919954-03 GW

Collected by  
Shannon McKernan

Collected date/time  
06/30/17 12:45

Received date/time  
07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997492	1	07/11/17 14:36	07/11/17 14:36	MCG
Wet Chemistry by Method 9056A	WG994932	1	07/01/17 21:47	07/01/17 21:47	SAM
Wet Chemistry by Method 9060A	WG996343	1	07/07/17 03:30	07/07/17 03:30	CSU
Metals (ICPMS) by Method 6020A	WG995966	1	07/06/17 14:12	07/06/17 21:31	VSS
Volatile Organic Compounds (GC) by Method RSK175	WG995803	1	07/06/17 11:08	07/06/17 11:08	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/13/17 14:21	07/13/17 14:21	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/14/17 05:24	07/14/17 05:24	JHH

## MW130-063017 L919954-04 GW

Collected by  
Shannon McKernan

Collected date/time  
06/30/17 15:10

Received date/time  
07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method 2320 B-2011	WG997492	1	07/11/17 14:43	07/11/17 14:43	MCG
Wet Chemistry by Method 9056A	WG994932	1	07/01/17 22:45	07/01/17 22:45	SAM
Wet Chemistry by Method 9056A	WG994932	10	07/01/17 22:59	07/01/17 22:59	SAM
Wet Chemistry by Method 9060A	WG996343	1	07/07/17 03:41	07/07/17 03:41	CSU
Metals (ICPMS) by Method 6020A	WG995966	1	07/06/17 14:12	07/06/17 19:48	VSS
Volatile Organic Compounds (GC) by Method NWTPHGX	WG997249	5	07/13/17 17:57	07/13/17 17:57	JHH
Volatile Organic Compounds (GC) by Method RSK175	WG995803	1	07/06/17 11:17	07/06/17 11:17	AMC
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	10	07/13/17 14:38	07/13/17 14:38	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	500	07/14/17 05:41	07/14/17 05:41	JHH

# SAMPLE SUMMARY



## G12-063017 L919954-05 GW

Collected by Shannon McKernan    Collected date/time 06/30/17 15:30    Received date/time 07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/13/17 14:54	07/13/17 14:54	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/14/17 05:58	07/14/17 05:58	JHH

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

## TRIP BLANK L919954-06 GW

Collected by Shannon McKernan    Collected date/time 06/30/17 00:00    Received date/time 07/01/17 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC) by Method NWTPHGX	WG997249	1	07/12/17 02:39	07/12/17 02:39	LRL
Volatile Organic Compounds (GC/MS) by Method 8260C	WG997929	1	07/13/17 12:58	07/13/17 12:58	BMB



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

Brian Ford  
Technical Service Representative

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	335000		2710	20000	1	07/11/2017 14:06	<a href="#">WG997492</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	111000		260	5000	5	07/01/2017 21:18	<a href="#">WG994932</a>
Nitrate	U		22.7	100	1	07/01/2017 21:04	<a href="#">WG994932</a>
Sulfate	6160		77.4	5000	1	07/01/2017 21:04	<a href="#">WG994932</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	9680		102	1000	1	07/07/2017 03:07	<a href="#">WG996343</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	876		15.0	100	1	07/06/2017 21:24	<a href="#">WG995966</a>
Manganese	527		0.250	5.00	1	07/06/2017 21:24	<a href="#">WG995966</a>

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	15000		158	500	5	07/13/2017 17:35	<a href="#">WG997249</a>
(S) a,a,a-Trifluorotoluene(FID)	99.7			77.0-122		07/13/2017 17:35	<a href="#">WG997249</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	1120		0.287	0.678	1	07/06/2017 11:02	<a href="#">WG995803</a>
Ethane	2.33		0.296	1.29	1	07/06/2017 11:02	<a href="#">WG995803</a>
Ethene	69.1		0.422	1.27	1	07/06/2017 11:02	<a href="#">WG995803</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.5	250	10	07/13/2017 13:48	<a href="#">WG997929</a>
Acrylonitrile	U		8.73	50.0	10	07/13/2017 13:48	<a href="#">WG997929</a>
Benzene	U		0.896	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Bromobenzene	U		1.33	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Bromodichloromethane	U		0.800	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Bromochloromethane	U		1.45	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Bromoform	U		1.86	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Bromomethane	U		1.57	25.0	10	07/13/2017 13:48	<a href="#">WG997929</a>
n-Butylbenzene	U		1.43	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
sec-Butylbenzene	U		1.34	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
tert-Butylbenzene	U		1.83	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Carbon disulfide	U		1.01	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Carbon tetrachloride	U		1.59	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Chlorobenzene	U		1.40	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Chlorodibromomethane	U		1.28	5.00	10	07/13/2017 13:48	<a href="#">WG997929</a>
Chloroethane	U		1.41	25.0	10	07/13/2017 13:48	<a href="#">WG997929</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/30/17 08:10

L919954

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloroform	U		0.860	5.00	10	07/13/2017 13:48	WG997929
Chloromethane	U		1.53	12.5	10	07/13/2017 13:48	WG997929
2-Chlorotoluene	U		1.11	5.00	10	07/13/2017 13:48	WG997929
4-Chlorotoluene	U		0.972	5.00	10	07/13/2017 13:48	WG997929
1,2-Dibromo-3-Chloropropane	U		3.25	25.0	10	07/13/2017 13:48	WG997929
1,2-Dibromoethane	U		1.93	5.00	10	07/13/2017 13:48	WG997929
Dibromomethane	U		1.17	5.00	10	07/13/2017 13:48	WG997929
1,2-Dichlorobenzene	U		1.01	5.00	10	07/13/2017 13:48	WG997929
1,3-Dichlorobenzene	U		1.30	5.00	10	07/13/2017 13:48	WG997929
1,4-Dichlorobenzene	U		1.21	5.00	10	07/13/2017 13:48	WG997929
Dichlorodifluoromethane	U		1.27	25.0	10	07/13/2017 13:48	WG997929
1,1-Dichloroethane	U		1.14	5.00	10	07/13/2017 13:48	WG997929
1,2-Dichloroethane	U		1.08	5.00	10	07/13/2017 13:48	WG997929
1,1-Dichloroethene	85.0		1.88	5.00	10	07/13/2017 13:48	WG997929
cis-1,2-Dichloroethene	21300		46.6	250	500	07/14/2017 04:50	WG997929
trans-1,2-Dichloroethene	57.3		1.52	5.00	10	07/13/2017 13:48	WG997929
1,2-Dichloropropane	U		1.90	5.00	10	07/13/2017 13:48	WG997929
1,1-Dichloropropene	U		1.28	5.00	10	07/13/2017 13:48	WG997929
1,3-Dichloropropane	U		1.47	10.0	10	07/13/2017 13:48	WG997929
cis-1,3-Dichloropropene	U		0.976	5.00	10	07/13/2017 13:48	WG997929
trans-1,3-Dichloropropene	U		2.22	5.00	10	07/13/2017 13:48	WG997929
trans-1,4-Dichloro-2-butene	U		2.57	50.0	10	07/13/2017 13:48	WG997929
2,2-Dichloropropane	U		0.929	5.00	10	07/13/2017 13:48	WG997929
Di-isopropyl ether	U		0.924	5.00	10	07/13/2017 13:48	WG997929
Ethylbenzene	U		1.58	5.00	10	07/13/2017 13:48	WG997929
Hexachloro-1,3-butadiene	U		1.57	10.0	10	07/13/2017 13:48	WG997929
2-Hexanone	U		7.57	50.0	10	07/13/2017 13:48	WG997929
n-Hexane	U		3.05	50.0	10	07/13/2017 13:48	WG997929
Iodomethane	U		3.77	100	10	07/13/2017 13:48	WG997929
Isopropylbenzene	U		1.26	5.00	10	07/13/2017 13:48	WG997929
p-Isopropyltoluene	U		1.38	5.00	10	07/13/2017 13:48	WG997929
2-Butanone (MEK)	U		12.8	50.0	10	07/13/2017 13:48	WG997929
Methylene Chloride	U		10.7	25.0	10	07/13/2017 13:48	WG997929
4-Methyl-2-pentanone (MIBK)	U		8.23	50.0	10	07/13/2017 13:48	WG997929
Methyl tert-butyl ether	U		1.02	5.00	10	07/13/2017 13:48	WG997929
Naphthalene	U		1.74	25.0	10	07/13/2017 13:48	WG997929
n-Propylbenzene	U		1.62	5.00	10	07/13/2017 13:48	WG997929
Styrene	U		1.17	5.00	10	07/13/2017 13:48	WG997929
1,1,1,2-Tetrachloroethane	U		1.20	5.00	10	07/13/2017 13:48	WG997929
1,1,2,2-Tetrachloroethane	U		1.30	5.00	10	07/13/2017 13:48	WG997929
1,1,2-Trichlorotrifluoroethane	U		1.64	5.00	10	07/13/2017 13:48	WG997929
Tetrachloroethene	11100		99.5	250	500	07/14/2017 04:50	WG997929
Toluene	U		4.12	5.00	10	07/13/2017 13:48	WG997929
1,2,3-Trichlorobenzene	U		1.64	5.00	10	07/13/2017 13:48	WG997929
1,2,4-Trichlorobenzene	U		3.55	5.00	10	07/13/2017 13:48	WG997929
1,1,1-Trichloroethane	U		0.940	5.00	10	07/13/2017 13:48	WG997929
1,1,2-Trichloroethane	U		1.86	5.00	10	07/13/2017 13:48	WG997929
Trichloroethene	5310		76.5	250	500	07/14/2017 04:50	WG997929
Trichlorofluoromethane	U		1.30	25.0	10	07/13/2017 13:48	WG997929
1,2,3-Trichloropropane	U		2.47	25.0	10	07/13/2017 13:48	WG997929
1,2,4-Trimethylbenzene	U		1.23	5.00	10	07/13/2017 13:48	WG997929
1,2,3-Trimethylbenzene	U		0.739	5.00	10	07/13/2017 13:48	WG997929
1,3,5-Trimethylbenzene	U		1.24	5.00	10	07/13/2017 13:48	WG997929
Vinyl acetate	U		6.45	50.0	10	07/13/2017 13:48	WG997929
Vinyl chloride	549		1.18	5.00	10	07/13/2017 13:48	WG997929
Xylenes, Total	U		3.16	15.0	10	07/13/2017 13:48	WG997929

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	106			80.0-120		07/14/2017 04:50	<a href="#">WG997929</a>
(S) Toluene-d8	104			80.0-120		07/13/2017 13:48	<a href="#">WG997929</a>
(S) Dibromofluoromethane	92.9			76.0-123		07/14/2017 04:50	<a href="#">WG997929</a>
(S) Dibromofluoromethane	99.2			76.0-123		07/13/2017 13:48	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	98.9			80.0-120		07/13/2017 13:48	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	94.9			80.0-120		07/14/2017 04:50	<a href="#">WG997929</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc





## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	218000		2710	20000	1	07/11/2017 14:28	<a href="#">WG997492</a>

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	11700		51.9	1000	1	07/01/2017 21:33	<a href="#">WG994932</a>
Nitrate	U		22.7	100	1	07/01/2017 21:33	<a href="#">WG994932</a>
Sulfate	6050		77.4	5000	1	07/01/2017 21:33	<a href="#">WG994932</a>

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1680		102	1000	1	07/07/2017 03:19	<a href="#">WG996343</a>

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	1770		15.0	100	1	07/06/2017 21:28	<a href="#">WG995966</a>
Manganese	360		0.250	5.00	1	07/06/2017 21:28	<a href="#">WG995966</a>

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	40.6		0.287	0.678	1	07/06/2017 11:05	<a href="#">WG995803</a>
Ethane	U		0.296	1.29	1	07/06/2017 11:05	<a href="#">WG995803</a>
Ethene	U		0.422	1.27	1	07/06/2017 11:05	<a href="#">WG995803</a>

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.45	J	1.05	25.0	1	07/13/2017 14:05	<a href="#">WG997929</a>
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:05	<a href="#">WG997929</a>
Benzene	U		0.0896	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Bromoform	U		0.186	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Bromomethane	U		0.157	2.50	1	07/13/2017 14:05	<a href="#">WG997929</a>
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Chloroethane	U		0.141	2.50	1	07/13/2017 14:05	<a href="#">WG997929</a>
Chloroform	U		0.0860	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Chloromethane	U		0.153	1.25	1	07/13/2017 14:05	<a href="#">WG997929</a>
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:05	<a href="#">WG997929</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:05	<a href="#">WG997929</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/30/17 10:50

L919954

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch	
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:05	WG997929	1 Cp
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:05	WG997929	2 Tc
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:05	WG997929	
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:05	WG997929	3 Ss
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:05	WG997929	
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:05	WG997929	4 Cn
1,1-Dichloroethene	0.387	J	0.188	0.500	1	07/13/2017 14:05	WG997929	
cis-1,2-Dichloroethene	1.54		0.0933	0.500	1	07/14/2017 05:07	WG997929	
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 14:05	WG997929	5 Sr
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:05	WG997929	
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:05	WG997929	6 Qc
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:05	WG997929	
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:05	WG997929	
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:05	WG997929	7 Gl
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:05	WG997929	
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:05	WG997929	8 Al
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:05	WG997929	
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:05	WG997929	
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:05	WG997929	9 Sc
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:05	WG997929	
n-Hexane	U		0.305	5.00	1	07/13/2017 14:05	WG997929	
Iodomethane	U		0.377	10.0	1	07/13/2017 14:05	WG997929	
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:05	WG997929	
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:05	WG997929	
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:05	WG997929	
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:05	WG997929	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:05	WG997929	
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:05	WG997929	
Naphthalene	U		0.174	2.50	1	07/13/2017 14:05	WG997929	
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:05	WG997929	
Styrene	U		0.117	0.500	1	07/13/2017 14:05	WG997929	
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:05	WG997929	
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:05	WG997929	
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:05	WG997929	
Tetrachloroethene	5.83		0.199	0.500	1	07/14/2017 05:07	WG997929	
Toluene	0.903		0.412	0.500	1	07/13/2017 14:05	WG997929	
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:05	WG997929	
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:05	WG997929	
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:05	WG997929	
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:05	WG997929	
Trichloroethene	5.21		0.153	0.500	1	07/14/2017 05:07	WG997929	
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:05	WG997929	
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:05	WG997929	
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:05	WG997929	
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:05	WG997929	
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:05	WG997929	
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:05	WG997929	
Vinyl chloride	U		0.118	0.500	1	07/13/2017 14:05	WG997929	
Xylenes, Total	0.396	J	0.316	1.50	1	07/13/2017 14:05	WG997929	
(S) Toluene-d8	108			80.0-120		07/14/2017 05:07	WG997929	
(S) Toluene-d8	104			80.0-120		07/13/2017 14:05	WG997929	
(S) Dibromofluoromethane	90.8			76.0-123		07/14/2017 05:07	WG997929	
(S) Dibromofluoromethane	100			76.0-123		07/13/2017 14:05	WG997929	
(S) 4-Bromofluorobenzene	99.9			80.0-120		07/13/2017 14:05	WG997929	
(S) 4-Bromofluorobenzene	95.6			80.0-120		07/14/2017 05:07	WG997929	



Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	305000		2710	20000	1	07/11/2017 14:36	<a href="#">WG997492</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	27300		51.9	1000	1	07/01/2017 21:47	<a href="#">WG994932</a>
Nitrate	U		22.7	100	1	07/01/2017 21:47	<a href="#">WG994932</a>
Sulfate	18000		77.4	5000	1	07/01/2017 21:47	<a href="#">WG994932</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	10000		102	1000	1	07/07/2017 03:30	<a href="#">WG996343</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	4960		15.0	100	1	07/06/2017 21:31	<a href="#">WG995966</a>
Manganese	779		0.250	5.00	1	07/06/2017 21:31	<a href="#">WG995966</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	38.7		0.287	0.678	1	07/06/2017 11:08	<a href="#">WG995803</a>
Ethane	U		0.296	1.29	1	07/06/2017 11:08	<a href="#">WG995803</a>
Ethene	U		0.422	1.27	1	07/06/2017 11:08	<a href="#">WG995803</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.65	J	1.05	25.0	1	07/13/2017 14:21	<a href="#">WG997929</a>
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:21	<a href="#">WG997929</a>
Benzene	U		0.0896	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Bromoform	U		0.186	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Bromomethane	U		0.157	2.50	1	07/13/2017 14:21	<a href="#">WG997929</a>
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Chloroethane	U		0.141	2.50	1	07/13/2017 14:21	<a href="#">WG997929</a>
Chloroform	U		0.0860	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Chloromethane	U		0.153	1.25	1	07/13/2017 14:21	<a href="#">WG997929</a>
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:21	<a href="#">WG997929</a>
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:21	<a href="#">WG997929</a>



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:21	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:21	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:21	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:21	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:21	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:21	WG997929
1,1-Dichloroethene	U		0.188	0.500	1	07/13/2017 14:21	WG997929
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/14/2017 05:24	WG997929
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 14:21	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:21	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:21	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:21	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:21	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:21	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:21	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:21	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:21	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:21	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:21	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:21	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 14:21	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 14:21	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:21	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:21	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:21	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:21	WG997929
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:21	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:21	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 14:21	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:21	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 14:21	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:21	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:21	WG997929
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:21	WG997929
Tetrachloroethene	U		0.199	0.500	1	07/13/2017 14:21	WG997929
Toluene	0.419	U	0.412	0.500	1	07/13/2017 14:21	WG997929
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:21	WG997929
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:21	WG997929
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:21	WG997929
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:21	WG997929
Trichloroethene	U		0.153	0.500	1	07/13/2017 14:21	WG997929
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:21	WG997929
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:21	WG997929
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:21	WG997929
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:21	WG997929
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:21	WG997929
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:21	WG997929
Vinyl chloride	U		0.118	0.500	1	07/13/2017 14:21	WG997929
Xylenes, Total	U		0.316	1.50	1	07/13/2017 14:21	WG997929
(S) Toluene-d8	105			80.0-120		07/13/2017 14:21	WG997929
(S) Toluene-d8	107			80.0-120		07/14/2017 05:24	WG997929
(S) Dibromofluoromethane	99.6			76.0-123		07/13/2017 14:21	WG997929
(S) Dibromofluoromethane	94.3			76.0-123		07/14/2017 05:24	WG997929
(S) 4-Bromofluorobenzene	99.2			80.0-120		07/13/2017 14:21	WG997929
(S) 4-Bromofluorobenzene	96.4			80.0-120		07/14/2017 05:24	WG997929

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	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Alkalinity	339000		2710	20000	1	07/11/2017 14:43	<a href="#">WG997492</a>

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Chloride	115000		519	10000	10	07/01/2017 22:59	<a href="#">WG994932</a>
Nitrate	U		22.7	100	1	07/01/2017 22:45	<a href="#">WG994932</a>
Sulfate	6230		77.4	5000	1	07/01/2017 22:45	<a href="#">WG994932</a>

3 Ss

4 Cn

5 Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1840		102	1000	1	07/07/2017 03:41	<a href="#">WG996343</a>

6 Qc

7 Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron	907		15.0	100	1	07/06/2017 19:48	<a href="#">WG995966</a>
Manganese	532	V	0.250	5.00	1	07/06/2017 19:48	<a href="#">WG995966</a>

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	10300		158	500	5	07/13/2017 17:57	<a href="#">WG997249</a>
(S) a,a,a-Trifluorotoluene(FID) 96.1				77.0-122		07/13/2017 17:57	<a href="#">WG997249</a>

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	1040		0.287	0.678	1	07/06/2017 11:17	<a href="#">WG995803</a>
Ethane	2.47		0.296	1.29	1	07/06/2017 11:17	<a href="#">WG995803</a>
Ethene	64.5		0.422	1.27	1	07/06/2017 11:17	<a href="#">WG995803</a>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.5	250	10	07/13/2017 14:38	<a href="#">WG997929</a>
Acrylonitrile	U		8.73	50.0	10	07/13/2017 14:38	<a href="#">WG997929</a>
Benzene	U		0.896	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Bromobenzene	U		1.33	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Bromodichloromethane	U		0.800	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Bromochloromethane	U		1.45	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Bromoform	U		1.86	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Bromomethane	U		1.57	25.0	10	07/13/2017 14:38	<a href="#">WG997929</a>
n-Butylbenzene	U		1.43	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
sec-Butylbenzene	U		1.34	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
tert-Butylbenzene	U		1.83	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Carbon disulfide	U		1.01	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Carbon tetrachloride	U		1.59	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Chlorobenzene	U		1.40	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Chlorodibromomethane	U		1.28	5.00	10	07/13/2017 14:38	<a href="#">WG997929</a>
Chloroethane	U		1.41	25.0	10	07/13/2017 14:38	<a href="#">WG997929</a>



Collected date/time: 06/30/17 15:10

L919954

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Chloroform	U		0.860	5.00	10	07/13/2017 14:38	WG997929
Chloromethane	U		1.53	12.5	10	07/13/2017 14:38	WG997929
2-Chlorotoluene	U		1.11	5.00	10	07/13/2017 14:38	WG997929
4-Chlorotoluene	U		0.972	5.00	10	07/13/2017 14:38	WG997929
1,2-Dibromo-3-Chloropropane	U		3.25	25.0	10	07/13/2017 14:38	WG997929
1,2-Dibromoethane	U		1.93	5.00	10	07/13/2017 14:38	WG997929
Dibromomethane	U		1.17	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichlorobenzene	U		1.01	5.00	10	07/13/2017 14:38	WG997929
1,3-Dichlorobenzene	U		1.30	5.00	10	07/13/2017 14:38	WG997929
1,4-Dichlorobenzene	U		1.21	5.00	10	07/13/2017 14:38	WG997929
Dichlorodifluoromethane	U		1.27	25.0	10	07/13/2017 14:38	WG997929
1,1-Dichloroethane	U		1.14	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichloroethane	U		1.08	5.00	10	07/13/2017 14:38	WG997929
1,1-Dichloroethene	94.3		1.88	5.00	10	07/13/2017 14:38	WG997929
cis-1,2-Dichloroethene	20100		46.6	250	500	07/14/2017 05:41	WG997929
trans-1,2-Dichloroethene	55.6		1.52	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichloropropane	U		1.90	5.00	10	07/13/2017 14:38	WG997929
1,1-Dichloropropene	U		1.28	5.00	10	07/13/2017 14:38	WG997929
1,3-Dichloropropane	U		1.47	10.0	10	07/13/2017 14:38	WG997929
cis-1,3-Dichloropropene	U		0.976	5.00	10	07/13/2017 14:38	WG997929
trans-1,3-Dichloropropene	U		2.22	5.00	10	07/13/2017 14:38	WG997929
trans-1,4-Dichloro-2-butene	U		2.57	50.0	10	07/13/2017 14:38	WG997929
2,2-Dichloropropane	U		0.929	5.00	10	07/13/2017 14:38	WG997929
Di-isopropyl ether	U		0.924	5.00	10	07/13/2017 14:38	WG997929
Ethylbenzene	U		1.58	5.00	10	07/13/2017 14:38	WG997929
Hexachloro-1,3-butadiene	U		1.57	10.0	10	07/13/2017 14:38	WG997929
2-Hexanone	U		7.57	50.0	10	07/13/2017 14:38	WG997929
n-Hexane	U		3.05	50.0	10	07/13/2017 14:38	WG997929
Iodomethane	U		3.77	100	10	07/13/2017 14:38	WG997929
Isopropylbenzene	U		1.26	5.00	10	07/13/2017 14:38	WG997929
p-Isopropyltoluene	U		1.38	5.00	10	07/13/2017 14:38	WG997929
2-Butanone (MEK)	U		12.8	50.0	10	07/13/2017 14:38	WG997929
Methylene Chloride	U		10.7	25.0	10	07/13/2017 14:38	WG997929
4-Methyl-2-pentanone (MIBK)	U		8.23	50.0	10	07/13/2017 14:38	WG997929
Methyl tert-butyl ether	U		1.02	5.00	10	07/13/2017 14:38	WG997929
Naphthalene	U		1.74	25.0	10	07/13/2017 14:38	WG997929
n-Propylbenzene	U		1.62	5.00	10	07/13/2017 14:38	WG997929
Styrene	U		1.17	5.00	10	07/13/2017 14:38	WG997929
1,1,1,2-Tetrachloroethane	U		1.20	5.00	10	07/13/2017 14:38	WG997929
1,1,2,2-Tetrachloroethane	U		1.30	5.00	10	07/13/2017 14:38	WG997929
1,1,2-Trichlorotrifluoroethane	U		1.64	5.00	10	07/13/2017 14:38	WG997929
Tetrachloroethene	6760		99.5	250	500	07/14/2017 05:41	WG997929
Toluene	U		4.12	5.00	10	07/13/2017 14:38	WG997929
1,2,3-Trichlorobenzene	U		1.64	5.00	10	07/13/2017 14:38	WG997929
1,2,4-Trichlorobenzene	U		3.55	5.00	10	07/13/2017 14:38	WG997929
1,1,1-Trichloroethane	U		0.940	5.00	10	07/13/2017 14:38	WG997929
1,1,2-Trichloroethane	U		1.86	5.00	10	07/13/2017 14:38	WG997929
Trichloroethene	4020		76.5	250	500	07/14/2017 05:41	WG997929
Trichlorofluoromethane	U		1.30	25.0	10	07/13/2017 14:38	WG997929
1,2,3-Trichloropropane	U		2.47	25.0	10	07/13/2017 14:38	WG997929
1,2,4-Trimethylbenzene	U		1.23	5.00	10	07/13/2017 14:38	WG997929
1,2,3-Trimethylbenzene	U		0.739	5.00	10	07/13/2017 14:38	WG997929
1,3,5-Trimethylbenzene	U		1.24	5.00	10	07/13/2017 14:38	WG997929
Vinyl acetate	U		6.45	50.0	10	07/13/2017 14:38	WG997929
Vinyl chloride	597		1.18	5.00	10	07/13/2017 14:38	WG997929
Xylenes, Total	U		3.16	15.0	10	07/13/2017 14:38	WG997929

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	108			80.0-120		07/14/2017 05:41	<a href="#">WG997929</a>
(S) Toluene-d8	104			80.0-120		07/13/2017 14:38	<a href="#">WG997929</a>
(S) Dibromofluoromethane	92.3			76.0-123		07/14/2017 05:41	<a href="#">WG997929</a>
(S) Dibromofluoromethane	101			76.0-123		07/13/2017 14:38	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	97.2			80.0-120		07/13/2017 14:38	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	96.2			80.0-120		07/14/2017 05:41	<a href="#">WG997929</a>

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



## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.65	J	1.05	25.0	1	07/13/2017 14:54	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:54	WG997929
Benzene	0.282	J	0.0896	0.500	1	07/13/2017 14:54	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:54	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:54	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:54	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 14:54	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 14:54	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:54	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:54	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:54	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:54	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:54	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:54	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:54	WG997929
Chloroethane	0.539	J	0.141	2.50	1	07/13/2017 14:54	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 14:54	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 14:54	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:54	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:54	WG997929
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:54	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:54	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:54	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:54	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:54	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:54	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:54	WG997929
1,1-Dichloroethene	2.31		0.188	0.500	1	07/13/2017 14:54	WG997929
cis-1,2-Dichloroethene	115		0.0933	0.500	1	07/14/2017 05:58	WG997929
trans-1,2-Dichloroethene	2.94		0.152	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:54	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:54	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:54	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:54	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:54	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:54	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:54	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:54	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:54	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:54	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:54	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 14:54	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 14:54	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:54	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:54	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:54	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:54	WG997929
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:54	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:54	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 14:54	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:54	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 14:54	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:54	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:54	WG997929

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc





Collected date/time: 06/30/17 15:30

L919954

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
Tetrachloroethene	U		0.199	0.500	1	07/14/2017 05:58	<a href="#">WG997929</a>
Toluene	U		0.412	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
Trichloroethene	0.323	J	0.153	0.500	1	07/14/2017 05:58	<a href="#">WG997929</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:54	<a href="#">WG997929</a>
Vinyl chloride	31.5		0.118	0.500	1	07/13/2017 14:54	<a href="#">WG997929</a>
Xylenes, Total	U		0.316	1.50	1	07/13/2017 14:54	<a href="#">WG997929</a>
(S) Toluene-d8	105			80.0-120		07/13/2017 14:54	<a href="#">WG997929</a>
(S) Toluene-d8	106			80.0-120		07/14/2017 05:58	<a href="#">WG997929</a>
(S) Dibromofluoromethane	92.5			76.0-123		07/14/2017 05:58	<a href="#">WG997929</a>
(S) Dibromofluoromethane	101			76.0-123		07/13/2017 14:54	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	97.7			80.0-120		07/14/2017 05:58	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	99.3			80.0-120		07/13/2017 14:54	<a href="#">WG997929</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 06/30/17 00:00

L919954

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/12/2017 02:39	WG997249
(S) a,a,a-Trifluorotoluene(FID)	93.1			77.0-122		07/12/2017 02:39	WG997249

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/13/2017 12:58	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 12:58	WG997929
Benzene	U		0.0896	0.500	1	07/13/2017 12:58	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 12:58	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 12:58	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 12:58	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 12:58	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 12:58	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 12:58	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 12:58	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 12:58	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 12:58	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 12:58	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 12:58	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 12:58	WG997929
Chloroethane	U		0.141	2.50	1	07/13/2017 12:58	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 12:58	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 12:58	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 12:58	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 12:58	WG997929
1,2-Dibromo-3-Chloropropane	U		1.325	2.50	1	07/13/2017 12:58	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 12:58	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 12:58	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 12:58	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 12:58	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 12:58	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 12:58	WG997929
1,1-Dichloroethene	U		0.188	0.500	1	07/13/2017 12:58	WG997929
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/13/2017 12:58	WG997929
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 12:58	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 12:58	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 12:58	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 12:58	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 12:58	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 12:58	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 12:58	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 12:58	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 12:58	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 12:58	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 12:58	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 12:58	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 12:58	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 12:58	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 12:58	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 12:58	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 12:58	WG997929



Collected date/time: 06/30/17 00:00

L919954

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 12:58	<a href="#">WG997929</a>
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Naphthalene	U		0.174	2.50	1	07/13/2017 12:58	<a href="#">WG997929</a>
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Styrene	U		0.117	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Tetrachloroethene	U		0.199	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Toluene	U		0.412	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Trichloroethene	U		0.153	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Vinyl acetate	U		0.645	5.00	1	07/13/2017 12:58	<a href="#">WG997929</a>
Vinyl chloride	U		0.118	0.500	1	07/13/2017 12:58	<a href="#">WG997929</a>
Xylenes, Total	U		0.316	1.50	1	07/13/2017 12:58	<a href="#">WG997929</a>
(S) Toluene-d8	106			80.0-120		07/13/2017 12:58	<a href="#">WG997929</a>
(S) Dibromofluoromethane	95.0			76.0-123		07/13/2017 12:58	<a href="#">WG997929</a>
(S) 4-Bromofluorobenzene	100			80.0-120		07/13/2017 12:58	<a href="#">WG997929</a>

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



Method Blank (MB)

(MB) R3232486-1 07/11/17 13:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Alkalinity	3390	J	2710	20000

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

L920265-02 Original Sample (OS) • Duplicate (DUP)

(OS) L920265-02 07/11/17 16:12 • (DUP) R3232486-5 07/11/17 16:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	10700	14400	1	30.0	J P1	20

L919954-01 Original Sample (OS) • Duplicate (DUP)

(OS) L919954-01 07/11/17 14:06 • (DUP) R3232486-2 07/11/17 14:12

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Alkalinity	335000	342000	1	2.00		20

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

(LCS) R3232486-3 07/11/17 14:18 • (LCSD) R3232486-4 07/11/17 15:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Alkalinity	100000	113000	114000	113	114	85.0-115			1.00	20



Method Blank (MB)

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

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	207	J	51.9	1000
Nitrate	U		22.7	100
Sulfate	U		77.4	5000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Nitrate	U	0.000	1	0		15
Sulfate	1700	1870	1	10	J	15

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	9410	9530	1	1		15
Nitrate	1540	1580	1	2		15
Sulfate	39900	40200	1	1		15

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

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

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Chloride	40000	38800	39100	97	98	80-120			1	15
Nitrate	8000	8050	8060	101	101	80-120			0	15
Sulfate	40000	40500	40500	101	101	80-120			0	15

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

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

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Nitrate	5000	U	1990	40	1	80-120	J6



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

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

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits
Chloride	50000	19100	70300	70700	102	103	1	80-120			0	15
Nitrate	5000	ND	4980	4820	100	96	1	80-120			3	15

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



Method Blank (MB)

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

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	1260	1120	1	12		20

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

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

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	5530	5600	1	1		20

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

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

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	75000	75100	74200	100	99	85-115			1	20

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

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

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	1770	50500	50400	97	97	1	80-120			0	20



Method Blank (MB)

(MB) R3231472-1 07/06/17 19:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron	U		15.0	100
Manganese	U		0.250	5.00

1 Cp

2 Tc

3 Ss

4 Cn

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

(LCS) R3231472-2 07/06/17 19:41 • (LCSD) R3231472-3 07/06/17 19:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Iron	5000	4760	4700	95	94	80-120			1	20
Manganese	50.0	46.7	46.1	93	92	80-120			1	20

5 Sr

6 Qc

L919954-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L919954-04 07/06/17 19:48 • (MS) R3231472-5 07/06/17 19:55 • (MSD) R3231472-6 07/06/17 19:59

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron	5000	907	5390	5420	90	90	1	75-125			1	20
Manganese	50.0	532	568	564	72	64	1	75-125	<u>V</u>	<u>V</u>	1	20

7 Gl

8 Al

9 Sc





Method Blank (MB)

(MB) R3232652-3 07/11/17 20:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-122

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

(LCS) R3232652-1 07/11/17 19:34 • (LCSD) R3232652-2 07/11/17 19:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	5390	5550	98.1	101	72.0-134			2.78	20
(S) a,a,a-Trifluorotoluene(FID)				106	107	77.0-122				

L920660-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L920660-01 07/12/17 09:41 • (MS) R3232652-4 07/12/17 10:03 • (MSD) R3232652-5 07/12/17 10:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	5500	ND	3890	3650	70.6	66.3	1	23.0-159			6.39	20
(S) a,a,a-Trifluorotoluene(FID)					99.2	99.1		77.0-122				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3231296-1 07/06/17 10:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		0.287	0.678
Ethane	U		0.296	1.29
Ethene	U		0.422	1.27

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

(OS) L919912-02 07/06/17 10:37 • (DUP) R3231296-2 07/06/17 11:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
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) R3231296-3 07/06/17 11:29 • (LCSD) R3231296-4 07/06/17 11:35

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methane	67.8	68.6	76.4	101	113	70.0-130			10.7	20
Ethane	129	124	127	96.1	98.3	70.0-130			2.26	20
Ethene	127	119	120	93.5	94.8	70.0-130			1.39	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3233160-3 07/13/17 12:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



Method Blank (MB)

(MB) R3233160-3 07/13/17 12:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
Trichloroethene	U		0.153	0.500
(S) Toluene-d8	106			80.0-120
(S) Dibromofluoromethane	98.4			76.0-123
(S) 4-Bromofluorobenzene	100			80.0-120

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3233160-1 07/13/17 11:34 • (LCSD) R3233160-2 07/13/17 11:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	123	117	98.8	93.3	10.0-160			5.72	23
Acrylonitrile	125	128	133	103	107	60.0-142			3.85	20
Benzene	25.0	24.2	24.5	96.6	98.2	69.0-123			1.63	20
Bromobenzene	25.0	24.0	23.8	95.8	95.1	79.0-120			0.770	20
Bromodichloromethane	25.0	24.5	25.0	97.8	100	76.0-120			2.36	20
Bromochloromethane	25.0	24.5	25.3	97.8	101	76.0-122			3.36	20
Bromoform	25.0	24.1	24.3	96.4	97.1	67.0-132			0.690	20
Bromomethane	25.0	24.4	25.2	97.6	101	18.0-160			3.29	20
n-Butylbenzene	25.0	24.9	24.8	99.6	99.4	72.0-126			0.170	20
sec-Butylbenzene	25.0	25.0	24.8	100	99.3	74.0-121			0.750	20
tert-Butylbenzene	25.0	25.0	25.0	100	100	75.0-122			0.160	20
Carbon disulfide	25.0	24.0	24.0	96.1	96.1	55.0-127			0.0600	20
Carbon tetrachloride	25.0	22.7	25.6	90.8	102	63.0-122			11.8	20
Chlorobenzene	25.0	24.9	24.9	99.6	99.6	79.0-121			0.0300	20
Chlorodibromomethane	25.0	24.8	25.2	99.0	101	75.0-125			1.84	20
Chloroethane	25.0	24.7	25.4	98.6	101	47.0-152			2.87	20
Chloroform	25.0	24.2	24.7	96.9	98.8	72.0-121			1.97	20
Chloromethane	25.0	23.6	24.3	94.2	97.3	48.0-139			3.17	20
2-Chlorotoluene	25.0	24.6	24.6	98.6	98.3	74.0-122			0.320	20
4-Chlorotoluene	25.0	24.5	24.4	98.2	97.8	79.0-120			0.420	20
1,2-Dibromo-3-Chloropropane	25.0	24.4	23.9	97.6	95.4	64.0-127			2.22	20
1,2-Dibromoethane	25.0	24.7	24.6	98.7	98.5	77.0-123			0.130	20
Dibromomethane	25.0	24.2	24.8	96.9	99.1	78.0-120			2.24	20
1,2-Dichlorobenzene	25.0	24.7	24.5	98.8	97.9	80.0-120			0.920	20
1,3-Dichlorobenzene	25.0	24.5	24.2	97.9	96.7	72.0-123			1.22	20
1,4-Dichlorobenzene	25.0	24.1	24.6	96.5	98.3	77.0-120			1.87	20
Dichlorodifluoromethane	25.0	21.5	21.7	85.9	86.9	49.0-155			1.10	20
1,1-Dichloroethane	25.0	24.5	24.9	98.0	99.8	70.0-126			1.80	20
1,2-Dichloroethane	25.0	23.8	24.6	95.4	98.5	67.0-126			3.27	20
1,1-Dichloroethene	25.0	24.0	24.3	96.0	97.2	64.0-129			1.20	20
cis-1,2-Dichloroethene	25.0	24.2	24.7	96.7	98.9	73.0-120			2.27	20
trans-1,2-Dichloroethene	25.0	24.5	25.0	98.1	99.9	71.0-121			1.84	20
1,2-Dichloropropane	25.0	24.4	24.8	97.5	99.0	75.0-125			1.50	20
1,1-Dichloropropene	25.0	24.6	24.9	98.4	99.4	71.0-129			1.02	20
1,3-Dichloropropane	25.0	24.4	24.4	97.5	97.4	80.0-121			0.130	20
cis-1,3-Dichloropropene	25.0	24.8	24.9	99.0	99.6	79.0-123			0.650	20
trans-1,3-Dichloropropene	25.0	25.7	25.1	103	101	74.0-127			2.37	20
trans-1,4-Dichloro-2-butene	25.0	23.7	23.5	94.8	94.0	55.0-134			0.850	20
2,2-Dichloropropane	25.0	23.2	24.5	92.8	97.9	60.0-125			5.40	20
Di-isopropyl ether	25.0	23.9	24.7	95.4	98.9	59.0-133			3.54	20

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc



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

(LCS) R3233160-1 07/13/17 11:34 • (LCSD) R3233160-2 07/13/17 11:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.7	25.0	98.9	100	77.0-120			1.27	20
Hexachloro-1,3-butadiene	25.0	24.8	24.6	99.1	98.6	64.0-131			0.480	20
2-Hexanone	125	124	122	99.1	97.9	58.0-147			1.22	20
n-Hexane	25.0	22.0	22.9	88.1	91.5	56.0-124			3.74	20
Iodomethane	125	124	126	98.9	101	57.0-140			2.16	20
Isopropylbenzene	25.0	24.9	24.8	99.5	99.4	75.0-120			0.130	20
p-Isopropyltoluene	25.0	25.1	24.8	101	99.3	74.0-126			1.22	20
2-Butanone (MEK)	125	125	126	99.8	101	37.0-158			0.930	20
Methylene Chloride	25.0	23.7	24.2	94.7	96.9	66.0-121			2.35	20
4-Methyl-2-pentanone (MIBK)	125	124	123	99.4	98.7	59.0-143			0.680	20
Methyl tert-butyl ether	25.0	24.1	25.4	96.5	102	64.0-123			5.21	20
Naphthalene	25.0	24.2	23.7	96.6	94.9	62.0-128			1.83	20
n-Propylbenzene	25.0	24.5	24.7	98.2	98.8	79.0-120			0.570	20
Styrene	25.0	25.2	25.0	101	99.9	78.0-124			0.900	20
1,1,1,2-Tetrachloroethane	25.0	24.6	24.8	98.2	99.1	75.0-122			0.870	20
1,1,2,2-Tetrachloroethane	25.0	23.6	23.7	94.5	94.7	71.0-122			0.130	20
1,1,2-Trichlorotrifluoroethane	25.0	23.4	23.6	93.6	94.5	61.0-136			0.960	20
Tetrachloroethene	25.0	24.3	24.1	97.4	96.4	70.0-127			1.02	20
Toluene	25.0	24.3	24.6	97.4	98.5	77.0-120			1.10	20
1,2,3-Trichlorobenzene	25.0	24.0	23.3	96.1	93.2	61.0-133			3.02	20
1,2,4-Trichlorobenzene	25.0	24.3	23.7	97.1	94.8	69.0-129			2.43	20
1,1,1-Trichloroethane	25.0	23.9	25.0	95.6	99.9	68.0-122			4.36	20
1,1,2-Trichloroethane	25.0	24.5	24.8	98.0	99.1	78.0-120			1.06	20
Trichlorofluoromethane	25.0	24.8	25.5	99.2	102	56.0-137			2.61	20
1,2,3-Trichloropropane	25.0	23.2	23.0	92.9	92.1	72.0-124			0.770	20
1,2,4-Trimethylbenzene	25.0	24.9	24.5	99.6	98.1	75.0-120			1.46	20
1,2,3-Trimethylbenzene	25.0	24.1	23.9	96.2	95.5	75.0-120			0.730	20
1,3,5-Trimethylbenzene	25.0	25.1	24.9	100	99.4	75.0-120			0.850	20
Vinyl acetate	125	122	130	97.3	104	46.0-160			6.58	20
Vinyl chloride	25.0	24.1	24.5	96.3	98.0	64.0-133			1.80	20
Xylenes, Total	75.0	75.0	75.1	100	100	77.0-120			0.130	20
Trichloroethene	25.0	25.3	25.1	101	100	78.0-120			0.600	20
(S) Toluene-d8				104	104	80.0-120				
(S) Dibromofluoromethane				99.5	101	76.0-123				
(S) 4-Bromofluorobenzene				100	99.5	80.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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



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

## State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina <sup>1</sup>	DW21704
Florida	E87487	North Carolina <sup>2</sup>	41
Georgia	NELAP	North Dakota	R-140
Georgia <sup>1</sup>	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky <sup>1</sup>	90010	South Dakota	n/a
Kentucky <sup>2</sup>	16	Tennessee <sup>14</sup>	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

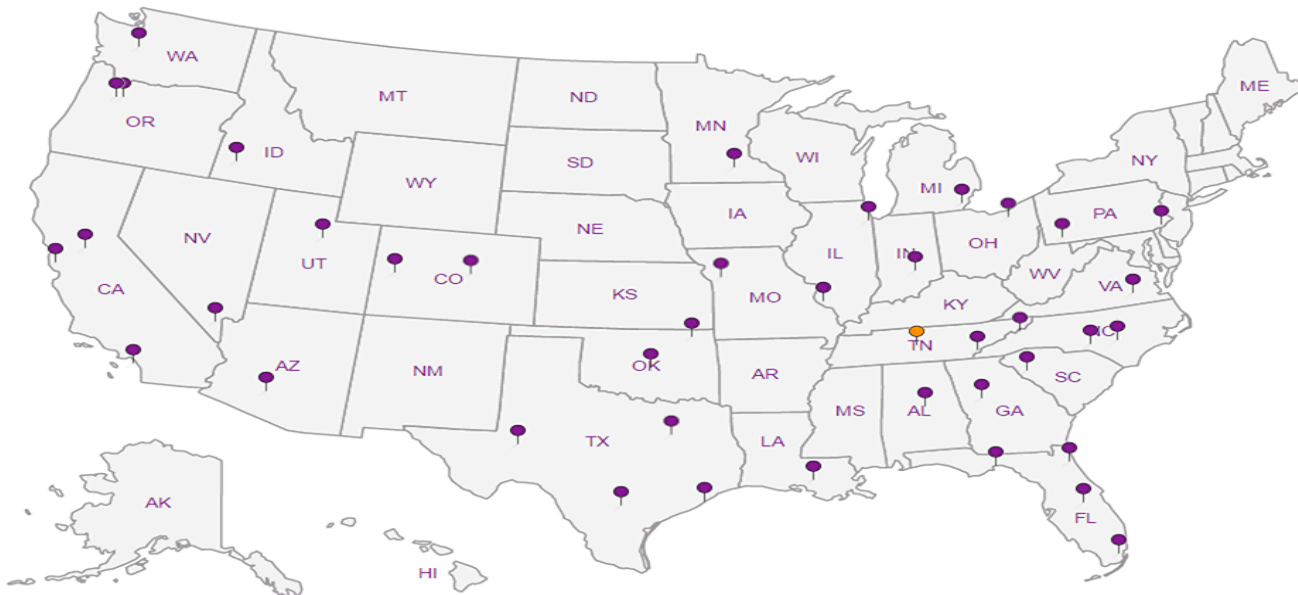
## Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

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

## Our Locations

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





**PES Environmental, Inc.- WA**  
 1215 Fourth Ave., Suite 1350  
 Seattle, WA 98161

Billing Information:  
 Attn: Accounts Payable  
 1215 Fourth Ave., Ste. 1350  
 Seattle, WA 98161

Report to:  
**Bill Haldeman**

Email To: bhdeman@pesenv.com

Project  
 Description: **American Linen Supply**

City/State  
 Collected: **SEATTLE, WA**

Phone: **206-529-3980**  
 Fax: **206-529-3985**


Client Project #  
**1413.001.02.002**

Lab Project #  
**PESENVSWA-141300102**

Collected by (print):  
**SHANNON MCKERNAN**

Site/Facility ID #  
**700 DEXTER AVE N SEATTLE**

P.O. #

Collected by (signature):  


**Rush?** (Lab MUST Be Notified)  
 Same Day  Five Day  
 Next Day  5 Day (Rad Only)  
 Two Day  10 Day (Rad Only)  
 Three Day

Quote #  
 Date Results Needed

Immediately Packed on Ice N  Y  X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
C10-063017	GRAB	GW	75	6/30/17	08:10	11
MW104-063017		GW	124		10:50	9
MW106-063017		GW	135		12:45	9
MW130-063017		GW	75		15:10	11
G12-063017		GW	25		15:30	43
TRIP BLANK	NA	GW	NA	4/11/17	NA	1
		GW				
		GW				
		GW				
		GW				

Analysis / Container / Preservative	Pres Chk
*Alk,Cl,NO3,S04 250miHDPE-NoPres	
NWTPHGX 40miAmb-HCl	
TOC 250miAmb-HCl	
Total Fe Mn 6020 250miHDPE-HNO3	
low level 8260C 40miAmb-HCl	
low level RSK175 40miAmb-HCl	

Chain of Custody Page \_\_\_ of \_\_\_



L.A.B S.C.I.E.N.C.E.S

YOUR LAB OF CHOICE

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



L# **1919454**

**C033**

Acctnum: **PESENVSWA**  
 Template: **T124201**  
 Prelogin: **P603202**  
 TSR: **110 - Brian Ford**  
 PB: **5-31-17**

Shipped Via: **FedEX Ground**

\* Matrix:  
 SS - Soil AIR - Air F - Filter  
 GW - Groundwater B - Bioassay  
 WW - WasteWater  
 DW - Drinking Water  
 OT - Other

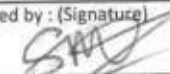
Remarks: \*NO3 nitrate has a 48 hour holding time

Samples returned via:  
 UPS  FedEx  Courier

Tracking #

pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

COC Seal Present/Intact:  NP  Y  N  
 COC Signed/Accurate:  Y  N  
 Bottles arrive intact:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 If Applicable  
 VOA Zero Headspace:  Y  N  
 Preservation Correct/Checked:  Y  N

Relinquished by: (Signature)  


Relinquished by: (Signature)

Relinquished by: (Signature)

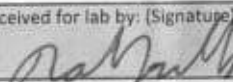
Date: **6/30/17**  
 Time: **14:16:45**

Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)  


Trip Blank Received:  Yes / No  
 HC / MeOH  
 TBR

Temp: **23** °C  
**44 + TRS**

Date: **7-1-17**  
 Time: **8:05**

If preservation required by Login: Date/Time

Hold:

Condition: **NCF / OK**

## MEMORANDUM

**TO:** Project File **DATE:** July 30, 2017  
**FROM:** Jessie Compeau  
**SUBJECT:** Laboratory Data Validation Review  
**PROJECT:** Former American Linen Supply Site, Seattle WA  
**PROJECT #:** 1413.001.02.002  
**TASK:** June 30, 2017- Groundwater Samples  
**LAB:** ESC Lab ID L919954

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Five (5) groundwater samples including a field duplicate and a trip blank were collected as part of a groundwater sampling event at the Former American Linen Supply Site, in Seattle, Washington, on June 30, 2017. The samples were shipped and delivered to ESC Lab Sciences (ESC) of Mount Juliet, TN for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline range organics (TPH-Gx) by NWTPH-Gx per analytical methods stipulated by Washington State Department of Ecology;
- VOCs (dissolved gases: methane, ethane, and ethene) by Method RSK-175;
- Metals (iron and manganese) by EPA Method 6020;
- Alkalinity by Standard Methods (SM) of Examination of Water and Wastewater 22<sup>nd</sup> Edition 2320 B (Revised 2011);
- Anions (chloride, nitrate, and sulfate) by EPA Method 9056A; and
- Total Organic Carbon (TOC) by EPA Method 9060A.

The results are reported in ESC Sample Delivery Group (SDG) L919954. The quarterly monitoring round occurred between June 12 and 30 of 2017. Associated sample data are reported in fifteen ESC SDGs (SDGs L915737, L916025, L916678, L916723, L917439, L917461, L917742, L918096, L918387, L918537, L918598, L918687, L919100, L919285, and L919954). The quality assurance review of the sample data associated with SDG L919954 is summarized below.

### DATA QUALIFICATIONS

Guidelines established by USEPA for review of analytical data along with ESC control limit criteria were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data

Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

## **DATA VALIDATION**

### **Completeness**

All samples were collected and analyzed as requested.

### **Sample Collection and Preservation**

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice and shipped overnight by courier to ESC. The laboratory reported that the cooler and samples were received at 2.3 degrees Centigrade (°C) and below the recommended temperature preservation of 6°C. The laboratory indicated that the samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

### **Holding Times**

#### *USEPA Method 8260C:*

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *NWTPH-Gx Method:*

Samples were analyzed within the WA State recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *Method RSK-175:*

Samples were analyzed within method recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *USEPA Method 6020:*

Samples were analyzed within the USEPA recommended holding time for metals (iron and manganese) of 180 days for preserved waters from the date of sample collection. All holding time criteria were met.

#### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Samples were analyzed within the USEPA recommended holding time 48 hours for nitrate, 14 days for alkalinity, and 28 days for chloride, sulfate, and TOC. All holding time criteria were met.

### **Initial and Continuing Calibration**

Calibration data for this project are not required for this deliverable and ESC's notes do not indicate any issues with calibration.

## **Method Blank Results**

### *USEPA Method 8260C:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at or above the reported detection limits (RDLs).

### *NWTPH-Gx Method:*

A laboratory method blank was included with the analytical batch per method requirement. The target analyte (gasoline) was not detected in the method blank at or above the RDL.

### *Method RSK-175:*

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (dissolved gases) were not detected in the method blank at or above the RDL.

### *USEPA Method 6020:*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (iron and manganese) were not detected in the method blanks at or below the RDL.

### *General Chemistry (SM 2320B, EPA Methods 9056A and 9060A):*

Laboratory method blanks were included with the analytical batch per method requirement. The target analytes (alkalinity, anions, and TOC) were not detected in the method blanks at or above the RDL with the following discussion:

- Low levels of alkalinity and chloride were measured in the method blanks between the RDL and method detection limit (MDL). No action was necessary as associated alkalinity and chloride sample results are significantly greater than the detection in the blank.

## **Trip Blank Results**

### *USEPA Method 8260C and NWTPH-Gx:*

A trip blank was collected and submitted for analysis. The target analytes (VOCs and gasoline) were not detected in the method blank at or above the reported detection limits (RDLs).

## **Field, Rinsate, or Equipment Blank Results**

Field, rinsate, or equipment blanks were not collected.

## **Field Duplicate Analyses**

Field duplicates (MW130-063017 and C10-063017) results are comparable and less than 20% RPD with the following exceptions:

- **Field duplicate results for TOC, gasoline, and VOC compound tetrachloroethene are estimated and qualified (J) due to RPDs greater than 20%.**

## **Laboratory Duplicate Analyses**

### *USEPA Method 8260C:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results and/or matrix spike/matrix spike duplicate (MS/MSD) results for precision data.

### *NWTPH-Gx Method:*

A laboratory duplicate sample was not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for precision data.

### *Method RSK-175:*

Laboratory duplicate samples were performed on non-client samples. The RPDs for the target analytes (dissolved gases) are within the laboratory control limit of 20% RPD.

### *USEPA Method 6020:*

A laboratory duplicate sample was not analyzed. Refer to LCS/LCSD and/or MS/MSD results for precision data.

### *General Chemistry:*

*SM 2320B:* Laboratory duplicate sample analyses were performed on non-client sample and on sample C10-063017 within the analytical batch. The primary/duplicate RPDs for alkalinity analyses are within the laboratory control limit of 20% with the following discussion:

- Non-client sample duplicate results were calculated on values less than the RDL. The RPD is elevated but no action was taken as this is a non-client sample and furthermore calculating RPDs on estimated values (less than the RDL) is not recommended.

*EPA Method 9056A:* Laboratory duplicate sample analyses were performed on non-client samples within the analytical batch. The primary/duplicate RPD for anions (chloride, nitrate, and sulfate) analyses are within the laboratory control limit of 15% for results greater than five times the reporting limit.

*EPA Method 9060A:* A laboratory duplicate sample analyses were performed on non-client samples. The primary/duplicate RPDs for TOC analyses are within the laboratory control limit of 20%.

## **Surrogate Recoveries**

### *USEPA Method 8260C:*

The surrogate recovery results for the samples, LCS/LCSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

### *NWTPH-Gx Method:*

The surrogate recovery results for the samples, LCS/LCSD, MS/MSD, and the method blank are within the laboratory surrogate control limits for all of the analyses.

## **Laboratory Control Samples**

### *USEPA Method 8260C:*

LCS/LCSD was analyzed by USEPA Method 8260C method. The LCS/LCSD %Rs and RPDs for the all target compounds are within the laboratory control criteria for water.

### *NWTPH-Gx Method:*

LCS/LCSDs were analyzed by the NWTPH-Gx method along with each analytical batch. The LCS/LCSD %Rs and RPD for the control analyte (gasoline) are within the laboratory control criteria for water.

### *Method RSK-175:*

LCS/LCSDs were analyzed by the RSK-175 method along with each analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes (dissolved gases) are within the laboratory control criteria for water.

### *USEPA Method 6020:*

LCS/LCSDs were analyzed by the USEPA Method 6020 along with the analytical batch. The LCS/LCSD %Rs and RPDs for the control analytes are within the laboratory control criteria for water.

### *General Chemistry:*

*SM 2320B:* The LCS/LCSD %Rs and RPD for alkalinity are within the laboratory control criteria for water.

*EPA Method 9056A:* The LCS/LCSD %Rs and RPDs for anions are within the laboratory control criteria for water for each analytical batch.

*EPA Method 9060A:* The LCS/LCSD %Rs and RPD for TOC are within the laboratory control criteria for water for each analytical batch.

## **Matrix Spike/Matrix Spike Duplicates**

### *USEPA Method 8260C:*

Matrix spike/matrix spike duplicate (MS/MSD) samples were not analyzed. Refer to laboratory control sample/sample duplicate (LCS/LCSD) results for additional information.

### *NWTPH-Gx Method:*

Matrix spike analysis was performed on a non-client sample. MS/MSD % Rs were below the laboratory control criteria for water due to matrix interference. No action was taken in this case since the spike was performed on an unrelated sample and LCS/LCSD results are acceptable.

### *Method RSK-175:*

MS/MSD analysis was not performed. Refer to LCS/LCSD results for additional information on accuracy and precision.

### *USEPA Method 6020:*

MS/MSD analysis was performed on sample MW130-063017 within the analytical batch. MS/MSD % Rs and RPD for metals were within the laboratory control criteria for water with the following discussion:

- Manganese sample amount is greater than four times the spike amount and the spike recoveries were not within acceptance criteria. No action was taken other than to note this.

*General Chemistry:*

*SM 2320B:* Matrix spike analysis was not performed on samples submitted for alkalinity testing. Refer to LCS/LCSD results for additional information.

*EPA Method 9056A:* MS and MS/MSD analysis were performed on non-client sample and on sample MW130-063017 within the analytical batches. MS % Rs and MS/MSD % Rs and RPDs were within the laboratory control criteria for water with the following exception:

- Non-client nitrate matrix spike result is below acceptance criteria. No action was taken since this is a non-client sample and analytical batch LCS/LCSD results are acceptable.

*EPA Method 9060A:* MS/MSD analyses for TOC were performed on a non-client sample within the analytical batch. MS/MSD % Rs and RPD for TOC were within the laboratory control criteria for water.

### **Other Quality Control Issues**

No laboratory quality control issues were identified in the laboratory report.

### **Quantitation Limits**

The RDLs used for this sample group were acceptable for the project. Several samples were diluted due to elevated concentrations of various target analytes.

**Detections between the MDL and RDL are estimated (J) by the laboratory and qualified (J) by the data validator to re-emphasize that the detection is estimated.**

### **Data Assessment**

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



C10-063017

Collected date/time: 06/30/17 08:10

## SAMPLE RESULTS - 01

L919954

ONE LAB. NATIONWIDE.



## Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	335000		2710	20000	1	07/11/2017 14:06	WG997492

15

Cp

Tc

## Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	111000		260	5000	5	07/01/2017 21:18	WG994932
Nitrate	U		22.7	100	1	07/01/2017 21:04	WG994932
Sulfate	6160		77.4	5000	1	07/01/2017 21:04	WG994932

JC 7/30/17

Ss

Cn

Sr

## Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	9680	J	102	1000	1	07/07/2017 03:07	WG996343

Qc

Gl

## Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	876		15.0	100	1	07/06/2017 21:24	WG995966
Manganese	527		0.250	5.00	1	07/06/2017 21:24	WG995966

Al

Sc

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	15000	J	158	500	5	07/13/2017 17:35	WG997249
(S) a, a, a-Trifluorotoluene(FID)	99.7			77.0-122		07/13/2017 17:35	WG997249

## Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	1120		0.287	0.678	1	07/06/2017 11:02	WG995803
Ethane	2.33		0.296	1.29	1	07/06/2017 11:02	WG995803
Ethene	69.1		0.422	1.27	1	07/06/2017 11:02	WG995803

## Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		10.5	250	10	07/13/2017 13:48	WG997929
Acrylonitrile	U		8.73	50.0	10	07/13/2017 13:48	WG997929
Benzene	U		0.896	5.00	10	07/13/2017 13:48	WG997929
Bromobenzene	U		1.33	5.00	10	07/13/2017 13:48	WG997929
Bromodichloromethane	U		0.800	5.00	10	07/13/2017 13:48	WG997929
Bromochloromethane	U		1.45	5.00	10	07/13/2017 13:48	WG997929
Bromoform	U		1.86	5.00	10	07/13/2017 13:48	WG997929
Bromomethane	U		1.57	25.0	10	07/13/2017 13:48	WG997929
n-Butylbenzene	U		1.43	5.00	10	07/13/2017 13:48	WG997929
sec-Butylbenzene	U		1.34	5.00	10	07/13/2017 13:48	WG997929
tert-Butylbenzene	U		1.83	5.00	10	07/13/2017 13:48	WG997929
Carbon disulfide	U		1.01	5.00	10	07/13/2017 13:48	WG997929
Carbon tetrachloride	U		1.59	5.00	10	07/13/2017 13:48	WG997929
Chlorobenzene	U		1.40	5.00	10	07/13/2017 13:48	WG997929
Chlorodibromomethane	U		1.28	5.00	10	07/13/2017 13:48	WG997929
Chloroethane	U		1.41	25.0	10	07/13/2017 13:48	WG997929

JC 7/26/17

C10-063017

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.



Collected date/time: 06/30/17 08:10

L919954

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch	
Chloroform	U		0.860	5.00	10	07/13/2017 13:48	WG997929	Cp
Chloromethane	U		1.53	12.5	10	07/13/2017 13:48	WG997929	Tc
2-Chlorotoluene	U		1.11	5.00	10	07/13/2017 13:48	WG997929	Ss
4-Chlorotoluene	U		0.972	5.00	10	07/13/2017 13:48	WG997929	Cn
1,2-Dibromo-3-Chloropropane	U		3.25	25.0	10	07/13/2017 13:48	WG997929	Sr
1,2-Dibromoethane	U		1.93	5.00	10	07/13/2017 13:48	WG997929	Qc
Dibromomethane	U		1.17	5.00	10	07/13/2017 13:48	WG997929	Gl
1,2-Dichlorobenzene	U		1.01	5.00	10	07/13/2017 13:48	WG997929	Al
1,3-Dichlorobenzene	U		1.30	5.00	10	07/13/2017 13:48	WG997929	Sc
1,4-Dichlorobenzene	U		1.21	5.00	10	07/13/2017 13:48	WG997929	
Dichlorodifluoromethane	U		1.27	25.0	10	07/13/2017 13:48	WG997929	
1,1-Dichloroethane	U		1.14	5.00	10	07/13/2017 13:48	WG997929	
1,2-Dichloroethane	U		1.08	5.00	10	07/13/2017 13:48	WG997929	
1,1-Dichloroethene	85.0		1.88	5.00	10	07/13/2017 13:48	WG997929	
cis-1,2-Dichloroethene	21300		46.6	250	500	07/14/2017 04:50	WG997929	
trans-1,2-Dichloroethene	57.3		1.52	5.00	10	07/13/2017 13:48	WG997929	
1,2-Dichloropropane	U		1.90	5.00	10	07/13/2017 13:48	WG997929	
1,1-Dichloropropene	U		1.28	5.00	10	07/13/2017 13:48	WG997929	
1,3-Dichloropropane	U		1.47	10.0	10	07/13/2017 13:48	WG997929	
cis-1,3-Dichloropropene	U		0.976	5.00	10	07/13/2017 13:48	WG997929	
trans-1,3-Dichloropropene	U		2.22	5.00	10	07/13/2017 13:48	WG997929	
trans-1,4-Dichloro-2-butene	U		2.57	50.0	10	07/13/2017 13:48	WG997929	
2,2-Dichloropropane	U		0.929	5.00	10	07/13/2017 13:48	WG997929	
Di-isopropyl ether	U		0.924	5.00	10	07/13/2017 13:48	WG997929	
Ethylbenzene	U		1.58	5.00	10	07/13/2017 13:48	WG997929	
Hexachloro-1,3-butadiene	U		1.57	10.0	10	07/13/2017 13:48	WG997929	
2-Hexanone	U		7.57	50.0	10	07/13/2017 13:48	WG997929	
n-Hexane	U		3.05	50.0	10	07/13/2017 13:48	WG997929	
Iodomethane	U		3.77	100	10	07/13/2017 13:48	WG997929	
Isopropylbenzene	U		1.26	5.00	10	07/13/2017 13:48	WG997929	
p-Isopropyltoluene	U		1.38	5.00	10	07/13/2017 13:48	WG997929	
2-Butanone (MEK)	U		12.8	50.0	10	07/13/2017 13:48	WG997929	
Methylene Chloride	U		10.7	25.0	10	07/13/2017 13:48	WG997929	
4-Methyl-2-pentanone (MIBK)	U		8.23	50.0	10	07/13/2017 13:48	WG997929	
Methyl tert-butyl ether	U		1.02	5.00	10	07/13/2017 13:48	WG997929	
Naphthalene	U		1.74	25.0	10	07/13/2017 13:48	WG997929	
n-Propylbenzene	U		1.62	5.00	10	07/13/2017 13:48	WG997929	
Styrene	U		1.17	5.00	10	07/13/2017 13:48	WG997929	
1,1,1,2-Tetrachloroethane	U		1.20	5.00	10	07/13/2017 13:48	WG997929	
1,1,2,2-Tetrachloroethane	U		1.30	5.00	10	07/13/2017 13:48	WG997929	
1,1,2-Trichlorotrifluoroethane	U		1.64	5.00	10	07/13/2017 13:48	WG997929	
Tetrachloroethene	1100	J	99.5	250	500	07/14/2017 04:50	WG997929	
Toluene	U		4.12	5.00	10	07/13/2017 13:48	WG997929	
1,2,3-Trichlorobenzene	U		1.64	5.00	10	07/13/2017 13:48	WG997929	
1,2,4-Trichlorobenzene	U		3.55	5.00	10	07/13/2017 13:48	WG997929	
1,1,1-Trichloroethane	U		0.940	5.00	10	07/13/2017 13:48	WG997929	
1,1,2-Trichloroethane	U		1.86	5.00	10	07/13/2017 13:48	WG997929	
Trichloroethene	5310		76.5	250	500	07/14/2017 04:50	WG997929	
Trichlorofluoromethane	U		1.30	25.0	10	07/13/2017 13:48	WG997929	
1,2,3-Trichloropropane	U		2.47	25.0	10	07/13/2017 13:48	WG997929	
1,2,4-Trimethylbenzene	U		1.23	5.00	10	07/13/2017 13:48	WG997929	
1,2,3-Trimethylbenzene	U		0.739	5.00	10	07/13/2017 13:48	WG997929	
1,3,5-Trimethylbenzene	U		1.24	5.00	10	07/13/2017 13:48	WG997929	
Vinyl acetate	U		6.45	50.0	10	07/13/2017 13:48	WG997929	
Vinyl chloride	549		1.18	5.00	10	07/13/2017 13:48	WG997929	
Xylenes, Total	U		3.16	15.0	10	07/13/2017 13:48	WG997929	

*JC 7/26/17*



Collected date/time: 06/30/17 08:10

L919954

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	106 ✓			80.0-120		07/14/2017 04:50	WG997929
(S) Toluene-d8	104 ✓			80.0-120		07/13/2017 13:48	WG997929
(S) Dibromofluoromethane	92.9 ✓			76.0-123		07/14/2017 04:50	WG997929
(S) Dibromofluoromethane	99.2 ✓			76.0-123		07/13/2017 13:48	WG997929
(S) 4-Bromofluorobenzene	98.9 ✓			80.0-120		07/13/2017 13:48	WG997929
(S) 4-Bromofluorobenzene	94.9 ✓			80.0-120		07/14/2017 04:50	WG997929

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

Si

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

*J 7/26/17*



Collected date/time: 06/30/17 10:50

L919954

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	218000		2710	20000	1	07/11/2017 14:28	WG997492

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	11700		51.9	1000	1	07/01/2017 21:33	WG994932
Nitrate	U		22.7	100	1	07/01/2017 21:33	WG994932
Sulfate	6050		77.4	5000	1	07/01/2017 21:33	WG994932

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1680		102	1000	1	07/07/2017 03:19	WG996343

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	1770		15.0	100	1	07/06/2017 21:28	WG995966
Manganese	360		0.250	5.00	1	07/06/2017 21:28	WG995966

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	40.6		0.287	0.678	1	07/06/2017 11:05	WG995803
Ethane	U		0.296	1.29	1	07/06/2017 11:05	WG995803
Ethene	U		0.422	1.27	1	07/06/2017 11:05	WG995803

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.45	J	1.05	25.0	1	07/13/2017 14:05	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:05	WG997929
Benzene	U		0.0896	0.500	1	07/13/2017 14:05	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:05	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:05	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:05	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 14:05	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 14:05	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:05	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:05	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:05	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:05	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:05	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:05	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:05	WG997929
Chloroethane	U		0.141	2.50	1	07/13/2017 14:05	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 14:05	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 14:05	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:05	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:05	WG997929
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:05	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:05	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:05	WG997929

JC 7/12/17



Collected date/time: 06/30/17 10:50

L919954

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:05	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:05	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:05	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:05	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:05	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:05	WG997929
1,1-Dichloroethene	0.387	J J	0.188	0.500	1	07/13/2017 14:05	WG997929
cis-1,2-Dichloroethene	1.54		0.0933	0.500	1	07/14/2017 05:07	WG997929
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 14:05	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:05	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:05	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:05	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:05	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:05	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:05	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:05	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:05	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:05	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:05	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:05	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 14:05	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 14:05	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:05	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:05	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:05	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:05	WG997929
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:05	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:05	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 14:05	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:05	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 14:05	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:05	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:05	WG997929
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:05	WG997929
Tetrachloroethene	5.83		0.199	0.500	1	07/14/2017 05:07	WG997929
Toluene	0.903		0.412	0.500	1	07/13/2017 14:05	WG997929
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:05	WG997929
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:05	WG997929
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:05	WG997929
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:05	WG997929
Trichloroethene	5.21		0.153	0.500	1	07/14/2017 05:07	WG997929
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:05	WG997929
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:05	WG997929
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:05	WG997929
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:05	WG997929
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:05	WG997929
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:05	WG997929
Vinyl chloride	U		0.118	0.500	1	07/13/2017 14:05	WG997929
Xylenes, Total	0.396	J J	0.316	1.50	1	07/13/2017 14:05	WG997929
(S) Toluene-d8	108			80.0-120		07/14/2017 05:07	WG997929
(S) Toluene-d8	104			80.0-120		07/13/2017 14:05	WG997929
(S) Dibromofluoromethane	90.8			76.0-123		07/14/2017 05:07	WG997929
(S) Dibromofluoromethane	100			76.0-123		07/13/2017 14:05	WG997929
(S) 4-Bromofluorobenzene	99.9			80.0-120		07/13/2017 14:05	WG997929
(S) 4-Bromofluorobenzene	95.6			80.0-120		07/14/2017 05:07	WG997929

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

J 7/26/17



Collected date/time: 06/30/17 12:45

L919954

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	305000		2710	20000	1	07/11/2017 14:36	WG997492

Cp

Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	27300		51.9	1000	1	07/01/2017 21:47	WG994932
Nitrate	U		22.7	100	1	07/01/2017 21:47	WG994932
Sulfate	18000		77.4	5000	1	07/01/2017 21:47	WG994932

Ss

Cn

Sr

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	10000		102	1000	1	07/07/2017 03:30	WG996343

Qc

Gl

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	4960		15.0	100	1	07/06/2017 21:31	WG995966
Manganese	779		0.250	5.00	1	07/06/2017 21:31	WG995966

Al

Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	38.7		0.287	0.678	1	07/06/2017 11:08	WG995803
Ethane	U		0.296	1.29	1	07/06/2017 11:08	WG995803
Ethene	U		0.422	1.27	1	07/06/2017 11:08	WG995803

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	1.65	J	1.05	25.0	1	07/13/2017 14:21	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:21	WG997929
Benzene	U		0.0896	0.500	1	07/13/2017 14:21	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:21	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:21	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:21	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 14:21	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 14:21	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:21	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:21	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:21	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:21	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:21	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:21	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:21	WG997929
Chloroethane	U		0.141	2.50	1	07/13/2017 14:21	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 14:21	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 14:21	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:21	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:21	WG997929
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:21	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:21	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:21	WG997929

*Handwritten signature and date: Jk 7/26/17*

MW106-063017

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.



Collected date/time: 06/30/17 12:45

L919954

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:21	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:21	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:21	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:21	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:21	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:21	WG997929
1,1-Dichloroethene	U		0.188	0.500	1	07/13/2017 14:21	WG997929
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/14/2017 05:24	WG997929
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 14:21	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:21	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:21	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:21	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:21	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:21	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:21	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:21	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:21	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:21	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:21	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:21	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 14:21	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 14:21	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:21	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:21	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:21	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:21	WG997929
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:21	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:21	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 14:21	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:21	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 14:21	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:21	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:21	WG997929
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:21	WG997929
Tetrachloroethene	U		0.199	0.500	1	07/13/2017 14:21	WG997929
Toluene	0.419	J	0.412	0.500	1	07/13/2017 14:21	WG997929
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:21	WG997929
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:21	WG997929
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:21	WG997929
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:21	WG997929
Trichloroethene	U		0.153	0.500	1	07/13/2017 14:21	WG997929
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:21	WG997929
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:21	WG997929
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:21	WG997929
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:21	WG997929
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:21	WG997929
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:21	WG997929
Vinyl chloride	U		0.118	0.500	1	07/13/2017 14:21	WG997929
Xylenes, Total	U		0.316	1.50	1	07/13/2017 14:21	WG997929
(S) Toluene-d8	105	✓		80.0-120		07/13/2017 14:21	WG997929
(S) Toluene-d8	107	✓		80.0-120		07/14/2017 05:24	WG997929
(S) Dibromofluoromethane	99.6	✓		76.0-123		07/13/2017 14:21	WG997929
(S) Dibromofluoromethane	94.3	✓		76.0-123		07/14/2017 05:24	WG997929
(S) 4-Bromofluorobenzene	99.2	✓		80.0-120		07/13/2017 14:21	WG997929
(S) 4-Bromofluorobenzene	96.4	✓		80.0-120		07/14/2017 05:24	WG997929

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

JK 7/26/17

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Alkalinity	339000		2710	20000	1	07/11/2017 14:43	WG997492

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	115000		519	10000	10	07/01/2017 22:59	WG994932
Nitrate	U	X	22.7	100	1	07/01/2017 22:45	WG994932
Sulfate	6230		77.4	5000	1	07/01/2017 22:45	WG994932

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	1840	J	102	1000	1	07/07/2017 03:41	WG996343

*gc 7/30/17*

Metals (ICPMS) by Method 6020A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron	907		15.0	100	1	07/06/2017 19:48	WG995966
Manganese	532	V	0.250	5.00	1	07/06/2017 19:48	WG995966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	10300	J	158	500	5	07/13/2017 17:57	WG997249
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-122		07/13/2017 17:57	WG997249

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	1040		0.287	0.678	1	07/06/2017 11:17	WG995803
Ethane	2.47		0.296	1.29	1	07/06/2017 11:17	WG995803
Ethene	64.5		0.422	1.27	1	07/06/2017 11:17	WG995803

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Acetone	U		10.5	250	10	07/13/2017 14:38	WG997929
Acrylonitrile	U		8.73	50.0	10	07/13/2017 14:38	WG997929
Benzene	U		0.896	5.00	10	07/13/2017 14:38	WG997929
Bromobenzene	U		1.33	5.00	10	07/13/2017 14:38	WG997929
Bromodichloromethane	U		0.800	5.00	10	07/13/2017 14:38	WG997929
Bromochloromethane	U		1.45	5.00	10	07/13/2017 14:38	WG997929
Bromoform	U		1.86	5.00	10	07/13/2017 14:38	WG997929
Bromomethane	U		1.57	25.0	10	07/13/2017 14:38	WG997929
n-Butylbenzene	U		1.43	5.00	10	07/13/2017 14:38	WG997929
sec-Butylbenzene	U		1.34	5.00	10	07/13/2017 14:38	WG997929
tert-Butylbenzene	U		1.83	5.00	10	07/13/2017 14:38	WG997929
Carbon disulfide	U		1.01	5.00	10	07/13/2017 14:38	WG997929
Carbon tetrachloride	U		1.59	5.00	10	07/13/2017 14:38	WG997929
Chlorobenzene	U		1.40	5.00	10	07/13/2017 14:38	WG997929
Chlorodibromomethane	U		1.28	5.00	10	07/13/2017 14:38	WG997929
Chloroethane	U		1.41	25.0	10	07/13/2017 14:38	WG997929

*gc 7/12/17*





Collected date/time: 06/30/17 15:10

L919954

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloroform	U		0.860	5.00	10	07/13/2017 14:38	WG997929
Chloromethane	U		1.53	12.5	10	07/13/2017 14:38	WG997929
2-Chlorotoluene	U		1.11	5.00	10	07/13/2017 14:38	WG997929
4-Chlorotoluene	U		0.972	5.00	10	07/13/2017 14:38	WG997929
1,2-Dibromo-3-Chloropropane	U		3.25	25.0	10	07/13/2017 14:38	WG997929
1,2-Dibromoethane	U		1.93	5.00	10	07/13/2017 14:38	WG997929
Dibromomethane	U		1.17	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichlorobenzene	U		1.01	5.00	10	07/13/2017 14:38	WG997929
1,3-Dichlorobenzene	U		1.30	5.00	10	07/13/2017 14:38	WG997929
1,4-Dichlorobenzene	U		1.21	5.00	10	07/13/2017 14:38	WG997929
Dichlorodifluoromethane	U		1.27	25.0	10	07/13/2017 14:38	WG997929
1,1-Dichloroethane	U		1.14	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichloroethane	U		1.08	5.00	10	07/13/2017 14:38	WG997929
1,1-Dichloroethene	94.3		1.88	5.00	10	07/13/2017 14:38	WG997929
cis-1,2-Dichloroethene	20100		46.6	250	500	07/14/2017 05:41	WG997929
trans-1,2-Dichloroethene	55.6		1.52	5.00	10	07/13/2017 14:38	WG997929
1,2-Dichloropropane	U		1.90	5.00	10	07/13/2017 14:38	WG997929
1,1-Dichloropropene	U		1.28	5.00	10	07/13/2017 14:38	WG997929
1,3-Dichloropropane	U		1.47	10.0	10	07/13/2017 14:38	WG997929
cis-1,3-Dichloropropene	U		0.976	5.00	10	07/13/2017 14:38	WG997929
trans-1,3-Dichloropropene	U		2.22	5.00	10	07/13/2017 14:38	WG997929
trans-1,4-Dichloro-2-butene	U		2.57	50.0	10	07/13/2017 14:38	WG997929
2,2-Dichloropropane	U		0.929	5.00	10	07/13/2017 14:38	WG997929
Di-isopropyl ether	U		0.924	5.00	10	07/13/2017 14:38	WG997929
Ethylbenzene	U		1.58	5.00	10	07/13/2017 14:38	WG997929
Hexachloro-1,3-butadiene	U		1.57	10.0	10	07/13/2017 14:38	WG997929
2-Hexanone	U		7.57	50.0	10	07/13/2017 14:38	WG997929
n-Hexane	U		3.05	50.0	10	07/13/2017 14:38	WG997929
Iodomethane	U		3.77	100	10	07/13/2017 14:38	WG997929
Isopropylbenzene	U		1.26	5.00	10	07/13/2017 14:38	WG997929
p-Isopropyltoluene	U		1.38	5.00	10	07/13/2017 14:38	WG997929
2-Butanone (MEK)	U		12.8	50.0	10	07/13/2017 14:38	WG997929
Methylene Chloride	U		10.7	25.0	10	07/13/2017 14:38	WG997929
4-Methyl-2-pentanone (MIBK)	U		8.23	50.0	10	07/13/2017 14:38	WG997929
Methyl tert-butyl ether	U		1.02	5.00	10	07/13/2017 14:38	WG997929
Naphthalene	U		1.74	25.0	10	07/13/2017 14:38	WG997929
n-Propylbenzene	U		1.62	5.00	10	07/13/2017 14:38	WG997929
Styrene	U		1.17	5.00	10	07/13/2017 14:38	WG997929
1,1,1,2-Tetrachloroethane	U		1.20	5.00	10	07/13/2017 14:38	WG997929
1,1,2,2-Tetrachloroethane	U		1.30	5.00	10	07/13/2017 14:38	WG997929
1,1,2-Trichlorotrifluoroethane	U		1.64	5.00	10	07/13/2017 14:38	WG997929
Tetrachloroethene	6760	J	99.5	250	500	07/14/2017 05:41	WG997929
Toluene	U		4.12	5.00	10	07/13/2017 14:38	WG997929
1,2,3-Trichlorobenzene	U		1.64	5.00	10	07/13/2017 14:38	WG997929
1,2,4-Trichlorobenzene	U		3.55	5.00	10	07/13/2017 14:38	WG997929
1,1,1-Trichloroethane	U		0.940	5.00	10	07/13/2017 14:38	WG997929
1,1,2-Trichloroethane	U		1.86	5.00	10	07/13/2017 14:38	WG997929
Trichloroethene	4020		76.5	250	500	07/14/2017 05:41	WG997929
Trichlorofluoromethane	U		1.30	25.0	10	07/13/2017 14:38	WG997929
1,2,3-Trichloropropane	U		2.47	25.0	10	07/13/2017 14:38	WG997929
1,2,4-Trimethylbenzene	U		1.23	5.00	10	07/13/2017 14:38	WG997929
1,2,3-Trimethylbenzene	U		0.739	5.00	10	07/13/2017 14:38	WG997929
1,3,5-Trimethylbenzene	U		1.24	5.00	10	07/13/2017 14:38	WG997929
Vinyl acetate	U		6.45	50.0	10	07/13/2017 14:38	WG997929
Vinyl chloride	597		1.18	5.00	10	07/13/2017 14:38	WG997929
Xylenes, Total	U		3.16	15.0	10	07/13/2017 14:38	WG997929

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

*JC*  
7/12/17



Collected date/time: 06/30/17 15:10

L919954

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) Toluene-d8	108			80.0-120		07/14/2017 05:41	WG997929
(S) Toluene-d8	104			80.0-120		07/13/2017 14:38	WG997929
(S) Dibromofluoromethane	92.3			76.0-123		07/14/2017 05:41	WG997929
(S) Dibromofluoromethane	101			76.0-123		07/13/2017 14:38	WG997929
(S) 4-Bromofluorobenzene	97.2			80.0-120		07/13/2017 14:38	WG997929
(S) 4-Bromofluorobenzene	96.2			80.0-120		07/14/2017 05:41	WG997929



Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

*Handwritten signature and date: 7/26/17*

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1.65	J J	1.05	25.0	1	07/13/2017 14:54	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 14:54	WG997929
Benzene	0.282	J J	0.0896	0.500	1	07/13/2017 14:54	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 14:54	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 14:54	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 14:54	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 14:54	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 14:54	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 14:54	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 14:54	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 14:54	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 14:54	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 14:54	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 14:54	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 14:54	WG997929
Chloroethane	0.539	J J	0.141	2.50	1	07/13/2017 14:54	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 14:54	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 14:54	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 14:54	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 14:54	WG997929
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 14:54	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 14:54	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 14:54	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 14:54	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 14:54	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 14:54	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 14:54	WG997929
1,1-Dichloroethene	2.31		0.188	0.500	1	07/13/2017 14:54	WG997929
cis-1,2-Dichloroethene	115		0.0933	0.500	1	07/14/2017 05:58	WG997929
trans-1,2-Dichloroethene	2.94		0.152	0.500	1	07/13/2017 14:54	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 14:54	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 14:54	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 14:54	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 14:54	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 14:54	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 14:54	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 14:54	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 14:54	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 14:54	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 14:54	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 14:54	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 14:54	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 14:54	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 14:54	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 14:54	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 14:54	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 14:54	WG997929
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 14:54	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 14:54	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 14:54	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 14:54	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 14:54	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 14:54	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 14:54	WG997929

- Cp
- Tc
- Ss
- Cn
- Sr
- Qc
- Gl
- Al
- Sc

*Jr 7/26/17*

G12-063017

SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.



Collected date/time: 06/30/17 15:30

L919954

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 14:54	WG997929
Tetrachloroethene	U		0.199	0.500	1	07/14/2017 05:58	WG997929
Toluene	U		0.412	0.500	1	07/13/2017 14:54	WG997929
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 14:54	WG997929
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 14:54	WG997929
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 14:54	WG997929
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 14:54	WG997929
Trichloroethene	0.323	J	0.153	0.500	1	07/14/2017 05:58	WG997929
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 14:54	WG997929
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 14:54	WG997929
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 14:54	WG997929
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 14:54	WG997929
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 14:54	WG997929
Vinyl acetate	U		0.645	5.00	1	07/13/2017 14:54	WG997929
Vinyl chloride	31.5		0.118	0.500	1	07/13/2017 14:54	WG997929
Xylenes, Total	U		0.316	1.50	1	07/13/2017 14:54	WG997929
(S) Toluene-d8	105			80.0-120		07/13/2017 14:54	WG997929
(S) Toluene-d8	106			80.0-120		07/14/2017 05:58	WG997929
(S) Dibromofluoromethane	92.5			76.0-123		07/14/2017 05:58	WG997929
(S) Dibromofluoromethane	101			76.0-123		07/13/2017 14:54	WG997929
(S) 4-Bromofluorobenzene	97.7			80.0-120		07/14/2017 05:58	WG997929
(S) 4-Bromofluorobenzene	99.3			80.0-120		07/13/2017 14:54	WG997929

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

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Collected date/time: 06/30/17 00:00

SAMPLE RESULTS - 06

L919954

ONE LAB. NATIONWIDE.



Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U	✓	31.6	100	1	07/12/2017 02:39	WG997249
(S) o,a,a-Trifluorotoluene(FID) 93.1	U	✓		77.0-122		07/12/2017 02:39	WG997249

Cp

Tc

Ss

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1.05	25.0	1	07/13/2017 12:58	WG997929
Acrylonitrile	U		0.873	5.00	1	07/13/2017 12:58	WG997929
Benzene	U		0.0896	0.500	1	07/13/2017 12:58	WG997929
Bromobenzene	U		0.133	0.500	1	07/13/2017 12:58	WG997929
Bromodichloromethane	U		0.0800	0.500	1	07/13/2017 12:58	WG997929
Bromochloromethane	U		0.145	0.500	1	07/13/2017 12:58	WG997929
Bromoform	U		0.186	0.500	1	07/13/2017 12:58	WG997929
Bromomethane	U		0.157	2.50	1	07/13/2017 12:58	WG997929
n-Butylbenzene	U		0.143	0.500	1	07/13/2017 12:58	WG997929
sec-Butylbenzene	U		0.134	0.500	1	07/13/2017 12:58	WG997929
tert-Butylbenzene	U		0.183	0.500	1	07/13/2017 12:58	WG997929
Carbon disulfide	U		0.101	0.500	1	07/13/2017 12:58	WG997929
Carbon tetrachloride	U		0.159	0.500	1	07/13/2017 12:58	WG997929
Chlorobenzene	U		0.140	0.500	1	07/13/2017 12:58	WG997929
Chlorodibromomethane	U		0.128	0.500	1	07/13/2017 12:58	WG997929
Chloroethane	U		0.141	2.50	1	07/13/2017 12:58	WG997929
Chloroform	U		0.0860	0.500	1	07/13/2017 12:58	WG997929
Chloromethane	U		0.153	1.25	1	07/13/2017 12:58	WG997929
2-Chlorotoluene	U		0.111	0.500	1	07/13/2017 12:58	WG997929
4-Chlorotoluene	U		0.0972	0.500	1	07/13/2017 12:58	WG997929
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	07/13/2017 12:58	WG997929
1,2-Dibromoethane	U		0.193	0.500	1	07/13/2017 12:58	WG997929
Dibromomethane	U		0.117	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichlorobenzene	U		0.101	0.500	1	07/13/2017 12:58	WG997929
1,3-Dichlorobenzene	U		0.130	0.500	1	07/13/2017 12:58	WG997929
1,4-Dichlorobenzene	U		0.121	0.500	1	07/13/2017 12:58	WG997929
Dichlorodifluoromethane	U		0.127	2.50	1	07/13/2017 12:58	WG997929
1,1-Dichloroethane	U		0.114	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichloroethane	U		0.108	0.500	1	07/13/2017 12:58	WG997929
1,1-Dichloroethene	U		0.188	0.500	1	07/13/2017 12:58	WG997929
cis-1,2-Dichloroethene	U		0.0933	0.500	1	07/13/2017 12:58	WG997929
trans-1,2-Dichloroethene	U		0.152	0.500	1	07/13/2017 12:58	WG997929
1,2-Dichloropropane	U		0.190	0.500	1	07/13/2017 12:58	WG997929
1,1-Dichloropropene	U		0.128	0.500	1	07/13/2017 12:58	WG997929
1,3-Dichloropropane	U		0.147	1.00	1	07/13/2017 12:58	WG997929
cis-1,3-Dichloropropene	U		0.0976	0.500	1	07/13/2017 12:58	WG997929
trans-1,3-Dichloropropene	U		0.222	0.500	1	07/13/2017 12:58	WG997929
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	07/13/2017 12:58	WG997929
2,2-Dichloropropane	U		0.0929	0.500	1	07/13/2017 12:58	WG997929
Di-isopropyl ether	U		0.0924	0.500	1	07/13/2017 12:58	WG997929
Ethylbenzene	U		0.158	0.500	1	07/13/2017 12:58	WG997929
Hexachloro-1,3-butadiene	U		0.157	1.00	1	07/13/2017 12:58	WG997929
2-Hexanone	U		0.757	5.00	1	07/13/2017 12:58	WG997929
n-Hexane	U		0.305	5.00	1	07/13/2017 12:58	WG997929
Iodomethane	U		0.377	10.0	1	07/13/2017 12:58	WG997929
Isopropylbenzene	U		0.126	0.500	1	07/13/2017 12:58	WG997929
p-Isopropyltoluene	U		0.138	0.500	1	07/13/2017 12:58	WG997929
2-Butanone (MEK)	U		1.28	5.00	1	07/13/2017 12:58	WG997929
Methylene Chloride	U		1.07	2.50	1	07/13/2017 12:58	WG997929

Cn

Sr

Qc

Gl

Al

Sc

*JC 7/26/17*

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SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.



Collected date/time: 06/30/17 00:00

L919954

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	07/13/2017 12:58	WG997929
Methyl tert-butyl ether	U		0.102	0.500	1	07/13/2017 12:58	WG997929
Naphthalene	U		0.174	2.50	1	07/13/2017 12:58	WG997929
n-Propylbenzene	U		0.162	0.500	1	07/13/2017 12:58	WG997929
Styrene	U		0.117	0.500	1	07/13/2017 12:58	WG997929
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	07/13/2017 12:58	WG997929
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	07/13/2017 12:58	WG997929
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	07/13/2017 12:58	WG997929
Tetrachloroethene	U		0.199	0.500	1	07/13/2017 12:58	WG997929
Toluene	U		0.412	0.500	1	07/13/2017 12:58	WG997929
1,2,3-Trichlorobenzene	U		0.164	0.500	1	07/13/2017 12:58	WG997929
1,2,4-Trichlorobenzene	U		0.355	0.500	1	07/13/2017 12:58	WG997929
1,1,1-Trichloroethane	U		0.0940	0.500	1	07/13/2017 12:58	WG997929
1,1,2-Trichloroethane	U		0.186	0.500	1	07/13/2017 12:58	WG997929
Trichloroethene	U		0.153	0.500	1	07/13/2017 12:58	WG997929
Trichlorofluoromethane	U		0.130	2.50	1	07/13/2017 12:58	WG997929
1,2,3-Trichloropropane	U		0.247	2.50	1	07/13/2017 12:58	WG997929
1,2,4-Trimethylbenzene	U		0.123	0.500	1	07/13/2017 12:58	WG997929
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	07/13/2017 12:58	WG997929
1,3,5-Trimethylbenzene	U		0.124	0.500	1	07/13/2017 12:58	WG997929
Vinyl acetate	U		0.645	5.00	1	07/13/2017 12:58	WG997929
Vinyl chloride	U		0.118	0.500	1	07/13/2017 12:58	WG997929
Xylenes, Total	U		0.316	1.50	1	07/13/2017 12:58	WG997929
(S) Toluene-d8	106			80.0-120		07/13/2017 12:58	WG997929
(S) Dibromofluoromethane	95.0			76.0-123		07/13/2017 12:58	WG997929
(S) 4-Bromofluorobenzene	100			80.0-120		07/13/2017 12:58	WG997929

Cp  
Tc  
Ss  
Cn  
Si  
Qc  
Gl  
Al  
Sc

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7/26/17