

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1568644
Samples Received: 12/16/2022
Project Number: QTime # 29490
Description: Allen Street Groundwater

Report To: Jennifer Claussen
4026 Fairview Industrial Dr. SE
Salem, OR 97302

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.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
1520 ALLEN POST L1568644-01	5
1520 ALLEN PRE L1568644-02	7
DUPLICATE L1568644-03	9
Qc: Quality Control Summary	11
Volatile Organic Compounds (GC/MS) by Method 8260D	11
Gl: Glossary of Terms	15
Al: Accreditations & Locations	16
Sc: Sample Chain of Custody	17

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

SAMPLE SUMMARY

1520 ALLEN POST L1568644-01 GW

Collected by
Sarah Kingery

Collected date/time
12/15/22 13:35

Received date/time
12/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1979070	1	12/26/22 16:39	12/26/22 16:39	JAH	Mt. Juliet, TN

¹Cp

²Tc

³Ss

1520 ALLEN PRE L1568644-02 GW

Collected by
Sarah Kingery

Collected date/time
12/15/22 13:40

Received date/time
12/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1979070	1	12/26/22 17:00	12/26/22 17:00	JAH	Mt. Juliet, TN

⁴Cn

⁵Sr

DUPLICATE L1568644-03 GW

Collected by
Sarah Kingery

Collected date/time
12/15/22 13:45

Received date/time
12/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1979070	1	12/26/22 17:20	12/26/22 17:20	JAH	Mt. Juliet, TN

⁶Qc

⁷Gl

⁸Al

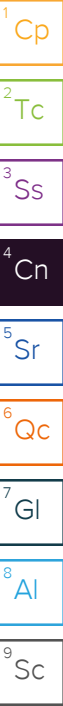
⁹Sc

CASE NARRATIVE

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



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/26/2022 16:39	WG1979070
Acrolein	U		2.54	50.0	1	12/26/2022 16:39	WG1979070
Acrylonitrile	U		0.671	10.0	1	12/26/2022 16:39	WG1979070
Benzene	U		0.0941	1.00	1	12/26/2022 16:39	WG1979070
Bromobenzene	U		0.118	1.00	1	12/26/2022 16:39	WG1979070
Bromodichloromethane	U		0.136	1.00	1	12/26/2022 16:39	WG1979070
Bromoform	U		0.129	1.00	1	12/26/2022 16:39	WG1979070
Bromomethane	U	C3	0.605	5.00	1	12/26/2022 16:39	WG1979070
n-Butylbenzene	U	C3 J4	0.157	1.00	1	12/26/2022 16:39	WG1979070
sec-Butylbenzene	U		0.125	1.00	1	12/26/2022 16:39	WG1979070
tert-Butylbenzene	U		0.127	1.00	1	12/26/2022 16:39	WG1979070
Carbon disulfide	0.336	B J	0.0962	1.00	1	12/26/2022 16:39	WG1979070
Carbon tetrachloride	U		0.128	1.00	1	12/26/2022 16:39	WG1979070
Chlorobenzene	U		0.116	1.00	1	12/26/2022 16:39	WG1979070
Chlorodibromomethane	U		0.140	1.00	1	12/26/2022 16:39	WG1979070
Chloroethane	U		0.192	5.00	1	12/26/2022 16:39	WG1979070
Chloroform	U		0.111	5.00	1	12/26/2022 16:39	WG1979070
Chloromethane	U		0.960	2.50	1	12/26/2022 16:39	WG1979070
2-Chlorotoluene	U		0.106	1.00	1	12/26/2022 16:39	WG1979070
4-Chlorotoluene	U		0.114	1.00	1	12/26/2022 16:39	WG1979070
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	12/26/2022 16:39	WG1979070
1,2-Dibromoethane	U		0.126	1.00	1	12/26/2022 16:39	WG1979070
Dibromomethane	U		0.122	1.00	1	12/26/2022 16:39	WG1979070
1,2-Dichlorobenzene	U		0.107	1.00	1	12/26/2022 16:39	WG1979070
1,3-Dichlorobenzene	U		0.110	1.00	1	12/26/2022 16:39	WG1979070
1,4-Dichlorobenzene	U		0.120	1.00	1	12/26/2022 16:39	WG1979070
Dichlorodifluoromethane	U		0.374	5.00	1	12/26/2022 16:39	WG1979070
1,1-Dichloroethane	U		0.100	1.00	1	12/26/2022 16:39	WG1979070
1,2-Dichloroethane	U		0.0819	1.00	1	12/26/2022 16:39	WG1979070
1,1-Dichloroethene	U		0.188	1.00	1	12/26/2022 16:39	WG1979070
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/26/2022 16:39	WG1979070
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/26/2022 16:39	WG1979070
1,2-Dichloropropane	U		0.149	1.00	1	12/26/2022 16:39	WG1979070
1,1-Dichloropropene	U		0.142	1.00	1	12/26/2022 16:39	WG1979070
1,3-Dichloropropane	U		0.110	1.00	1	12/26/2022 16:39	WG1979070
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/26/2022 16:39	WG1979070
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/26/2022 16:39	WG1979070
2,2-Dichloropropane	U		0.161	1.00	1	12/26/2022 16:39	WG1979070
Di-isopropyl ether	U		0.105	1.00	1	12/26/2022 16:39	WG1979070
Ethylbenzene	U		0.137	1.00	1	12/26/2022 16:39	WG1979070
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/26/2022 16:39	WG1979070
Isopropylbenzene	U		0.105	1.00	1	12/26/2022 16:39	WG1979070
p-Isopropyltoluene	U		0.120	1.00	1	12/26/2022 16:39	WG1979070
2-Butanone (MEK)	U		1.19	10.0	1	12/26/2022 16:39	WG1979070
Methylene Chloride	U		0.430	5.00	1	12/26/2022 16:39	WG1979070
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/26/2022 16:39	WG1979070
Methyl tert-butyl ether	U		0.101	1.00	1	12/26/2022 16:39	WG1979070
Naphthalene	U		1.00	5.00	1	12/26/2022 16:39	WG1979070
n-Propylbenzene	U		0.0993	1.00	1	12/26/2022 16:39	WG1979070
Styrene	U		0.118	1.00	1	12/26/2022 16:39	WG1979070
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/26/2022 16:39	WG1979070
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/26/2022 16:39	WG1979070
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	12/26/2022 16:39	WG1979070
Tetrachloroethene	U		0.300	1.00	1	12/26/2022 16:39	WG1979070
Toluene	U		0.278	1.00	1	12/26/2022 16:39	WG1979070
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	12/26/2022 16:39	WG1979070

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	12/26/2022 16:39	WG1979070
1,1,1-Trichloroethane	U		0.149	1.00	1	12/26/2022 16:39	WG1979070
1,1,2-Trichloroethane	U		0.158	1.00	1	12/26/2022 16:39	WG1979070
Trichloroethene	U		0.190	1.00	1	12/26/2022 16:39	WG1979070
Trichlorofluoromethane	U		0.160	5.00	1	12/26/2022 16:39	WG1979070
1,2,3-Trichloropropane	U		0.237	2.50	1	12/26/2022 16:39	WG1979070
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/26/2022 16:39	WG1979070
1,2,3-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 16:39	WG1979070
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 16:39	WG1979070
Vinyl chloride	U		0.234	1.00	1	12/26/2022 16:39	WG1979070
Xylenes, Total	U		0.174	3.00	1	12/26/2022 16:39	WG1979070
(S) Toluene-d8	106			80.0-120		12/26/2022 16:39	WG1979070
(S) 4-Bromofluorobenzene	105			77.0-126		12/26/2022 16:39	WG1979070
(S) 1,2-Dichloroethane-d4	95.3			70.0-130		12/26/2022 16:39	WG1979070

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/26/2022 17:00	WG1979070
Acrolein	U		2.54	50.0	1	12/26/2022 17:00	WG1979070
Acrylonitrile	U		0.671	10.0	1	12/26/2022 17:00	WG1979070
Benzene	U		0.0941	1.00	1	12/26/2022 17:00	WG1979070
Bromobenzene	U		0.118	1.00	1	12/26/2022 17:00	WG1979070
Bromodichloromethane	U		0.136	1.00	1	12/26/2022 17:00	WG1979070
Bromoform	U		0.129	1.00	1	12/26/2022 17:00	WG1979070
Bromomethane	U	C3	0.605	5.00	1	12/26/2022 17:00	WG1979070
n-Butylbenzene	U	C3 J4	0.157	1.00	1	12/26/2022 17:00	WG1979070
sec-Butylbenzene	U		0.125	1.00	1	12/26/2022 17:00	WG1979070
tert-Butylbenzene	U		0.127	1.00	1	12/26/2022 17:00	WG1979070
Carbon disulfide	0.344	B J	0.0962	1.00	1	12/26/2022 17:00	WG1979070
Carbon tetrachloride	U		0.128	1.00	1	12/26/2022 17:00	WG1979070
Chlorobenzene	U		0.116	1.00	1	12/26/2022 17:00	WG1979070
Chlorodibromomethane	U		0.140	1.00	1	12/26/2022 17:00	WG1979070
Chloroethane	U		0.192	5.00	1	12/26/2022 17:00	WG1979070
Chloroform	U		0.111	5.00	1	12/26/2022 17:00	WG1979070
Chloromethane	U		0.960	2.50	1	12/26/2022 17:00	WG1979070
2-Chlorotoluene	U		0.106	1.00	1	12/26/2022 17:00	WG1979070
4-Chlorotoluene	U		0.114	1.00	1	12/26/2022 17:00	WG1979070
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	12/26/2022 17:00	WG1979070
1,2-Dibromoethane	U		0.126	1.00	1	12/26/2022 17:00	WG1979070
Dibromomethane	U		0.122	1.00	1	12/26/2022 17:00	WG1979070
1,2-Dichlorobenzene	U		0.107	1.00	1	12/26/2022 17:00	WG1979070
1,3-Dichlorobenzene	U		0.110	1.00	1	12/26/2022 17:00	WG1979070
1,4-Dichlorobenzene	U		0.120	1.00	1	12/26/2022 17:00	WG1979070
Dichlorodifluoromethane	U		0.374	5.00	1	12/26/2022 17:00	WG1979070
1,1-Dichloroethane	U		0.100	1.00	1	12/26/2022 17:00	WG1979070
1,2-Dichloroethane	U		0.0819	1.00	1	12/26/2022 17:00	WG1979070
1,1-Dichloroethene	U		0.188	1.00	1	12/26/2022 17:00	WG1979070
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/26/2022 17:00	WG1979070
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/26/2022 17:00	WG1979070
1,2-Dichloropropane	U		0.149	1.00	1	12/26/2022 17:00	WG1979070
1,1-Dichloropropene	U		0.142	1.00	1	12/26/2022 17:00	WG1979070
1,3-Dichloropropane	U		0.110	1.00	1	12/26/2022 17:00	WG1979070
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/26/2022 17:00	WG1979070
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/26/2022 17:00	WG1979070
2,2-Dichloropropane	U		0.161	1.00	1	12/26/2022 17:00	WG1979070
Di-isopropyl ether	U		0.105	1.00	1	12/26/2022 17:00	WG1979070
Ethylbenzene	U		0.137	1.00	1	12/26/2022 17:00	WG1979070
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/26/2022 17:00	WG1979070
Isopropylbenzene	U		0.105	1.00	1	12/26/2022 17:00	WG1979070
p-Isopropyltoluene	U		0.120	1.00	1	12/26/2022 17:00	WG1979070
2-Butanone (MEK)	U		1.19	10.0	1	12/26/2022 17:00	WG1979070
Methylene Chloride	U		0.430	5.00	1	12/26/2022 17:00	WG1979070
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/26/2022 17:00	WG1979070
Methyl tert-butyl ether	U		0.101	1.00	1	12/26/2022 17:00	WG1979070
Naphthalene	U		1.00	5.00	1	12/26/2022 17:00	WG1979070
n-Propylbenzene	U		0.0993	1.00	1	12/26/2022 17:00	WG1979070
Styrene	U		0.118	1.00	1	12/26/2022 17:00	WG1979070
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/26/2022 17:00	WG1979070
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/26/2022 17:00	WG1979070
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	12/26/2022 17:00	WG1979070
Tetrachloroethene	U		0.300	1.00	1	12/26/2022 17:00	WG1979070
Toluene	U		0.278	1.00	1	12/26/2022 17:00	WG1979070
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	12/26/2022 17:00	WG1979070

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	12/26/2022 17:00	WG1979070
1,1,1-Trichloroethane	U		0.149	1.00	1	12/26/2022 17:00	WG1979070
1,1,2-Trichloroethane	U		0.158	1.00	1	12/26/2022 17:00	WG1979070
Trichloroethene	U		0.190	1.00	1	12/26/2022 17:00	WG1979070
Trichlorofluoromethane	U		0.160	5.00	1	12/26/2022 17:00	WG1979070
1,2,3-Trichloropropane	U		0.237	2.50	1	12/26/2022 17:00	WG1979070
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/26/2022 17:00	WG1979070
1,2,3-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 17:00	WG1979070
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 17:00	WG1979070
Vinyl chloride	U		0.234	1.00	1	12/26/2022 17:00	WG1979070
Xylenes, Total	U		0.174	3.00	1	12/26/2022 17:00	WG1979070
(S) Toluene-d8	105			80.0-120		12/26/2022 17:00	WG1979070
(S) 4-Bromofluorobenzene	109			77.0-126		12/26/2022 17:00	WG1979070
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		12/26/2022 17:00	WG1979070

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

DUPLICATE

Collected date/time: 12/15/22 13:45

SAMPLE RESULTS - 03

L1568644

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/26/2022 17:20	WG1979070
Acrolein	U		2.54	50.0	1	12/26/2022 17:20	WG1979070
Acrylonitrile	U		0.671	10.0	1	12/26/2022 17:20	WG1979070
Benzene	U		0.0941	1.00	1	12/26/2022 17:20	WG1979070
Bromobenzene	U		0.118	1.00	1	12/26/2022 17:20	WG1979070
Bromodichloromethane	U		0.136	1.00	1	12/26/2022 17:20	WG1979070
Bromoform	U		0.129	1.00	1	12/26/2022 17:20	WG1979070
Bromomethane	U	C3	0.605	5.00	1	12/26/2022 17:20	WG1979070
n-Butylbenzene	U	C3 J4	0.157	1.00	1	12/26/2022 17:20	WG1979070
sec-Butylbenzene	U		0.125	1.00	1	12/26/2022 17:20	WG1979070
tert-Butylbenzene	U		0.127	1.00	1	12/26/2022 17:20	WG1979070
Carbon disulfide	0.300	B J	0.0962	1.00	1	12/26/2022 17:20	WG1979070
Carbon tetrachloride	U		0.128	1.00	1	12/26/2022 17:20	WG1979070
Chlorobenzene	U		0.116	1.00	1	12/26/2022 17:20	WG1979070
Chlorodibromomethane	U		0.140	1.00	1	12/26/2022 17:20	WG1979070
Chloroethane	U		0.192	5.00	1	12/26/2022 17:20	WG1979070
Chloroform	U		0.111	5.00	1	12/26/2022 17:20	WG1979070
Chloromethane	U		0.960	2.50	1	12/26/2022 17:20	WG1979070
2-Chlorotoluene	U		0.106	1.00	1	12/26/2022 17:20	WG1979070
4-Chlorotoluene	U		0.114	1.00	1	12/26/2022 17:20	WG1979070
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	12/26/2022 17:20	WG1979070
1,2-Dibromoethane	U		0.126	1.00	1	12/26/2022 17:20	WG1979070
Dibromomethane	U		0.122	1.00	1	12/26/2022 17:20	WG1979070
1,2-Dichlorobenzene	U		0.107	1.00	1	12/26/2022 17:20	WG1979070
1,3-Dichlorobenzene	U		0.110	1.00	1	12/26/2022 17:20	WG1979070
1,4-Dichlorobenzene	U		0.120	1.00	1	12/26/2022 17:20	WG1979070
Dichlorodifluoromethane	U		0.374	5.00	1	12/26/2022 17:20	WG1979070
1,1-Dichloroethane	U		0.100	1.00	1	12/26/2022 17:20	WG1979070
1,2-Dichloroethane	U		0.0819	1.00	1	12/26/2022 17:20	WG1979070
1,1-Dichloroethene	U		0.188	1.00	1	12/26/2022 17:20	WG1979070
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/26/2022 17:20	WG1979070
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/26/2022 17:20	WG1979070
1,2-Dichloropropane	U		0.149	1.00	1	12/26/2022 17:20	WG1979070
1,1-Dichloropropene	U		0.142	1.00	1	12/26/2022 17:20	WG1979070
1,3-Dichloropropane	U		0.110	1.00	1	12/26/2022 17:20	WG1979070
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/26/2022 17:20	WG1979070
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/26/2022 17:20	WG1979070
2,2-Dichloropropane	U		0.161	1.00	1	12/26/2022 17:20	WG1979070
Di-isopropyl ether	U		0.105	1.00	1	12/26/2022 17:20	WG1979070
Ethylbenzene	U		0.137	1.00	1	12/26/2022 17:20	WG1979070
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/26/2022 17:20	WG1979070
Isopropylbenzene	U		0.105	1.00	1	12/26/2022 17:20	WG1979070
p-Isopropyltoluene	U		0.120	1.00	1	12/26/2022 17:20	WG1979070
2-Butanone (MEK)	U		1.19	10.0	1	12/26/2022 17:20	WG1979070
Methylene Chloride	U		0.430	5.00	1	12/26/2022 17:20	WG1979070
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/26/2022 17:20	WG1979070
Methyl tert-butyl ether	U		0.101	1.00	1	12/26/2022 17:20	WG1979070
Naphthalene	U		1.00	5.00	1	12/26/2022 17:20	WG1979070
n-Propylbenzene	U		0.0993	1.00	1	12/26/2022 17:20	WG1979070
Styrene	U		0.118	1.00	1	12/26/2022 17:20	WG1979070
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/26/2022 17:20	WG1979070
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/26/2022 17:20	WG1979070
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	12/26/2022 17:20	WG1979070
Tetrachloroethene	U		0.300	1.00	1	12/26/2022 17:20	WG1979070
Toluene	U		0.278	1.00	1	12/26/2022 17:20	WG1979070
1,2,3-Trichlorobenzene	U	C4	0.230	1.00	1	12/26/2022 17:20	WG1979070

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

ACCOUNT:

Oregon Dept. of Env. Quality - ODEQ

PROJECT:

QTime # 29490

SDG:

L1568644

DATE/TIME:

12/27/22 17:05

PAGE:

9 of 17

DUPLICATE

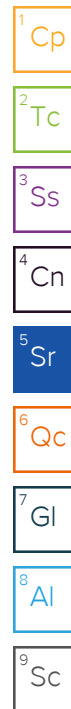
SAMPLE RESULTS - 03

Collected date/time: 12/15/22 13:45

L1568644

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U	C4	0.481	1.00	1	12/26/2022 17:20	WG1979070
1,1,1-Trichloroethane	U		0.149	1.00	1	12/26/2022 17:20	WG1979070
1,1,2-Trichloroethane	U		0.158	1.00	1	12/26/2022 17:20	WG1979070
Trichloroethene	U		0.190	1.00	1	12/26/2022 17:20	WG1979070
Trichlorofluoromethane	U		0.160	5.00	1	12/26/2022 17:20	WG1979070
1,2,3-Trichloropropane	U		0.237	2.50	1	12/26/2022 17:20	WG1979070
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/26/2022 17:20	WG1979070
1,2,3-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 17:20	WG1979070
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/26/2022 17:20	WG1979070
Vinyl chloride	U		0.234	1.00	1	12/26/2022 17:20	WG1979070
Xylenes, Total	U		0.174	3.00	1	12/26/2022 17:20	WG1979070
(S) Toluene-d8	107			80.0-120		12/26/2022 17:20	WG1979070
(S) 4-Bromofluorobenzene	107			77.0-126		12/26/2022 17:20	WG1979070
(S) 1,2-Dichloroethane-d4	95.4			70.0-130		12/26/2022 17:20	WG1979070



ACCOUNT:

Oregon Dept. of Env. Quality - ODEQ

PROJECT:

QTime # 29490

SDG:

L1568644

DATE/TIME:

12/27/22 17:05

PAGE:

10 of 17

Method Blank (MB)

(MB) R3875799-2 12/26/22 12:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	0.668	U	0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Method Blank (MB)

(MB) R3875799-2 12/26/22 12:52

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	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	106			77.0-126
(S) 1,2-Dichloroethane-d4	95.8			70.0-130

Laboratory Control Sample (LCS)

(LCS) R3875799-1 12/26/22 11:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	26.8	107	19.0-160	
Acrolein	25.0	23.4	93.6	10.0-160	
Acrylonitrile	25.0	29.3	117	55.0-149	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3875799-1 12/26/22 11:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Benzene	5.00	5.34	107	70.0-123	
Bromobenzene	5.00	4.32	86.4	73.0-121	
Bromodichloromethane	5.00	5.19	104	75.0-120	
Bromoform	5.00	5.37	107	68.0-132	
Bromomethane	5.00	2.51	50.2	10.0-160	
n-Butylbenzene	5.00	3.53	70.6	73.0-125	J4
sec-Butylbenzene	5.00	4.56	91.2	75.0-125	
tert-Butylbenzene	5.00	4.64	92.8	76.0-124	
Carbon disulfide	5.00	4.62	92.4	61.0-128	
Carbon tetrachloride	5.00	5.21	104	68.0-126	
Chlorobenzene	5.00	4.97	99.4	80.0-121	
Chlorodibromomethane	5.00	5.15	103	77.0-125	
Chloroethane	5.00	4.07	81.4	47.0-150	
Chloroform	5.00	5.21	104	73.0-120	
Chloromethane	5.00	5.45	109	41.0-142	
2-Chlorotoluene	5.00	4.62	92.4	76.0-123	
4-Chlorotoluene	5.00	4.28	85.6	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.35	87.0	58.0-134	
1,2-Dibromoethane	5.00	5.30	106	80.0-122	
Dibromomethane	5.00	5.16	103	80.0-120	
1,2-Dichlorobenzene	5.00	4.60	92.0	79.0-121	
1,3-Dichlorobenzene	5.00	4.63	92.6	79.0-120	
1,4-Dichlorobenzene	5.00	4.89	97.8	79.0-120	
Dichlorodifluoromethane	5.00	5.43	109	51.0-149	
1,1-Dichloroethane	5.00	5.35	107	70.0-126	
1,2-Dichloroethane	5.00	4.69	93.8	70.0-128	
1,1-Dichloroethene	5.00	5.00	100	71.0-124	
cis-1,2-Dichloroethene	5.00	5.40	108	73.0-120	
trans-1,2-Dichloroethene	5.00	4.89	97.8	73.0-120	
1,2-Dichloropropane	5.00	5.42	108	77.0-125	
1,1-Dichloropropene	5.00	4.86	97.2	74.0-126	
1,3-Dichloropropane	5.00	5.05	101	80.0-120	
cis-1,3-Dichloropropene	5.00	5.19	104	80.0-123	
trans-1,3-Dichloropropene	5.00	4.64	92.8	78.0-124	
2,2-Dichloropropane	5.00	4.81	96.2	58.0-130	
Di-isopropyl ether	5.00	5.21	104	58.0-138	
Ethylbenzene	5.00	4.86	97.2	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.74	94.8	54.0-138	
Isopropylbenzene	5.00	4.91	98.2	76.0-127	
p-Isopropyltoluene	5.00	4.43	88.6	76.0-125	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS)

(LCS) R3875799-1 12/26/22 11:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
2-Butanone (MEK)	25.0	28.2	113	44.0-160	
Methylene Chloride	5.00	5.27	105	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	25.5	102	68.0-142	
Methyl tert-butyl ether	5.00	5.37	107	68.0-125	
Naphthalene	5.00	4.22	84.4	54.0-135	
n-Propylbenzene	5.00	4.33	86.6	77.0-124	
Styrene	5.00	4.25	85.0	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	5.35	107	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	4.92	98.4	65.0-130	
1,1,2-Trichlorotrifluoroethane	5.00	5.08	102	69.0-132	
Tetrachloroethene	5.00	4.81	96.2	72.0-132	
Toluene	5.00	4.86	97.2	79.0-120	
1,2,3-Trichlorobenzene	5.00	4.89	97.8	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.24	84.8	57.0-137	
1,1,1-Trichloroethane	5.00	5.18	104	73.0-124	
1,1,2-Trichloroethane	5.00	5.47	109	80.0-120	
Trichloroethene	5.00	5.55	111	78.0-124	
Trichlorofluoromethane	5.00	4.26	85.2	59.0-147	
1,2,3-Trichloropropane	5.00	4.89	97.8	73.0-130	
1,2,4-Trimethylbenzene	5.00	4.37	87.4	76.0-121	
1,2,3-Trimethylbenzene	5.00	4.44	88.8	77.0-120	
1,3,5-Trimethylbenzene	5.00	4.46	89.2	76.0-122	
Vinyl chloride	5.00	4.65	93.0	67.0-131	
Xylenes, Total	15.0	14.5	96.7	79.0-123	
(S) Toluene-d8			101	80.0-120	
(S) 4-Bromofluorobenzene			109	77.0-126	
(S) 1,2-Dichloroethane-d4			93.6	70.0-130	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

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.

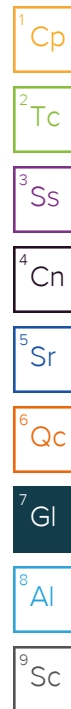
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

MDL	Method Detection Limit.
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

B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.



ACCREDITATIONS & LOCATIONS

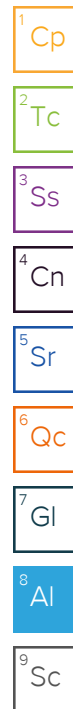
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
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}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.



State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: Department of Environmental Quality			Contract Laboratory Name: Pace Analytical			Lab Selection Criteria: ☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work			Turn Around Time: ☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other			
Send Lab Report To: Jennifer Claussen Address: 4026 Fairview Industrial Dr. SE Salem, OR 97302 Tel. #: 503-545-9219 E-mail: Jennifer.Claussen@deq.oregon.gov			Lab Batch #:			Invoice To: Address: DEQEXP@deq.state.or.us						
Project Name: Allen Street Groundwater Project #: QTime # 29490			Sample Preservative									
Sampler Name: Sarah Kingery			Requested Analyses									
Sample ID#		Collection Date/Time	Matrix	Number of Containers					Comments			
				8260					L1968644			
1520 Allen Post		12/15/22 1:35	W	3	X					-01		
1520 Allen Mid			W	3								
1520 Allen Pre		12/15/22 1:40	W	3	X					-02		
Duplicate		12/15/22 1:45	W	3	X					-03		
E152												
Sample Receipt Checklist										NOTB \$ removed		
COC Seal Present/Intact: ☒ Y ☐ N IF Applicable												
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N												
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N												
Correct bottles used: ☒ Y ☐ N												
Sufficient volume sent: ☒ Y ☐ N												
RAD Screen <0.5 mR/hr: ☒ Y ☐ N												
Notes: Only run 'Post' samples if detections are found in the 'Mid' samples												
Relinquished By: Sarah Kingery			Agency/Agent: OR-DEQ			Received By:			Agency/Agent: PACE			
Signature:			Time & Date: 2:00pm 12-15-22			Signature:			Time & Date: 2:00 12/16			
Relinquished By:			Agency/Agent:			Received By:			Agency/Agent:			
Signature:			Time & Date:			Signature:			Time & Date:			

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # [8903]. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.