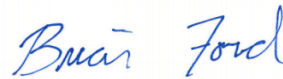


Cascade Corporation- Fairview, OR

Sample Delivery Group: L1247054
Samples Received: 08/05/2020
Project Number: PNG0564S20
Description: Cascade TSA

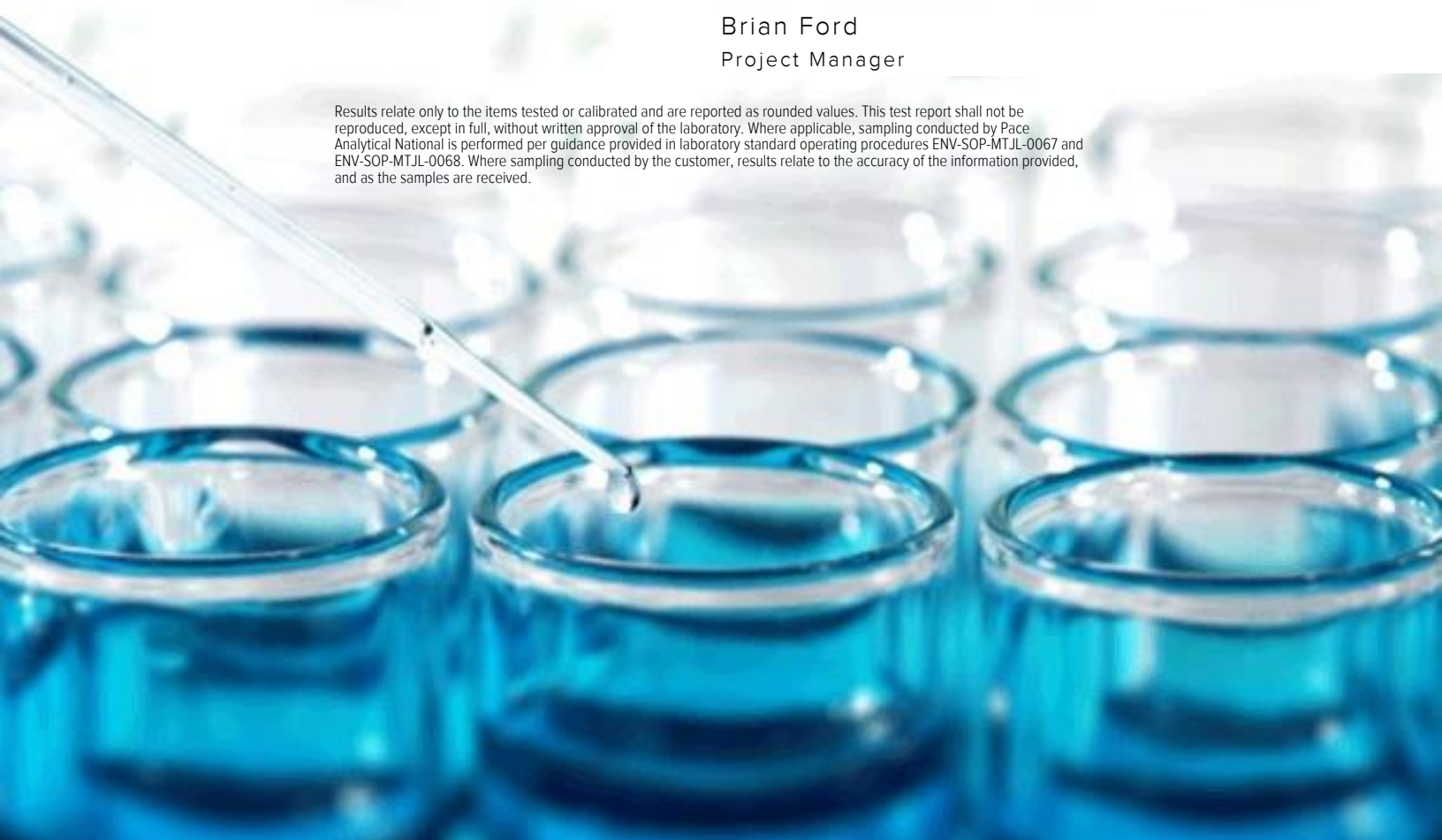
Report To: Cindy Bartlett
2201 NE 201st Avenue
Fairview, OR 97024-9718

Entire Report Reviewed By:



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.





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¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



TS-C-EFF-080420 L1247054-01 GW

				Collected by PY/MT	Collected date/time	Received date/time
					08/04/20 11:00	08/05/20 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1522640	1	08/09/20 00:44	08/09/20 00:44	ACG	Mt. Juliet, TN

¹Cp²Tc³Ss

TS-C-EFF-080420-DUP L1247054-02 GW

				Collected by PY/MT	Collected date/time	Received date/time
					08/04/20 11:01	08/05/20 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1522640	1	08/09/20 01:03	08/09/20 01:03	ACG	Mt. Juliet, TN

⁴Cn⁵Sr⁶Qc

TRIP BLANK LOT# 448 L1247054-03 GW

				Collected by PY/MT	Collected date/time	Received date/time
					08/04/20 00:00	08/05/20 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1524018	1	08/08/20 10:04	08/08/20 10:04	BMB	Mt. Juliet, TN

⁷Gl⁸Al⁹Sc

ACCOUNT:

Cascade Corporation- Fairview, OR

PROJECT:

PNG0564S20

SDG:

L1247054

DATE/TIME:

08/13/20 10:56

PAGE:

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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

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	25.0	1	08/09/2020 00:44	WG1522640
Acrolein	ND	J4	50.0	1	08/09/2020 00:44	WG1522640
Acrylonitrile	ND		5.00	1	08/09/2020 00:44	WG1522640
Benzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Bromobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Bromodichloromethane	ND		0.500	1	08/09/2020 00:44	WG1522640
Bromoform	ND		0.500	1	08/09/2020 00:44	WG1522640
Bromomethane	ND		2.50	1	08/09/2020 00:44	WG1522640
n-Butylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
sec-Butylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
tert-Butylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Carbon disulfide	ND		0.500	1	08/09/2020 00:44	WG1522640
Carbon tetrachloride	ND		0.500	1	08/09/2020 00:44	WG1522640
Chlorobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Chlorodibromomethane	ND		0.500	1	08/09/2020 00:44	WG1522640
Chloroethane	ND		2.50	1	08/09/2020 00:44	WG1522640
Chloroform	ND		0.500	1	08/09/2020 00:44	WG1522640
Chloromethane	ND		1.25	1	08/09/2020 00:44	WG1522640
2-Chlorotoluene	ND		0.500	1	08/09/2020 00:44	WG1522640
4-Chlorotoluene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/09/2020 00:44	WG1522640
1,2-Dibromoethane	ND		0.500	1	08/09/2020 00:44	WG1522640
Dibromomethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2-Dichlorobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,3-Dichlorobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,4-Dichlorobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Dichlorodifluoromethane	ND		2.50	1	08/09/2020 00:44	WG1522640
1,1-Dichloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2-Dichloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1-Dichloroethene	ND		0.500	1	08/09/2020 00:44	WG1522640
cis-1,2-Dichloroethene	ND		0.500	1	08/09/2020 00:44	WG1522640
trans-1,2-Dichloroethene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2-Dichloropropane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1-Dichloropropene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,3-Dichloropropane	ND		1.00	1	08/09/2020 00:44	WG1522640
cis-1,3-Dichloropropene	ND		0.500	1	08/09/2020 00:44	WG1522640
trans-1,3-Dichloropropene	ND		0.500	1	08/09/2020 00:44	WG1522640
2,2-Dichloropropane	ND		0.500	1	08/09/2020 00:44	WG1522640
Di-isopropyl ether	ND		0.500	1	08/09/2020 00:44	WG1522640
Ethylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Hexachloro-1,3-butadiene	ND		1.00	1	08/09/2020 00:44	WG1522640
Isopropylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
p-Isopropyltoluene	ND		0.500	1	08/09/2020 00:44	WG1522640
2-Butanone (MEK)	ND		5.00	1	08/09/2020 00:44	WG1522640
Methylene Chloride	ND		2.50	1	08/09/2020 00:44	WG1522640
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/09/2020 00:44	WG1522640
Methyl tert-butyl ether	ND		0.500	1	08/09/2020 00:44	WG1522640
Naphthalene	ND		2.50	1	08/09/2020 00:44	WG1522640
n-Propylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Styrene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
Tetrachloroethene	ND		0.500	1	08/09/2020 00:44	WG1522640
Toluene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2,3-Trichlorobenzene	ND		0.500	1	08/09/2020 00:44	WG1522640

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 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		1.00	1	08/09/2020 00:44	WG1522640
1,1,1-Trichloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
1,1,2-Trichloroethane	ND		0.500	1	08/09/2020 00:44	WG1522640
Trichloroethene	ND		0.500	1	08/09/2020 00:44	WG1522640
Trichlorofluoromethane	ND		2.50	1	08/09/2020 00:44	WG1522640
1,2,3-Trichloropropane	ND	J4	2.50	1	08/09/2020 00:44	WG1522640
1,2,4-Trimethylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,2,3-Trimethylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
1,3,5-Trimethylbenzene	ND		0.500	1	08/09/2020 00:44	WG1522640
Vinyl chloride	ND		0.500	1	08/09/2020 00:44	WG1522640
Xylenes, Total	ND		1.50	1	08/09/2020 00:44	WG1522640
(S) Toluene-d8	108		80.0-120		08/09/2020 00:44	WG1522640
(S) 4-Bromofluorobenzene	98.9		77.0-126		08/09/2020 00:44	WG1522640
(S) 1,2-Dichloroethane-d4	111		70.0-130		08/09/2020 00:44	WG1522640

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND	J4	25.0	1	08/09/2020 01:03	WG1522640
Acrolein	ND	J4	50.0	1	08/09/2020 01:03	WG1522640
Acrylonitrile	ND		5.00	1	08/09/2020 01:03	WG1522640
Benzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Bromobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Bromodichloromethane	ND		0.500	1	08/09/2020 01:03	WG1522640
Bromoform	ND		0.500	1	08/09/2020 01:03	WG1522640
Bromomethane	ND		2.50	1	08/09/2020 01:03	WG1522640
n-Butylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
sec-Butylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
tert-Butylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Carbon disulfide	ND		0.500	1	08/09/2020 01:03	WG1522640
Carbon tetrachloride	ND		0.500	1	08/09/2020 01:03	WG1522640
Chlorobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Chlorodibromomethane	ND		0.500	1	08/09/2020 01:03	WG1522640
Chloroethane	ND		2.50	1	08/09/2020 01:03	WG1522640
Chloroform	ND		0.500	1	08/09/2020 01:03	WG1522640
Chloromethane	ND		1.25	1	08/09/2020 01:03	WG1522640
2-Chlorotoluene	ND		0.500	1	08/09/2020 01:03	WG1522640
4-Chlorotoluene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/09/2020 01:03	WG1522640
1,2-Dibromoethane	ND		0.500	1	08/09/2020 01:03	WG1522640
Dibromomethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2-Dichlorobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,3-Dichlorobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,4-Dichlorobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Dichlorodifluoromethane	ND		2.50	1	08/09/2020 01:03	WG1522640
1,1-Dichloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2-Dichloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1-Dichloroethene	ND		0.500	1	08/09/2020 01:03	WG1522640
cis-1,2-Dichloroethene	ND		0.500	1	08/09/2020 01:03	WG1522640
trans-1,2-Dichloroethene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2-Dichloropropane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1-Dichloropropene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,3-Dichloropropane	ND		1.00	1	08/09/2020 01:03	WG1522640
cis-1,3-Dichloropropene	ND		0.500	1	08/09/2020 01:03	WG1522640
trans-1,3-Dichloropropene	ND		0.500	1	08/09/2020 01:03	WG1522640
2,2-Dichloropropane	ND		0.500	1	08/09/2020 01:03	WG1522640
Di-isopropyl ether	ND		0.500	1	08/09/2020 01:03	WG1522640
Ethylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Hexachloro-1,3-butadiene	ND		1.00	1	08/09/2020 01:03	WG1522640
Isopropylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
p-Isopropyltoluene	ND		0.500	1	08/09/2020 01:03	WG1522640
2-Butanone (MEK)	ND		5.00	1	08/09/2020 01:03	WG1522640
Methylene Chloride	ND		2.50	1	08/09/2020 01:03	WG1522640
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/09/2020 01:03	WG1522640
Methyl tert-butyl ether	ND		0.500	1	08/09/2020 01:03	WG1522640
Naphthalene	ND		2.50	1	08/09/2020 01:03	WG1522640
n-Propylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Styrene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
Tetrachloroethene	ND		0.500	1	08/09/2020 01:03	WG1522640
Toluene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2,3-Trichlorobenzene	ND		0.500	1	08/09/2020 01:03	WG1522640

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 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		1.00	1	08/09/2020 01:03	WG1522640
1,1,1-Trichloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
1,1,2-Trichloroethane	ND		0.500	1	08/09/2020 01:03	WG1522640
Trichloroethene	ND		0.500	1	08/09/2020 01:03	WG1522640
Trichlorofluoromethane	ND		2.50	1	08/09/2020 01:03	WG1522640
1,2,3-Trichloropropane	ND	J4	2.50	1	08/09/2020 01:03	WG1522640
1,2,4-Trimethylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,2,3-Trimethylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
1,3,5-Trimethylbenzene	ND		0.500	1	08/09/2020 01:03	WG1522640
Vinyl chloride	ND		0.500	1	08/09/2020 01:03	WG1522640
Xylenes, Total	ND		1.50	1	08/09/2020 01:03	WG1522640
(S) Toluene-d8	107		80.0-120		08/09/2020 01:03	WG1522640
(S) 4-Bromofluorobenzene	97.2		77.0-126		08/09/2020 01:03	WG1522640
(S) 1,2-Dichloroethane-d4	108		70.0-130		08/09/2020 01:03	WG1522640

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc



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

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	08/08/2020 10:04	WG1524018
Acrolein	ND		50.0	1	08/08/2020 10:04	WG1524018
Acrylonitrile	ND		5.00	1	08/08/2020 10:04	WG1524018
Benzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Bromobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Bromodichloromethane	ND		0.500	1	08/08/2020 10:04	WG1524018
Bromoform	ND		0.500	1	08/08/2020 10:04	WG1524018
Bromomethane	ND		2.50	1	08/08/2020 10:04	WG1524018
n-Butylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
sec-Butylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
tert-Butylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Carbon disulfide	ND		0.500	1	08/08/2020 10:04	WG1524018
Carbon tetrachloride	ND		0.500	1	08/08/2020 10:04	WG1524018
Chlorobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Chlorodibromomethane	ND		0.500	1	08/08/2020 10:04	WG1524018
Chloroethane	ND		2.50	1	08/08/2020 10:04	WG1524018
Chloroform	ND		0.500	1	08/08/2020 10:04	WG1524018
Chloromethane	ND		1.25	1	08/08/2020 10:04	WG1524018
2-Chlorotoluene	ND		0.500	1	08/08/2020 10:04	WG1524018
4-Chlorotoluene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2-Dibromo-3-Chloropropane	ND		2.50	1	08/08/2020 10:04	WG1524018
1,2-Dibromoethane	ND		0.500	1	08/08/2020 10:04	WG1524018
Dibromomethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2-Dichlorobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,3-Dichlorobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,4-Dichlorobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Dichlorodifluoromethane	ND		2.50	1	08/08/2020 10:04	WG1524018
1,1-Dichloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2-Dichloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1-Dichloroethene	ND		0.500	1	08/08/2020 10:04	WG1524018
cis-1,2-Dichloroethene	ND		0.500	1	08/08/2020 10:04	WG1524018
trans-1,2-Dichloroethene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2-Dichloropropane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1-Dichloropropene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,3-Dichloropropane	ND		1.00	1	08/08/2020 10:04	WG1524018
cis-1,3-Dichloropropene	ND		0.500	1	08/08/2020 10:04	WG1524018
trans-1,3-Dichloropropene	ND		0.500	1	08/08/2020 10:04	WG1524018
2,2-Dichloropropane	ND	<u>JO</u>	0.500	1	08/08/2020 10:04	WG1524018
Di-isopropyl ether	ND		0.500	1	08/08/2020 10:04	WG1524018
Ethylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Hexachloro-1,3-butadiene	ND		1.00	1	08/08/2020 10:04	WG1524018
Isopropylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
p-Isopropyltoluene	ND		0.500	1	08/08/2020 10:04	WG1524018
2-Butanone (MEK)	ND		5.00	1	08/08/2020 10:04	WG1524018
Methylene Chloride	ND		2.50	1	08/08/2020 10:04	WG1524018
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	08/08/2020 10:04	WG1524018
Methyl tert-butyl ether	ND		0.500	1	08/08/2020 10:04	WG1524018
Naphthalene	ND		2.50	1	08/08/2020 10:04	WG1524018
n-Propylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Styrene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1,1,2-Tetrachloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1,2,2-Tetrachloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
Tetrachloroethene	ND		0.500	1	08/08/2020 10:04	WG1524018
Toluene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2,3-Trichlorobenzene	ND		0.500	1	08/08/2020 10:04	WG1524018

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 8260D

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		1.00	1	08/08/2020 10:04	WG1524018
1,1,1-Trichloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
1,1,2-Trichloroethane	ND		0.500	1	08/08/2020 10:04	WG1524018
Trichloroethene	ND		0.500	1	08/08/2020 10:04	WG1524018
Trichlorofluoromethane	ND		2.50	1	08/08/2020 10:04	WG1524018
1,2,3-Trichloropropane	ND		2.50	1	08/08/2020 10:04	WG1524018
1,2,4-Trimethylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,2,3-Trimethylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
1,3,5-Trimethylbenzene	ND		0.500	1	08/08/2020 10:04	WG1524018
Vinyl chloride	ND		0.500	1	08/08/2020 10:04	WG1524018
Xylenes, Total	ND		1.50	1	08/08/2020 10:04	WG1524018
(S) Toluene-d8	105		80.0-120		08/08/2020 10:04	WG1524018
(S) 4-Bromofluorobenzene	99.3		77.0-126		08/08/2020 10:04	WG1524018
(S) 1,2-Dichloroethane-d4	102		70.0-130		08/08/2020 10:04	WG1524018

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



Method Blank (MB)

(MB) R3558585-2 08/08/20 18:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	25.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	5.00
Benzene	U		0.0941	0.500
Bromobenzene	U		0.118	0.500
Bromodichloromethane	U		0.136	0.500
Bromoform	U		0.129	0.500
Bromomethane	U		0.605	2.50
n-Butylbenzene	U		0.157	0.500
sec-Butylbenzene	U		0.125	0.500
tert-Butylbenzene	U		0.127	0.500
Carbon disulfide	U		0.0962	0.500
Carbon tetrachloride	U		0.128	0.500
Chlorobenzene	U		0.117	0.500
Chlorodibromomethane	U		0.140	0.500
Chloroethane	U		0.192	2.50
Chloroform	U		0.111	0.500
Chloromethane	U		0.960	1.25
2-Chlorotoluene	U		0.106	0.500
4-Chlorotoluene	U		0.114	0.500
1,2-Dibromo-3-Chloropropane	U		0.276	2.50
1,2-Dibromoethane	U		0.126	0.500
Dibromomethane	U		0.122	0.500
1,2-Dichlorobenzene	U		0.107	0.500
1,3-Dichlorobenzene	U		0.299	0.500
1,4-Dichlorobenzene	U		0.120	0.500
Dichlorodifluoromethane	U		0.374	2.50
1,1-Dichloroethane	U		0.100	0.500
1,2-Dichloroethane	U		0.0819	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.126	0.500
trans-1,2-Dichloroethene	U		0.149	0.500
1,2-Dichloropropane	U		0.149	0.500
1,1-Dichloropropene	U		0.142	0.500
1,3-Dichloropropane	U		0.109	1.00
cis-1,3-Dichloropropene	U		0.111	0.500
trans-1,3-Dichloropropene	U		0.118	0.500
2,2-Dichloropropane	U		0.161	0.500
Di-isopropyl ether	U		0.105	0.500
Ethylbenzene	U		0.137	0.500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3558585-2 08/08/20 18:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	0.500
p-Isopropyltoluene	U		0.120	0.500
2-Butanone (MEK)	U		1.19	5.00
Methylene Chloride	U		0.430	2.50
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00
Methyl tert-butyl ether	U		0.101	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.0993	0.500
Styrene	U		0.118	0.500
1,1,1,2-Tetrachloroethane	U		0.147	0.500
1,1,2,2-Tetrachloroethane	U		0.133	0.500
Tetrachloroethene	U		0.300	0.500
Toluene	U		0.278	0.500
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	0.500
1,1,2-Trichloroethane	U		0.158	0.500
Trichloroethene	U		0.190	0.500
Trichlorofluoromethane	U		0.160	2.50
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	0.500
1,2,4-Trimethylbenzene	U		0.322	0.500
1,3,5-Trimethylbenzene	U		0.104	0.500
Vinyl chloride	U		0.234	0.500
Xylenes, Total	U		0.174	1.50
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	96.7			77.0-126
(S) 1,2-Dichloroethane-d4	109			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3558585-3 08/08/20 22:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	44.0	176	19.0-160	J4
Acrolein	25.0	157	628	10.0-160	J4
Acrylonitrile	25.0	29.9	120	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3558585-3 08/08/20 22:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	5.00	4.96	99.2	70.0-123	
Bromobenzene	5.00	5.85	117	73.0-121	
Bromodichloromethane	5.00	5.26	105	75.0-120	
Bromoform	5.00	5.71	114	68.0-132	
Bromomethane	5.00	5.00	100	10.0-160	
n-Butylbenzene	5.00	5.43	109	73.0-125	
sec-Butylbenzene	5.00	5.69	114	75.0-125	
tert-Butylbenzene	5.00	5.85	117	76.0-124	
Carbon disulfide	5.00	4.67	93.4	61.0-128	
Carbon tetrachloride	5.00	4.60	92.0	68.0-126	
Chlorobenzene	5.00	5.57	111	80.0-121	
Chlorodibromomethane	5.00	5.46	109	77.0-125	
Chloroethane	5.00	5.08	102	47.0-150	
Chloroform	5.00	5.26	105	73.0-120	
Chloromethane	5.00	5.65	113	41.0-142	
2-Chlorotoluene	5.00	5.83	117	76.0-123	
4-Chlorotoluene	5.00	5.80	116	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	5.70	114	58.0-134	
1,2-Dibromoethane	5.00	5.48	110	80.0-122	
Dibromomethane	5.00	5.35	107	80.0-120	
1,2-Dichlorobenzene	5.00	5.88	118	79.0-121	
1,3-Dichlorobenzene	5.00	5.76	115	79.0-120	
1,4-Dichlorobenzene	5.00	5.75	115	79.0-120	
Dichlorodifluoromethane	5.00	5.38	108	51.0-149	
1,1-Dichloroethane	5.00	5.19	104	70.0-126	
1,2-Dichloroethane	5.00	5.74	115	70.0-128	
1,1-Dichloroethene	5.00	4.74	94.8	71.0-124	
cis-1,2-Dichloroethene	5.00	5.13	103	73.0-120	
trans-1,2-Dichloroethene	5.00	4.89	97.8	73.0-120	
1,2-Dichloropropane	5.00	5.20	104	77.0-125	
1,1-Dichloropropene	5.00	4.91	98.2	74.0-126	
1,3-Dichloropropane	5.00	5.77	115	80.0-120	
cis-1,3-Dichloropropene	5.00	4.79	95.8	80.0-123	
trans-1,3-Dichloropropene	5.00	5.48	110	78.0-124	
2,2-Dichloropropane	5.00	4.41	88.2	58.0-130	
Di-isopropyl ether	5.00	5.46	109	58.0-138	
Ethylbenzene	5.00	5.43	109	79.0-123	
Hexachloro-1,3-butadiene	5.00	6.18	124	54.0-138	
Isopropylbenzene	5.00	5.42	108	76.0-127	
p-Isopropyltoluene	5.00	5.60	112	76.0-125	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Laboratory Control Sample (LCS)

(LCS) R3558585-3 08/08/20 22:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2-Butanone (MEK)	25.0	32.6	130	44.0-160	
Methylene Chloride	5.00	5.15	103	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	32.8	131	68.0-142	
Methyl tert-butyl ether	5.00	5.36	107	68.0-125	
Naphthalene	5.00	5.80	116	54.0-135	
n-Propylbenzene	5.00	5.58	112	77.0-124	
Styrene	5.00	5.49	110	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	5.82	116	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.37	107	65.0-130	
Tetrachloroethene	5.00	5.35	107	72.0-132	
Toluene	5.00	5.37	107	79.0-120	
1,1,2-Trichlorotrifluoroethane	5.00	4.65	93.0	69.0-132	
1,2,3-Trichlorobenzene	5.00	5.98	120	50.0-138	
1,2,4-Trichlorobenzene	5.00	5.83	117	57.0-137	
1,1,1-Trichloroethane	5.00	4.83	96.6	73.0-124	
1,1,2-Trichloroethane	5.00	5.84	117	80.0-120	
Trichloroethene	5.00	5.39	108	78.0-124	
Trichlorofluoromethane	5.00	5.14	103	59.0-147	
1,2,3-Trichloropropane	5.00	6.55	131	73.0-130	J4
1,2,3-Trimethylbenzene	5.00	5.75	115	77.0-120	
1,2,4-Trimethylbenzene	5.00	5.64	113	76.0-121	
1,3,5-Trimethylbenzene	5.00	5.75	115	76.0-122	
Vinyl chloride	5.00	5.11	102	67.0-131	
Xylenes, Total	15.0	16.1	107	79.0-123	
(S) Toluene-d8			105	80.0-120	
(S) 4-Bromofluorobenzene			99.6	77.0-126	
(S) 1,2-Dichloroethane-d4			113	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Method Blank (MB)

(MB) R3559046-2 08/08/20 06:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	25.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	5.00
Benzene	U		0.0941	0.500
Bromobenzene	U		0.118	0.500
Bromodichloromethane	U		0.136	0.500
Bromoform	U		0.129	0.500
Bromomethane	U		0.605	2.50
n-Butylbenzene	U		0.157	0.500
sec-Butylbenzene	U		0.125	0.500
tert-Butylbenzene	U		0.127	0.500
Carbon disulfide	U		0.0962	0.500
Carbon tetrachloride	U		0.128	0.500
Chlorobenzene	U		0.117	0.500
Chlorodibromomethane	U		0.140	0.500
Chloroethane	U		0.192	2.50
Chloroform	U		0.111	0.500
Chloromethane	U		0.960	1.25
2-Chlorotoluene	U		0.106	0.500
4-Chlorotoluene	U		0.114	0.500
1,2-Dibromo-3-Chloropropane	U		0.276	2.50
1,2-Dibromoethane	U		0.126	0.500
Dibromomethane	U		0.122	0.500
1,2-Dichlorobenzene	U		0.107	0.500
1,3-Dichlorobenzene	U		0.299	0.500
1,4-Dichlorobenzene	U		0.120	0.500
Dichlorodifluoromethane	U		0.374	2.50
1,1-Dichloroethane	U		0.100	0.500
1,2-Dichloroethane	U		0.0819	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.126	0.500
trans-1,2-Dichloroethene	U		0.149	0.500
1,2-Dichloropropane	U		0.149	0.500
1,1-Dichloropropene	U		0.142	0.500
1,3-Dichloropropane	U		0.109	1.00
cis-1,3-Dichloropropene	U		0.111	0.500
trans-1,3-Dichloropropene	U		0.118	0.500
2,2-Dichloropropane	U	JO	0.161	0.500
Di-isopropyl ether	U		0.105	0.500
Ethylbenzene	U		0.137	0.500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3559046-2 08/08/20 06:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	0.500
p-Isopropyltoluene	U		0.120	0.500
2-Butanone (MEK)	U		1.19	5.00
Methylene Chloride	U		0.430	2.50
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00
Methyl tert-butyl ether	U		0.101	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.0993	0.500
Styrene	U		0.118	0.500
1,1,1,2-Tetrachloroethane	U		0.147	0.500
1,1,2,2-Tetrachloroethane	U		0.133	0.500
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500
Tetrachloroethene	U		0.300	0.500
Toluene	U		0.278	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	0.500
1,1,2-Trichloroethane	U		0.158	0.500
Trichloroethene	U		0.190	0.500
Trichlorofluoromethane	U		0.160	2.50
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	0.500
1,2,3-Trimethylbenzene	U		0.104	0.500
1,3,5-Trimethylbenzene	U		0.104	0.500
Vinyl chloride	U		0.234	0.500
Xylenes, Total	U		0.174	1.50
(S) Toluene-d8	108			80.0-120
(S) 4-Bromofluorobenzene	96.6			77.0-126
(S) 1,2-Dichloroethane-d4	98.0			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3559046-1 08/08/20 06:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	22.2	88.8	19.0-160	
Acrolein	25.0	26.3	105	10.0-160	
Acrylonitrile	25.0	22.4	89.6	55.0-149	



Laboratory Control Sample (LCS)

(LCS) R3559046-1 08/08/20 06:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	5.00	4.63	92.6	70.0-123	
Bromobenzene	5.00	5.61	112	73.0-121	
Bromodichloromethane	5.00	4.83	96.6	75.0-120	
Bromoform	5.00	5.07	101	68.0-132	
Bromomethane	5.00	4.39	87.8	10.0-160	
n-Butylbenzene	5.00	5.05	101	73.0-125	
sec-Butylbenzene	5.00	5.32	106	75.0-125	
tert-Butylbenzene	5.00	5.39	108	76.0-124	
Carbon disulfide	5.00	4.20	84.0	61.0-128	
Carbon tetrachloride	5.00	4.16	83.2	68.0-126	
Chlorobenzene	5.00	5.33	107	80.0-121	
Chlorodibromomethane	5.00	5.47	109	77.0-125	
Chloroethane	5.00	4.73	94.6	47.0-150	
Chloroform	5.00	4.83	96.6	73.0-120	
Chloromethane	5.00	4.66	93.2	41.0-142	
2-Chlorotoluene	5.00	5.53	111	76.0-123	
4-Chlorotoluene	5.00	5.61	112	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.76	95.2	58.0-134	
1,2-Dibromoethane	5.00	5.19	104	80.0-122	
Dibromomethane	5.00	4.85	97.0	80.0-120	
1,2-Dichlorobenzene	5.00	5.46	109	79.0-121	
1,3-Dichlorobenzene	5.00	5.46	109	79.0-120	
1,4-Dichlorobenzene	5.00	5.63	113	79.0-120	
Dichlorodifluoromethane	5.00	4.84	96.8	51.0-149	
1,1-Dichloroethane	5.00	4.91	98.2	70.0-126	
1,2-Dichloroethane	5.00	4.90	98.0	70.0-128	
1,1-Dichloroethene	5.00	4.39	87.8	71.0-124	
cis-1,2-Dichloroethene	5.00	4.80	96.0	73.0-120	
trans-1,2-Dichloroethene	5.00	4.37	87.4	73.0-120	
1,2-Dichloropropane	5.00	4.90	98.0	77.0-125	
1,1-Dichloropropene	5.00	4.46	89.2	74.0-126	
1,3-Dichloropropane	5.00	5.45	109	80.0-120	
cis-1,3-Dichloropropene	5.00	4.59	91.8	80.0-123	
trans-1,3-Dichloropropene	5.00	5.03	101	78.0-124	
2,2-Dichloropropane	5.00	3.71	74.2	58.0-130	JO
Di-isopropyl ether	5.00	5.07	101	58.0-138	
Ethylbenzene	5.00	5.06	101	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.38	87.6	54.0-138	
Isopropylbenzene	5.00	5.15	103	76.0-127	
p-Isopropyltoluene	5.00	5.24	105	76.0-125	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3559046-1 08/08/20 06:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2-Butanone (MEK)	25.0	22.7	90.8	44.0-160	
Methylene Chloride	5.00	4.71	94.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	28.5	114	68.0-142	
Methyl tert-butyl ether	5.00	4.77	95.4	68.0-125	
Naphthalene	5.00	5.24	105	54.0-135	
n-Propylbenzene	5.00	5.39	108	77.0-124	
Styrene	5.00	5.34	107	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	5.26	105	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.30	106	65.0-130	
1,1,2-Trichlorotrifluoroethane	5.00	4.50	90.0	69.0-132	
Tetrachloroethene	5.00	5.27	105	72.0-132	
Toluene	5.00	5.24	105	79.0-120	
1,2,3-Trichlorobenzene	5.00	5.68	114	50.0-138	
1,2,4-Trichlorobenzene	5.00	5.23	105	57.0-137	
1,1,1-Trichloroethane	5.00	4.60	92.0	73.0-124	
1,1,2-Trichloroethane	5.00	5.50	110	80.0-120	
Trichloroethene	5.00	5.03	101	78.0-124	
Trichlorofluoromethane	5.00	4.64	92.8	59.0-147	
1,2,3-Trichloropropane	5.00	6.02	120	73.0-130	
1,2,4-Trimethylbenzene	5.00	5.48	110	76.0-121	
1,2,3-Trimethylbenzene	5.00	5.39	108	77.0-120	
1,3,5-Trimethylbenzene	5.00	5.54	111	76.0-122	
Vinyl chloride	5.00	4.79	95.8	67.0-131	
Xylenes, Total	15.0	15.6	104	79.0-123	
(S) Toluene-d8			109	80.0-120	
(S) 4-Bromofluorobenzene			101	77.0-126	
(S) 1,2-Dichloroethane-d4			105	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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

Qualifier Description

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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

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

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

State Accreditations

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

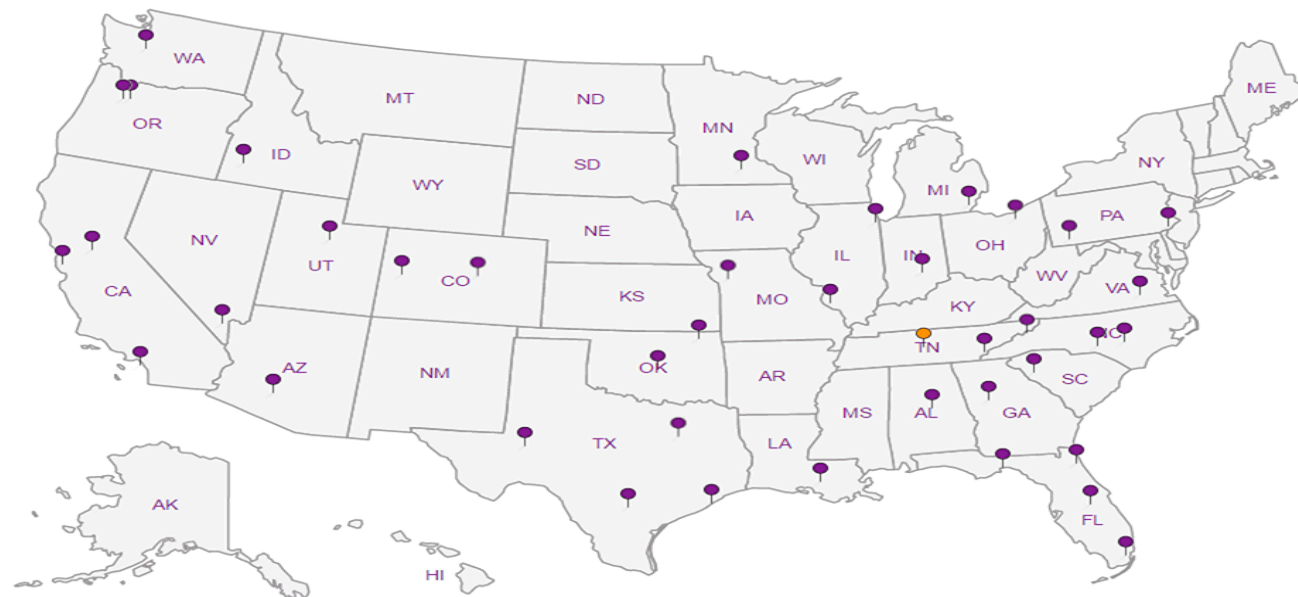
Third Party Federal Accreditations

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

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

Our Locations

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



Cascade Corporation- Fairview, OR

2201 NE 201st Avenue
Fairview, OR 97024-9718

Billing Information:

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

Pres
Chk

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



Report to:
Cindy Bartlett

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

Project Description:
Cascadia TSA

City/State
Collected: Fairview OR

Please Circle:
PT ME ET

Phone: 503-669-6286

Client Project #
PNG0564S20

Lab Project #
CASCORFOR-PNG0564

Collected by (print):
PAT YADON / MIKE TAYLOR

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N ☐ Y ☒

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

Date Results Needed

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
TS-C-EFF-080420		GW		8/4/20	11:00	3 X
TS-C-EFF-080420-DUP		GW		8/4/20	11:01	3 X
TS-C-INF-080420		GW		8/4/20	11:08	30 X
Trip Blank Lot# 448		GW		8/4/20	NA	1 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: NOTE 1 TRIP BLANK in cooler SHAW

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:

☐ UPS ☐ FedEx ☐ Courier

Tracking # 905008876020

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: ☒ X ☐ N
Preservation Correct/Checked: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Date:

8/4/20

Date:

Time:

15:30

Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes/No

HCL/MeOH
TBR

Temp: 10.0°C

Bottles Received: 10

Date: 08/05/20

Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition:

NCF OK

Cole Medley



Login #: L1247054	Client: CASCORFOR	Date:08/05/20	Evaluated by:Cole Medley
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Non-Conformance (check applicable items)

Sample Integrity	Chain of Custody Clarification	If Broken Container:
Parameter(s) past holding time	X Login Clarification Needed	Insufficient packing material around container
Temperature not in range	Chain of custody is incomplete	Insufficient packing material inside cooler
Improper container type	Please specify Metals requested.	
pH not in range.	Please specify TCCLP 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.	If no Chain of Custody:
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: Did not receive ID:TS-C-INF-080420

Client informed by:	Call x	Email	Voice Mail	Date:08/06/20	Time:1415
TSR Initials:bjf	Client Contact: Pat Yadon				

Login Instructions

Proceed without **TS-C-INF-080420**