

August 15, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Cascade Corporation- Fairview, OR

Sample Delivery Group: L1127015  
Samples Received: 08/08/2019  
Project Number: PNG0564S19-05  
Description: CTS

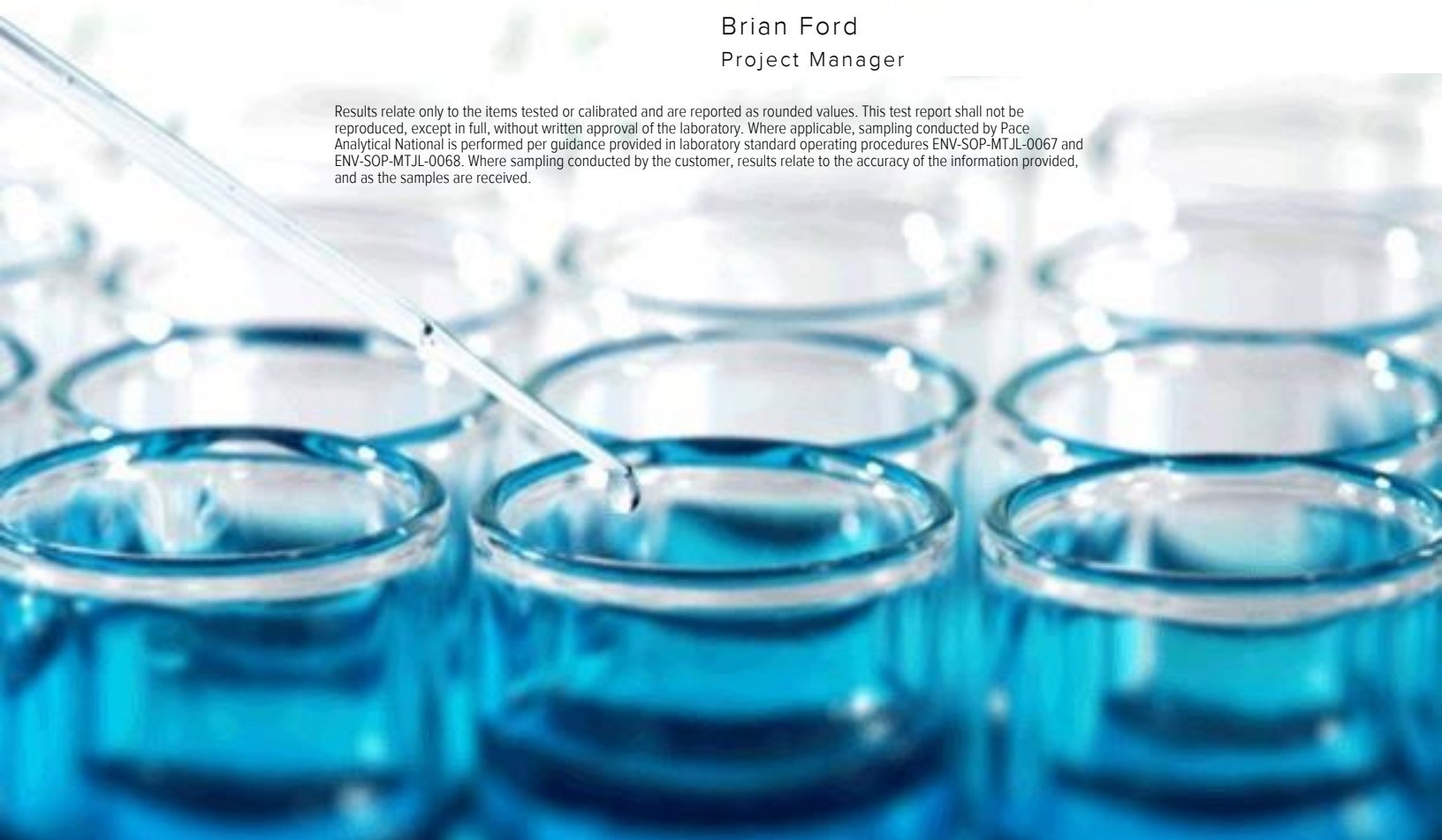
Report To: Cindy Bartlett  
2201 NE 201st Avenue  
Fairview, OR 97024-9718

Entire Report Reviewed By:

*Brian Ford*

Brian Ford  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
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<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
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TS-C-EFF-080619-DUP L1127015-02	<b>7</b>	<b>4</b> Cn
TS-C-INF-080619 L1127015-03	<b>9</b>	<b>5</b> Sr
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<b>Al: Accreditations &amp; Locations</b>	<b>18</b>	<b>8</b> Al
<b>Sc: Sample Chain of Custody</b>	<b>19</b>	<b>9</b> Sc

# SAMPLE SUMMARY



## TS-C-EFF-080619 L1127015-01 GW

Collected by PY/DT      Collected date/time      Received date/time  
 08/06/19 09:20      08/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1327324	1	08/15/19 17:01	08/15/19 17:01	BMB	Mt. Juliet, TN

1  
Cp

2  
Tc

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Ss

4  
Cn

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Sr

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Qc

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Gl

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Al

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Sc

## TS-C-EFF-080619-DUP L1127015-02 GW

Collected by PY/DT      Collected date/time      Received date/time  
 08/06/19 09:21      08/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1327324	1	08/15/19 17:22	08/15/19 17:22	BMB	Mt. Juliet, TN

## TS-C-INF-080619 L1127015-03 GW

Collected by PY/DT      Collected date/time      Received date/time  
 08/06/19 09:30      08/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1327324	1	08/15/19 17:43	08/15/19 17:43	BMB	Mt. Juliet, TN

## TRIP BLANK #LOT 406 L1127015-04 GW

Collected by PY/DT      Collected date/time      Received date/time  
 08/06/19 00:00      08/08/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1327324	1	08/15/19 12:07	08/15/19 12:07	BMB	Mt. Juliet, TN



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

Brian Ford  
Project Manager

- <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	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		25.0	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Acrolein	ND	J4	50.0	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Acrylonitrile	ND		5.00	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Benzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Bromobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Bromodichloromethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Bromoform	ND	JO	0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Bromomethane	ND	JO	2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
n-Butylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
sec-Butylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
tert-Butylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Carbon disulfide	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Carbon tetrachloride	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Chlorobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Chlorodibromomethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Chloroethane	ND	JO	2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Chloroform	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Chloromethane	ND		1.25	1	08/15/2019 17:01	<a href="#">WG1327324</a>
2-Chlorotoluene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
4-Chlorotoluene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2-Dibromoethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Dibromomethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2-Dichlorobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,3-Dichlorobenzene	ND	J4	0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,4-Dichlorobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Dichlorodifluoromethane	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1-Dichloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2-Dichloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1-Dichloroethene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
cis-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
trans-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2-Dichloropropane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1-Dichloropropene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,3-Dichloropropane	ND		1.00	1	08/15/2019 17:01	<a href="#">WG1327324</a>
cis-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
trans-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
2,2-Dichloropropane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Di-isopropyl ether	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Ethylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Isopropylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
p-Isopropyltoluene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
2-Butanone (MEK)	ND		5.00	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Methylene Chloride	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Methyl tert-butyl ether	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Naphthalene	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
n-Propylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Styrene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Tetrachloroethene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Toluene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2,3-Trichlorobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1,1-Trichloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,1,2-Trichloroethane	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Trichloroethene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Trichlorofluoromethane	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2,3-Trichloropropane	ND		2.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2,4-Trimethylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,2,3-Trimethylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
1,3,5-Trimethylbenzene	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Vinyl chloride	ND		0.500	1	08/15/2019 17:01	<a href="#">WG1327324</a>
Xylenes, Total	ND		1.50	1	08/15/2019 17:01	<a href="#">WG1327324</a>
(S) Toluene-d8	109		80.0-120		08/15/2019 17:01	<a href="#">WG1327324</a>
(S) 4-Bromofluorobenzene	99.7		77.0-126		08/15/2019 17:01	<a href="#">WG1327324</a>
(S) 1,2-Dichloroethane-d4	95.3		70.0-130		08/15/2019 17:01	<a href="#">WG1327324</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		25.0	1	08/15/2019 17:22	WG1327324
Acrolein	ND	J4	50.0	1	08/15/2019 17:22	WG1327324
Acrylonitrile	ND		5.00	1	08/15/2019 17:22	WG1327324
Benzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Bromobenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Bromodichloromethane	ND		0.500	1	08/15/2019 17:22	WG1327324
Bromoform	ND	JO	0.500	1	08/15/2019 17:22	WG1327324
Bromomethane	ND	JO	2.50	1	08/15/2019 17:22	WG1327324
n-Butylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
sec-Butylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
tert-Butylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Carbon disulfide	ND		0.500	1	08/15/2019 17:22	WG1327324
Carbon tetrachloride	ND		0.500	1	08/15/2019 17:22	WG1327324
Chlorobenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Chlorodibromomethane	ND		0.500	1	08/15/2019 17:22	WG1327324
Chloroethane	ND	JO	2.50	1	08/15/2019 17:22	WG1327324
Chloroform	ND		0.500	1	08/15/2019 17:22	WG1327324
Chloromethane	ND		1.25	1	08/15/2019 17:22	WG1327324
2-Chlorotoluene	ND		0.500	1	08/15/2019 17:22	WG1327324
4-Chlorotoluene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/15/2019 17:22	WG1327324
1,2-Dibromoethane	ND		0.500	1	08/15/2019 17:22	WG1327324
Dibromomethane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,2-Dichlorobenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,3-Dichlorobenzene	ND	J4	0.500	1	08/15/2019 17:22	WG1327324
1,4-Dichlorobenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Dichlorodifluoromethane	ND		2.50	1	08/15/2019 17:22	WG1327324
1,1-Dichloroethane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,2-Dichloroethane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,1-Dichloroethene	ND		0.500	1	08/15/2019 17:22	WG1327324
cis-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:22	WG1327324
trans-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,2-Dichloropropane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,1-Dichloropropene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,3-Dichloropropane	ND		1.00	1	08/15/2019 17:22	WG1327324
cis-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:22	WG1327324
trans-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:22	WG1327324
2,2-Dichloropropane	ND		0.500	1	08/15/2019 17:22	WG1327324
Di-isopropyl ether	ND		0.500	1	08/15/2019 17:22	WG1327324
Ethylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2019 17:22	WG1327324
Isopropylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
p-Isopropyltoluene	ND		0.500	1	08/15/2019 17:22	WG1327324
2-Butanone (MEK)	ND		5.00	1	08/15/2019 17:22	WG1327324
Methylene Chloride	ND		2.50	1	08/15/2019 17:22	WG1327324
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/15/2019 17:22	WG1327324
Methyl tert-butyl ether	ND		0.500	1	08/15/2019 17:22	WG1327324
Naphthalene	ND		2.50	1	08/15/2019 17:22	WG1327324
n-Propylbenzene	ND		0.500	1	08/15/2019 17:22	WG1327324
Styrene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:22	WG1327324
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/15/2019 17:22	WG1327324
Tetrachloroethene	ND		0.500	1	08/15/2019 17:22	WG1327324
Toluene	ND		0.500	1	08/15/2019 17:22	WG1327324
1,2,3-Trichlorobenzene	ND		0.500	1	08/15/2019 17:22	WG1327324

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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,1,1-Trichloroethane	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,1,2-Trichloroethane	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
Trichloroethene	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
Trichlorofluoromethane	ND		2.50	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,2,3-Trichloropropane	ND		2.50	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,2,4-Trimethylbenzene	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,2,3-Trimethylbenzene	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
1,3,5-Trimethylbenzene	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
Vinyl chloride	ND		0.500	1	08/15/2019 17:22	<a href="#">WG1327324</a>
Xylenes, Total	ND		1.50	1	08/15/2019 17:22	<a href="#">WG1327324</a>
(S) Toluene-d8	113		80.0-120		08/15/2019 17:22	<a href="#">WG1327324</a>
(S) 4-Bromofluorobenzene	102		77.0-126		08/15/2019 17:22	<a href="#">WG1327324</a>
(S) 1,2-Dichloroethane-d4	96.2		70.0-130		08/15/2019 17:22	<a href="#">WG1327324</a>

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

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		25.0	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Acrolein	ND	J4	50.0	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Acrylonitrile	ND		5.00	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Benzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Bromobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Bromodichloromethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Bromoform	ND	JO	0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Bromomethane	ND	JO	2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
n-Butylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
sec-Butylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
tert-Butylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Carbon disulfide	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Carbon tetrachloride	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Chlorobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Chlorodibromomethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Chloroethane	ND	JO	2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Chloroform	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Chloromethane	ND		1.25	1	08/15/2019 17:43	<a href="#">WG1327324</a>
2-Chlorotoluene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
4-Chlorotoluene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2-Dibromoethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Dibromomethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2-Dichlorobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,3-Dichlorobenzene	ND	J4	0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,4-Dichlorobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Dichlorodifluoromethane	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1-Dichloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2-Dichloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1-Dichloroethene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
cis-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
trans-1,2-Dichloroethene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2-Dichloropropane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1-Dichloropropene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,3-Dichloropropane	ND		1.00	1	08/15/2019 17:43	<a href="#">WG1327324</a>
cis-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
trans-1,3-Dichloropropene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
2,2-Dichloropropane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Di-isopropyl ether	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Ethylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Isopropylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
p-Isopropyltoluene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
2-Butanone (MEK)	ND		5.00	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Methylene Chloride	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Methyl tert-butyl ether	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Naphthalene	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
n-Propylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Styrene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Tetrachloroethene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Toluene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2,3-Trichlorobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</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	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1,1-Trichloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,1,2-Trichloroethane	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Trichloroethene	4.84		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Trichlorofluoromethane	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2,3-Trichloropropane	ND		2.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2,4-Trimethylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,2,3-Trimethylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
1,3,5-Trimethylbenzene	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Vinyl chloride	ND		0.500	1	08/15/2019 17:43	<a href="#">WG1327324</a>
Xylenes, Total	ND		1.50	1	08/15/2019 17:43	<a href="#">WG1327324</a>
(S) Toluene-d8	108		80.0-120		08/15/2019 17:43	<a href="#">WG1327324</a>
(S) 4-Bromofluorobenzene	97.1		77.0-126		08/15/2019 17:43	<a href="#">WG1327324</a>
(S) 1,2-Dichloroethane-d4	95.5		70.0-130		08/15/2019 17:43	<a href="#">WG1327324</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	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		25.0	1	08/15/2019 12:07	WG1327324
Acrolein	ND	J4	50.0	1	08/15/2019 12:07	WG1327324
Acrylonitrile	ND		5.00	1	08/15/2019 12:07	WG1327324
Benzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Bromobenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Bromodichloromethane	ND		0.500	1	08/15/2019 12:07	WG1327324
Bromoform	ND	JO	0.500	1	08/15/2019 12:07	WG1327324
Bromomethane	ND	JO	2.50	1	08/15/2019 12:07	WG1327324
n-Butylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
sec-Butylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
tert-Butylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Carbon disulfide	ND		0.500	1	08/15/2019 12:07	WG1327324
Carbon tetrachloride	ND		0.500	1	08/15/2019 12:07	WG1327324
Chlorobenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Chlorodibromomethane	ND		0.500	1	08/15/2019 12:07	WG1327324
Chloroethane	ND	JO	2.50	1	08/15/2019 12:07	WG1327324
Chloroform	ND		0.500	1	08/15/2019 12:07	WG1327324
Chloromethane	ND		1.25	1	08/15/2019 12:07	WG1327324
2-Chlorotoluene	ND		0.500	1	08/15/2019 12:07	WG1327324
4-Chlorotoluene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/15/2019 12:07	WG1327324
1,2-Dibromoethane	ND		0.500	1	08/15/2019 12:07	WG1327324
Dibromomethane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,2-Dichlorobenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,3-Dichlorobenzene	ND	J4	0.500	1	08/15/2019 12:07	WG1327324
1,4-Dichlorobenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Dichlorodifluoromethane	ND		2.50	1	08/15/2019 12:07	WG1327324
1,1-Dichloroethane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,2-Dichloroethane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,1-Dichloroethene	ND		0.500	1	08/15/2019 12:07	WG1327324
cis-1,2-Dichloroethene	ND		0.500	1	08/15/2019 12:07	WG1327324
trans-1,2-Dichloroethene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,2-Dichloropropane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,1-Dichloropropene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,3-Dichloropropane	ND		1.00	1	08/15/2019 12:07	WG1327324
cis-1,3-Dichloropropene	ND		0.500	1	08/15/2019 12:07	WG1327324
trans-1,3-Dichloropropene	ND		0.500	1	08/15/2019 12:07	WG1327324
2,2-Dichloropropane	ND		0.500	1	08/15/2019 12:07	WG1327324
Di-isopropyl ether	ND		0.500	1	08/15/2019 12:07	WG1327324
Ethylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Hexachloro-1,3-butadiene	ND		1.00	1	08/15/2019 12:07	WG1327324
Isopropylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
p-Isopropyltoluene	ND		0.500	1	08/15/2019 12:07	WG1327324
2-Butanone (MEK)	ND		5.00	1	08/15/2019 12:07	WG1327324
Methylene Chloride	ND		2.50	1	08/15/2019 12:07	WG1327324
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/15/2019 12:07	WG1327324
Methyl tert-butyl ether	ND		0.500	1	08/15/2019 12:07	WG1327324
Naphthalene	ND		2.50	1	08/15/2019 12:07	WG1327324
n-Propylbenzene	ND		0.500	1	08/15/2019 12:07	WG1327324
Styrene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/15/2019 12:07	WG1327324
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/15/2019 12:07	WG1327324
Tetrachloroethene	ND		0.500	1	08/15/2019 12:07	WG1327324
Toluene	ND		0.500	1	08/15/2019 12:07	WG1327324
1,2,3-Trichlorobenzene	ND		0.500	1	08/15/2019 12:07	WG1327324

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	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,1,1-Trichloroethane	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,1,2-Trichloroethane	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
Trichloroethene	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
Trichlorofluoromethane	ND		2.50	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,2,3-Trichloropropane	ND		2.50	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,2,4-Trimethylbenzene	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,2,3-Trimethylbenzene	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
1,3,5-Trimethylbenzene	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
Vinyl chloride	ND		0.500	1	08/15/2019 12:07	<a href="#">WG1327324</a>
Xylenes, Total	ND		1.50	1	08/15/2019 12:07	<a href="#">WG1327324</a>
(S) Toluene-d8	110		80.0-120		08/15/2019 12:07	<a href="#">WG1327324</a>
(S) 4-Bromofluorobenzene	97.8		77.0-126		08/15/2019 12:07	<a href="#">WG1327324</a>
(S) 1,2-Dichloroethane-d4	95.3		70.0-130		08/15/2019 12:07	<a href="#">WG1327324</a>

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



Method Blank (MB)

(MB) R3440958-3 08/15/19 11:24

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrolein	U		3.97	50.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
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
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500
Ethylbenzene	U		0.158	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) R3440958-3 08/15/19 11:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexachloro-1,3-butadiene	0.518	<u>J</u>	0.157	1.00
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
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	0.250	<u>J</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 chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	110			80.0-120
(S) 4-Bromofluorobenzene	99.1			77.0-126
(S) 1,2-Dichloroethane-d4	98.2			70.0-130

<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) R3440958-1 08/15/19 10:00 • (LCSD) R3440958-2 08/15/19 10:21

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	%	%	%			%	%
Acetone	125	125	129	99.9	103	19.0-160			3.13	27
Acrolein	125	258	258	206	206	10.0-160	<u>J4</u>	<u>J4</u>	0.108	26
Acrylonitrile	125	138	142	110	114	55.0-149			3.01	20



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

(LCS) R3440958-1 08/15/19 10:00 • (LCSD) R3440958-2 08/15/19 10:21

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 %
Benzene	25.0	25.4	25.1	102	101	70.0-123			1.04	20
Bromobenzene	25.0	28.4	30.3	114	121	73.0-121			6.31	20
Bromodichloromethane	25.0	22.3	23.0	89.2	92.2	75.0-120			3.25	20
Bromoform	25.0	19.3	20.5	77.4	81.9	68.0-132			5.69	20
Bromomethane	25.0	11.7	10.9	47.0	43.6	10.0-160			7.52	25
n-Butylbenzene	25.0	25.8	27.7	103	111	73.0-125			7.17	20
sec-Butylbenzene	25.0	25.4	26.5	102	106	75.0-125			4.19	20
tert-Butylbenzene	25.0	24.4	25.2	97.5	101	76.0-124			3.40	20
Carbon disulfide	25.0	24.7	24.7	98.7	98.6	61.0-128			0.0555	20
Carbon tetrachloride	25.0	20.7	20.7	82.7	82.9	68.0-126			0.243	20
Chlorobenzene	25.0	22.9	23.2	91.6	92.8	80.0-121			1.24	20
Chlorodibromomethane	25.0	20.2	21.1	80.6	84.6	77.0-125			4.78	20
Chloroethane	25.0	19.2	19.0	76.9	75.8	47.0-150			1.34	20
Chloroform	25.0	23.8	24.0	95.3	95.9	73.0-120			0.554	20
Chloromethane	25.0	21.0	21.0	84.1	84.0	41.0-142			0.132	20
2-Chlorotoluene	25.0	26.8	28.1	107	112	76.0-123			4.55	20
4-Chlorotoluene	25.0	29.0	30.3	116	121	75.0-122			4.48	20
1,2-Dibromo-3-Chloropropane	25.0	20.1	23.1	80.3	92.3	58.0-134			13.9	20
1,2-Dibromoethane	25.0	21.8	23.2	87.0	92.7	80.0-122			6.33	20
Dibromomethane	25.0	21.5	22.7	86.0	90.7	80.0-120			5.34	20
1,2-Dichlorobenzene	25.0	28.1	29.8	112	119	79.0-121			5.91	20
1,3-Dichlorobenzene	25.0	28.9	30.4	116	121	79.0-120		J4	4.98	20
1,4-Dichlorobenzene	25.0	26.4	27.5	105	110	79.0-120			4.17	20
Dichlorodifluoromethane	25.0	20.9	20.8	83.5	83.3	51.0-149			0.188	20
1,1-Dichloroethane	25.0	26.2	25.9	105	104	70.0-126			0.960	20
1,2-Dichloroethane	25.0	22.5	23.8	90.1	95.2	70.0-128			5.51	20
1,1-Dichloroethene	25.0	22.9	22.6	91.7	90.5	71.0-124			1.29	20
cis-1,2-Dichloroethene	25.0	23.3	23.5	93.3	93.8	73.0-120			0.566	20
trans-1,2-Dichloroethene	25.0	24.6	25.4	98.5	102	73.0-120			3.03	20
1,2-Dichloropropane	25.0	28.0	29.0	112	116	77.0-125			3.69	20
1,1-Dichloropropene	25.0	26.4	25.8	106	103	74.0-126			2.34	20
1,3-Dichloropropane	25.0	25.1	27.3	100	109	80.0-120			8.59	20
cis-1,3-Dichloropropene	25.0	25.8	26.2	103	105	80.0-123			1.44	20
trans-1,3-Dichloropropene	25.0	24.2	25.0	96.9	100	78.0-124			3.13	20
2,2-Dichloropropane	25.0	22.7	22.6	91.0	90.6	58.0-130			0.422	20
Di-isopropyl ether	25.0	28.4	29.3	114	117	58.0-138			2.97	20
Ethylbenzene	25.0	23.1	23.1	92.2	92.6	79.0-123			0.385	20
Hexachloro-1,3-butadiene	25.0	26.0	29.4	104	118	54.0-138			12.3	20
Isopropylbenzene	25.0	22.7	22.8	90.6	91.2	76.0-127			0.632	20
p-Isopropyltoluene	25.0	24.0	25.2	95.8	101	76.0-125			5.22	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) R3440958-1 08/15/19 10:00 • (LCSD) R3440958-2 08/15/19 10:21

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 %
2-Butanone (MEK)	125	133	133	106	106	44.0-160			0.0839	20
Methylene Chloride	25.0	24.2	24.6	96.8	98.5	67.0-120			1.71	20
4-Methyl-2-pentanone (MIBK)	125	137	143	110	115	68.0-142			4.13	20
Methyl tert-butyl ether	25.0	24.4	25.4	97.7	102	68.0-125			3.92	20
Naphthalene	25.0	21.3	24.7	85.2	98.7	54.0-135			14.7	20
n-Propylbenzene	25.0	29.5	30.4	118	122	77.0-124			2.97	20
Styrene	25.0	20.1	22.5	80.4	89.8	73.0-130			11.0	20
1,1,1,2-Tetrachloroethane	25.0	20.8	21.5	83.4	86.0	75.0-125			3.10	20
1,1,2,2-Tetrachloroethane	25.0	28.2	30.2	113	121	65.0-130			6.97	20
1,1,2-Trichlorotrifluoroethane	25.0	22.7	22.5	90.6	90.0	69.0-132			0.673	20
Tetrachloroethene	25.0	23.6	23.7	94.4	94.9	72.0-132			0.476	20
Toluene	25.0	24.2	24.4	97.0	97.5	79.0-120			0.555	20
1,2,3-Trichlorobenzene	25.0	24.3	29.8	97.4	119	50.0-138			20.0	20
1,2,4-Trichlorobenzene	25.0	26.3	30.9	105	123	57.0-137			15.8	20
1,1,1-Trichloroethane	25.0	22.6	22.7	90.3	90.8	73.0-124			0.494	20
1,1,2-Trichloroethane	25.0	21.7	22.3	86.7	89.3	80.0-120			2.93	20
Trichloroethene	25.0	22.3	22.5	89.1	89.9	78.0-124			0.875	20
Trichlorofluoromethane	25.0	20.3	20.4	81.3	81.6	59.0-147			0.282	20
1,2,3-Trichloropropane	25.0	24.4	25.9	97.7	104	73.0-130			5.97	20
1,2,4-Trimethylbenzene	25.0	27.2	27.6	109	110	76.0-121			1.69	20
1,2,3-Trimethylbenzene	25.0	25.4	26.5	102	106	77.0-120			4.21	20
1,3,5-Trimethylbenzene	25.0	26.7	28.0	107	112	76.0-122			4.72	20
Vinyl chloride	25.0	26.6	26.4	106	106	67.0-131			0.757	20
Xylenes, Total	75.0	67.1	69.1	89.5	92.1	79.0-123			2.94	20
(S) Toluene-d8				95.5	96.4	80.0-120				
(S) 4-Bromofluorobenzene				87.3	89.6	77.0-126				
(S) 1,2-Dichloroethane-d4				97.7	101	70.0-130				

1 Cp

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Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
J4	The associated batch QC was outside the established quality control range for accuracy.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.  
 \* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	90010	South Carolina	84004
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana <sup>1</sup>	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

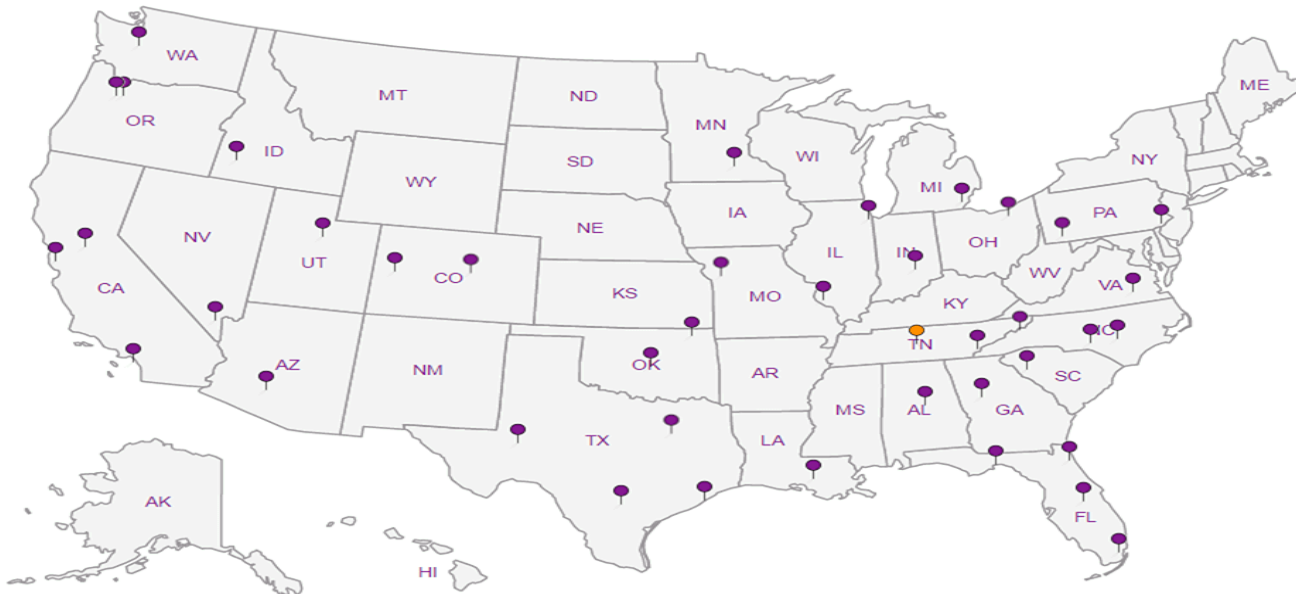
## Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
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>6</sup> Wastewater n/a Accreditation not applicable

## Our Locations

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



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**Cascade Corporation- Fairview, OR**

2201 NE 201st Avenue  
Fairview, OR 97024-9718

Billing Information:  
Accounts Payable  
P.O. Box 20187  
Portland, OR 97294-0187

Report to:  
**Cindy Bartlett**

Email To: CBartlett@Geosyntec.com;  
bwebb@Geosyntec.com

Project Description: **CTS**

City/State Collected: **Fairview OR**

Phone: **503-669-6286**  
Fax:

Client Project #  
**PNG0564S19-05**

Lab Project #  
**CASCORFOR-PNG0564**

Collected by (print):  
**PAT YADON / DIETRICH TIERSON**

Site/Facility ID #

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**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
TS-C-EFF-080619		GW		8-6-19	9:20	3 X
TS-C-EFF-080619		GW		8-6-19	9:21	3 X
TS-C-INF-080619		GW		8-6-19	9:30	3 X
Trip Blank # Lot 406		#20		8-6-19	NA	1 X
						0

VOCs 8260LLC 40miAmb-HCI

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



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



L# **L1127015**  
**1243**

Acctnum: **CASCORFOR**  
Template: **T153101**  
Prelogin: **P719889**  
TSR: **110 - Brian Ford**  
PB:

Shipped Via:  
Remarks Sample # (lab only)

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

Remarks:

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

Tracking # **4882 8629 5212**

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

**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 \_\_\_  
**RAD SCREEN: <0.5 mPA**

Relinquished by: (Signature)

Date: **8-7-19** Time:

Received by: (Signature)

Trip Blank Received: Yes  No   
HCL/MeOH  
TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp: **27.70-27.92** °C Bottles Received: **9**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)

Date: **8/8/19** Time: **8:45**

Hold: Condition: **NCF / OK**

## Brian Ford

---

**From:** Cindy Bartlett <CBartlett@Geosyntec.com>  
**Sent:** Friday, August 9, 2019 2:41 PM  
**To:** Brian Ford  
**Cc:** Brian Webb; Justin Whittet; Matt Gargiulo  
**Subject:** RE: Pace Analytical National Login for PNG0564S19-05 CTS L1127015  
**Attachments:** COCL1127015.pdf; ln01L1127015.pdf

CAUTION: This email originated from outside Pace Analytical. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Brian,  
There are two samples with the same name "TS-C-EFF-080619", and one should have had "-dup" in the sample name. When you report the data, we'll see your different lab IDs, but at this point can we edit the sample name?

Thanks,  
Cindy

-----Original Message-----

**From:** Brian Ford <bford@pacenational.com>  
**Sent:** Friday, August 9, 2019 12:30 PM  
**To:** Cindy Bartlett <CBartlett@Geosyntec.com>  
**Subject:** Pace Analytical National Login for PNG0564S19-05 CTS L1127015

"Privileged and Confidential"

Thank you for choosing Pace National! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

Pace National is leading the laboratory industry with our On-line Data Management tools. Please contact your Project Manager to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at  
<https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pacenational.com&data=02%7C01%7CCBartlett%40Geosyntec.com%7Ce50078d9e23941848f2108d71cfff35d%7C7125495671b047f48977c4c17bc205cb%7C1%7C0%7C637009758492256210&data=wDCVo2I2QoeLG4v8DfqKikfEYAI4z1YFAjy7ylAeDC4%3D&reserved=0>.

Visit Pace National's secure data management web site - myData - for all your reporting and data management needs at  
<https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pacenational.com%2Flogin&data=02%7C01%7CCBartlett%40Geosyntec.com%7Ce50078d9e23941848f2108d71cfff35d%7C7125495671b047f48977c4c17bc205cb%7C1%7C0%7C637009758492256210&data=wFUkoE8eY9rbQ%2FmVqUKBH%2BamZxPBWzQdZNNGicTdavi%3D&reserved=0>

Pace National ... "Your Lab of Choice"

Brian Ford  
Technical Service Representative

615-773-9772

Pace Analytical National  
12065 Lebanon Rd.  
Mt. Juliet, TN 37122

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