

July 11, 2020

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

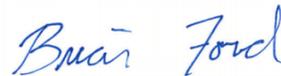
⁸ Al

⁹ Sc

Cascade Corporation- Fairview, OR

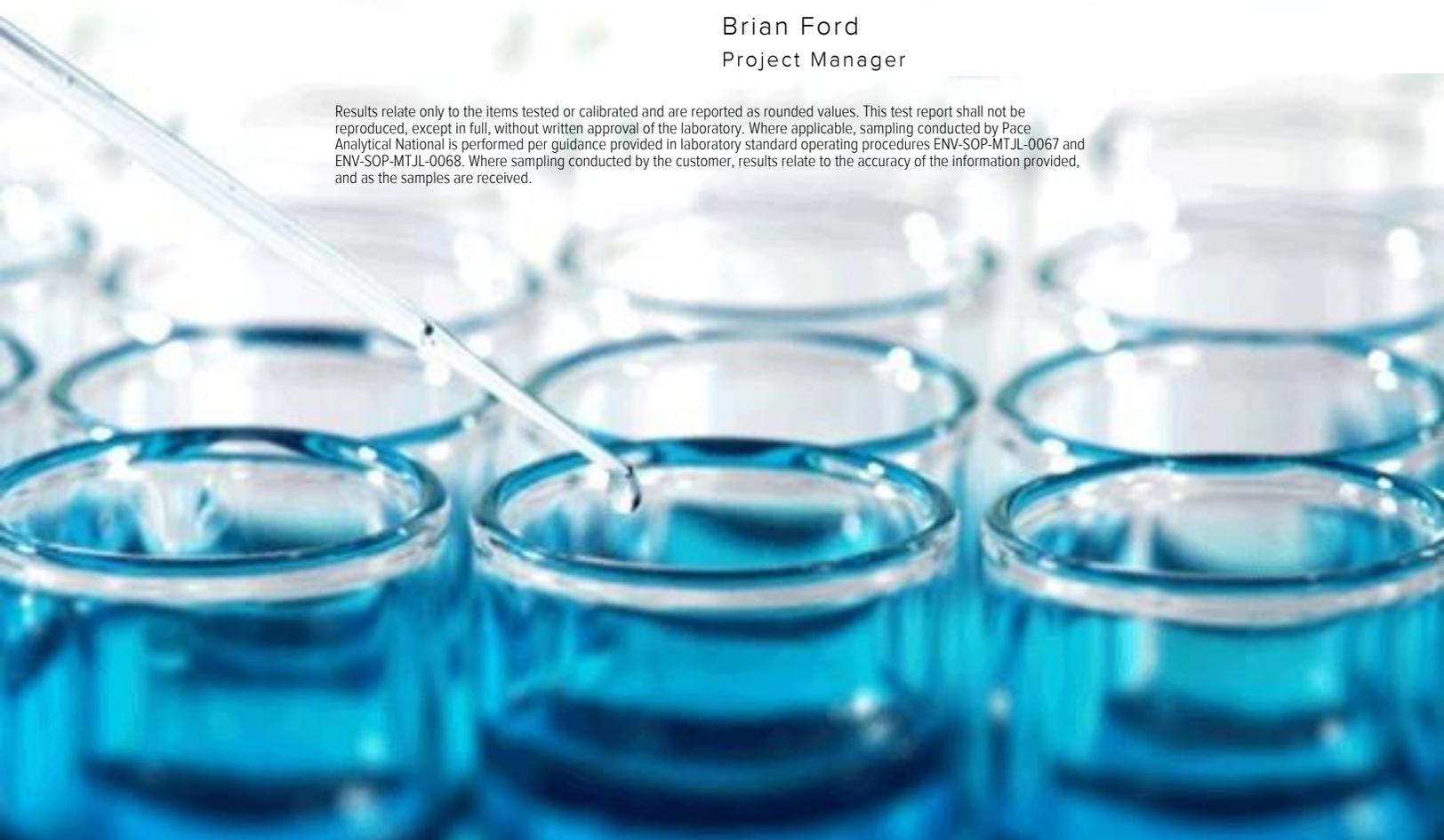
Sample Delivery Group: L1235402
Samples Received: 07/01/2020
Project Number: PNG0564S20-02.2
Description: Data Gaps VMW-J2
Site: DATA GAPS
Report To: Cindy Bartlett
2201 NE 201st Avenue
Fairview, OR 97024-9718

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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SAMPLE SUMMARY



VMWJ2-82.75-20200629 L1235402-01 Solid

Collected by: Cindy Bartlett
 Collected date/time: 06/29/20 11:30
 Received date/time: 07/01/20 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1504974	1	07/07/20 23:08	07/07/20 23:19	KBC	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1504838	1	06/29/20 11:30	07/07/20 18:18	JHH	Mt. Juliet, TN

¹ Cp

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



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.7		1	07/07/2020 23:19	WG1504974

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

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0787	1	07/07/2020 18:18	WG1504838
Acrylonitrile	ND		0.0197	1	07/07/2020 18:18	WG1504838
Benzene	ND		0.00157	1	07/07/2020 18:18	WG1504838
Bromobenzene	ND		0.0197	1	07/07/2020 18:18	WG1504838
Bromodichloromethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
Bromoform	ND		0.0394	1	07/07/2020 18:18	WG1504838
Bromomethane	ND		0.0197	1	07/07/2020 18:18	WG1504838
n-Butylbenzene	ND		0.0197	1	07/07/2020 18:18	WG1504838
sec-Butylbenzene	ND		0.0197	1	07/07/2020 18:18	WG1504838
tert-Butylbenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
Carbon tetrachloride	ND		0.00787	1	07/07/2020 18:18	WG1504838
Chlorobenzene	ND		0.00394	1	07/07/2020 18:18	WG1504838
Chlorodibromomethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
Chloroethane	ND		0.00787	1	07/07/2020 18:18	WG1504838
Chloroform	ND		0.00394	1	07/07/2020 18:18	WG1504838
Chloromethane	ND		0.0197	1	07/07/2020 18:18	WG1504838
2-Chlorotoluene	ND		0.00394	1	07/07/2020 18:18	WG1504838
4-Chlorotoluene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,2-Dibromo-3-Chloropropane	ND		0.0394	1	07/07/2020 18:18	WG1504838
1,2-Dibromoethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
Dibromomethane	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,2-Dichlorobenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,3-Dichlorobenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,4-Dichlorobenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
Dichlorodifluoromethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,1-Dichloroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,2-Dichloroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,1-Dichloroethene	ND		0.00394	1	07/07/2020 18:18	WG1504838
cis-1,2-Dichloroethene	ND		0.00394	1	07/07/2020 18:18	WG1504838
trans-1,2-Dichloroethene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,2-Dichloropropane	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,1-Dichloropropene	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,3-Dichloropropane	ND		0.00787	1	07/07/2020 18:18	WG1504838
cis-1,3-Dichloropropene	ND		0.00394	1	07/07/2020 18:18	WG1504838
trans-1,3-Dichloropropene	ND		0.00787	1	07/07/2020 18:18	WG1504838
2,2-Dichloropropane	ND		0.00394	1	07/07/2020 18:18	WG1504838
Di-isopropyl ether	ND		0.00157	1	07/07/2020 18:18	WG1504838
Ethylbenzene	ND		0.00394	1	07/07/2020 18:18	WG1504838
Hexachloro-1,3-butadiene	ND		0.0394	1	07/07/2020 18:18	WG1504838
Isopropylbenzene	ND		0.00394	1	07/07/2020 18:18	WG1504838
p-Isopropyltoluene	ND		0.00787	1	07/07/2020 18:18	WG1504838
2-Butanone (MEK)	ND		0.157	1	07/07/2020 18:18	WG1504838
Methylene Chloride	ND		0.0394	1	07/07/2020 18:18	WG1504838
4-Methyl-2-pentanone (MIBK)	ND		0.0394	1	07/07/2020 18:18	WG1504838
Methyl tert-butyl ether	ND		0.00157	1	07/07/2020 18:18	WG1504838
Naphthalene	ND		0.0197	1	07/07/2020 18:18	WG1504838
n-Propylbenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
Styrene	ND		0.0197	1	07/07/2020 18:18	WG1504838
1,1,1,2-Tetrachloroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,1,2,2-Tetrachloroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838

- 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 (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
Tetrachloroethene	ND		0.00394	1	07/07/2020 18:18	WG1504838
Toluene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,2,3-Trichlorobenzene	ND		0.0197	1	07/07/2020 18:18	WG1504838
1,2,4-Trichlorobenzene	ND		0.0197	1	07/07/2020 18:18	WG1504838
1,1,1-Trichloroethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,1,2-Trichloroethane	ND	J4	0.00394	1	07/07/2020 18:18	WG1504838
Trichloroethene	0.00535		0.00157	1	07/07/2020 18:18	WG1504838
Trichlorofluoromethane	ND		0.00394	1	07/07/2020 18:18	WG1504838
1,2,3-Trichloropropane	ND		0.0197	1	07/07/2020 18:18	WG1504838
1,2,4-Trimethylbenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,2,3-Trimethylbenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
1,3,5-Trimethylbenzene	ND		0.00787	1	07/07/2020 18:18	WG1504838
Vinyl chloride	ND		0.00394	1	07/07/2020 18:18	WG1504838
Xylenes, Total	ND		0.0102	1	07/07/2020 18:18	WG1504838
(S) Toluene-d8	107		75.0-131		07/07/2020 18:18	WG1504838
(S) 4-Bromofluorobenzene	89.7		67.0-138		07/07/2020 18:18	WG1504838
(S) 1,2-Dichloroethane-d4	88.3		70.0-130		07/07/2020 18:18	WG1504838

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



Method Blank (MB)

(MB) R3547482-1 07/07/20 23:19

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1235405-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1235405-03 07/07/20 23:19 • (DUP) R3547482-3 07/07/20 23:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	79.0	79.2	1	0.313		10

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3547482-2 07/07/20 23:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	



Method Blank (MB)

(MB) R3547018-3 07/07/20 12:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3547018-3 07/07/20 12:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	89.4			67.0-138
(S) 1,2-Dichloroethane-d4	89.4			70.0-130

¹ Cp

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⁸ Al

⁹ Sc

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

(LCS) R3547018-1 07/07/20 10:46 • (LCSD) R3547018-2 07/07/20 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.549	0.404	87.8	64.6	10.0-160			30.4	31
Acrylonitrile	0.625	0.502	0.554	80.3	88.6	45.0-153			9.85	22
Benzene	0.125	0.108	0.106	86.4	84.8	70.0-123			1.87	20
Bromobenzene	0.125	0.113	0.107	90.4	85.6	73.0-121			5.45	20
Bromodichloromethane	0.125	0.139	0.137	111	110	73.0-121			1.45	20



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

(LCS) R3547018-1 07/07/20 10:46 • (LCSD) R3547018-2 07/07/20 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.125	0.0871	0.0906	69.7	72.5	64.0-132			3.94	20
Bromomethane	0.125	0.108	0.109	86.4	87.2	56.0-147			0.922	20
n-Butylbenzene	0.125	0.128	0.124	102	99.2	68.0-135			3.17	20
sec-Butylbenzene	0.125	0.115	0.110	92.0	88.0	74.0-130			4.44	20
tert-Butylbenzene	0.125	0.153	0.146	122	117	75.0-127			4.68	20
Carbon tetrachloride	0.125	0.114	0.117	91.2	93.6	66.0-128			2.60	20
Chlorobenzene	0.125	0.112	0.110	89.6	88.0	76.0-128			1.80	20
Chlorodibromomethane	0.125	0.101	0.0986	80.8	78.9	74.0-127			2.40	20
Chloroethane	0.125	0.112	0.113	89.6	90.4	61.0-134			0.889	20
Chloroform	0.125	0.129	0.130	103	104	72.0-123			0.772	20
Chloromethane	0.125	0.128	0.135	102	108	51.0-138			5.32	20
2-Chlorotoluene	0.125	0.135	0.127	108	102	75.0-124			6.11	20
4-Chlorotoluene	0.125	0.125	0.120	100	96.0	75.0-124			4.08	20
1,2-Dibromo-3-Chloropropane	0.125	0.102	0.106	81.6	84.8	59.0-130			3.85	20
1,2-Dibromoethane	0.125	0.123	0.122	98.4	97.6	74.0-128			0.816	20
Dibromomethane	0.125	0.118	0.112	94.4	89.6	75.0-122			5.22	20
1,2-Dichlorobenzene	0.125	0.0985	0.0955	78.8	76.4	76.0-124			3.09	20
1,3-Dichlorobenzene	0.125	0.112	0.106	89.6	84.8	76.0-125			5.50	20
1,4-Dichlorobenzene	0.125	0.105	0.101	84.0	80.8	77.0-121			3.88	20
Dichlorodifluoromethane	0.125	0.144	0.145	115	116	43.0-156			0.692	20
1,1-Dichloroethane	0.125	0.126	0.128	101	102	70.0-127			1.57	20
1,2-Dichloroethane	0.125	0.104	0.102	83.2	81.6	65.0-131			1.94	20
1,1-Dichloroethene	0.125	0.116	0.121	92.8	96.8	65.0-131			4.22	20
cis-1,2-Dichloroethene	0.125	0.0964	0.0997	77.1	79.8	73.0-125			3.37	20
trans-1,2-Dichloroethene	0.125	0.146	0.151	117	121	71.0-125			3.37	20
1,2-Dichloropropane	0.125	0.126	0.121	101	96.8	74.0-125			4.05	20
1,1-Dichloropropene	0.125	0.119	0.115	95.2	92.0	73.0-125			3.42	20
1,3-Dichloropropane	0.125	0.117	0.109	93.6	87.2	80.0-125			7.08	20
cis-1,3-Dichloropropene	0.125	0.126	0.119	101	95.2	76.0-127			5.71	20
trans-1,3-Dichloropropene	0.125	0.118	0.111	94.4	88.8	73.0-127			6.11	20
2,2-Dichloropropane	0.125	0.125	0.126	100	101	59.0-135			0.797	20
Di-isopropyl ether	0.125	0.109	0.110	87.2	88.0	60.0-136			0.913	20
Ethylbenzene	0.125	0.122	0.119	97.6	95.2	74.0-126			2.49	20
Hexachloro-1,3-butadiene	0.125	0.101	0.103	80.8	82.4	57.0-150			1.96	20
Isopropylbenzene	0.125	0.115	0.116	92.0	92.8	72.0-127			0.866	20
p-Isopropyltoluene	0.125	0.115	0.111	92.0	88.8	72.0-133			3.54	20
2-Butanone (MEK)	0.625	0.590	0.584	94.4	93.4	30.0-160			1.02	24
Methylene Chloride	0.125	0.0962	0.101	77.0	80.8	68.0-123			4.87	20
4-Methyl-2-pentanone (MIBK)	0.625	0.593	0.588	94.9	94.1	56.0-143			0.847	20
Methyl tert-butyl ether	0.125	0.126	0.132	101	106	66.0-132			4.65	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) R3547018-1 07/07/20 10:46 • (LCSD) R3547018-2 07/07/20 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.109	0.113	87.2	90.4	59.0-130			3.60	20
n-Propylbenzene	0.125	0.121	0.113	96.8	90.4	74.0-126			6.84	20
Styrene	0.125	0.120	0.119	96.0	95.2	72.0-127			0.837	20
1,1,1,2-Tetrachloroethane	0.125	0.119	0.118	95.2	94.4	74.0-129			0.844	20
1,1,2,2-Tetrachloroethane	0.125	0.119	0.113	95.2	90.4	68.0-128			5.17	20
Tetrachloroethene	0.125	0.115	0.112	92.0	89.6	70.0-136			2.64	20
Toluene	0.125	0.115	0.109	92.0	87.2	75.0-121			5.36	20
1,1,2-Trichlorotrifluoroethane	0.125	0.128	0.133	102	106	61.0-139			3.83	20
1,2,3-Trichlorobenzene	0.125	0.102	0.103	81.6	82.4	59.0-139			0.976	20
1,2,4-Trichlorobenzene	0.125	0.0951	0.0979	76.1	78.3	62.0-137			2.90	20
1,1,1-Trichloroethane	0.125	0.121	0.124	96.8	99.2	69.0-126			2.45	20
1,1,2-Trichloroethane	0.125	0.156	0.145	125	116	78.0-123	J4		7.31	20
Trichloroethene	0.125	0.127	0.121	102	96.8	76.0-126			4.84	20
Trichlorofluoromethane	0.125	0.134	0.135	107	108	61.0-142			0.743	20
1,2,3-Trichloropropane	0.125	0.148	0.135	118	108	67.0-129			9.19	20
1,2,3-Trimethylbenzene	0.125	0.100	0.100	80.0	80.0	74.0-124			0.000	20
1,2,4-Trimethylbenzene	0.125	0.102	0.0980	81.6	78.4	70.0-126			4.00	20
1,3,5-Trimethylbenzene	0.125	0.115	0.111	92.0	88.8	73.0-127			3.54	20
Vinyl chloride	0.125	0.118	0.126	94.4	101	63.0-134			6.56	20
Xylenes, Total	0.375	0.320	0.317	85.3	84.5	72.0-127			0.942	20
(S) Toluene-d8				99.9	98.4	75.0-131				
(S) 4-Bromofluorobenzene				92.9	98.5	67.0-138				
(S) 1,2-Dichloroethane-d4				102	103	70.0-130				

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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

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

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Qualifier Description

J4	The associated batch QC was outside the established quality control range for accuracy.
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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

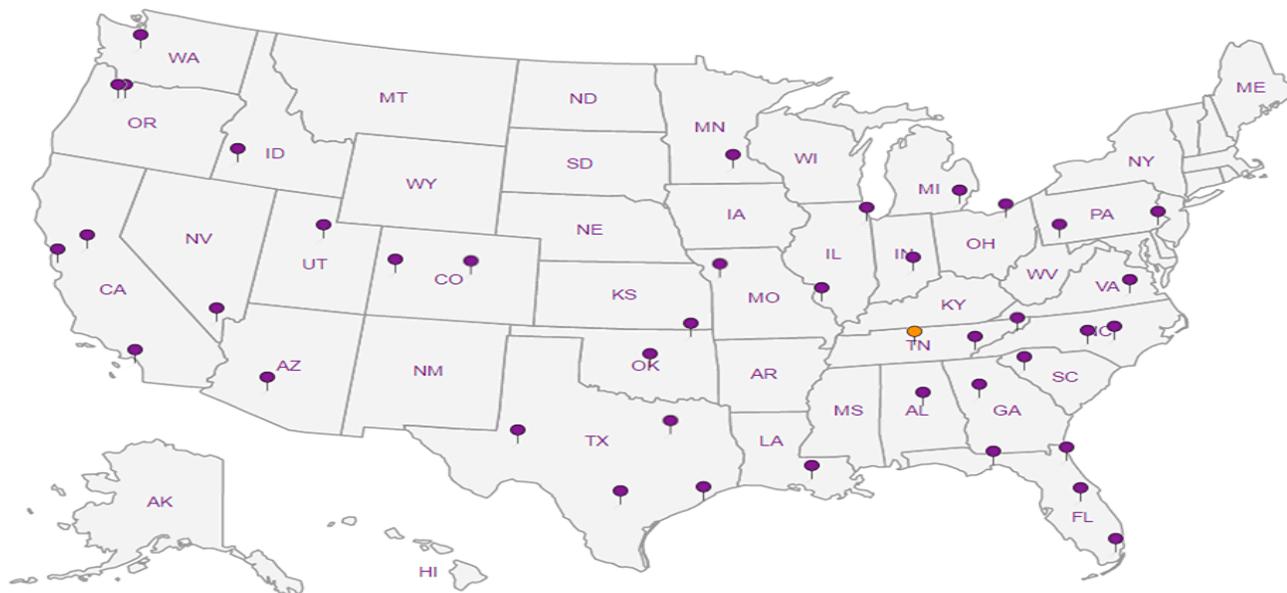
Third Party Federal Accreditations

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.



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.c

Project Description:
VMW-20 VMW-32

DATA GAPS

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: 503-669-6286

Client Project #
PNG0564S20-02.2

Lab Project #
CASCORFOR-PNG0564

Collected by (print):
CINDY BARTLETT

Site/Facility ID #
DATA GAPS

P.O. #
CASC 604

Collected by (signature):
CJB

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
VMW J2-82.75-20200628	G	SS	P2.75	6.30.20	1130	2
		SS				
		SS				
		SS				
		SS				
		SS				

Analysis / Container / Preservative
VOCs 8260D 2ozClr-NoPres
VOCs 8260D 40mlAmb/MeOH5ml/Syr

Chain of Custody Page ___ of ___



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



SDG # L1235402
J150

Acctnum: CASCORFOR
Template: T168956
Prelogin: P778899
PM: 110 - Brian Ford
PB:

Shipped Via:
Remarks Sample # (lab only)

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned by: _____ Tracking # 1275 8605 8758
___ UPS ___ FedEx ___ Courier _____

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 Headpace:		Y	N
Preservation Correct/Checked:		Y	N
RAD Screen <0.5 mR/hr:		Y	N

Relinquished by: (Signature)
CJB

Relinquished by: (Signature)
PNP

Relinquished by: (Signature)

Date: 6.30.20 1110

Date: 6/30/20 1300

Date:

Received by: (Signature)
CJB

Received by: (Signature)

Received for lab by: (Signature)
J. Brown

Trip Blank Received: Yes/No
HCL/MeOH
TBR

Temp: 2-1.1 °C
Bottles Received: 2

Date: 7/1/20 Time: 8:45

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK