From: Nicole L. LaPlant <nlaplant@releeinc.com>
Sent: Thursday, March 24, 2022 10:54 AM
To: Beggs, Tauren R - DNR
Subject: Status Update - Jagemann Plating Co Inc, BRRTS # 02-36-555544
Attachments: Jagemann Plating_Data Submittal Letter_BRRTS# 02-36-555544.pdf

Good Morning Tauren,

Attached are the results of the additional soil and groundwater samples that were collected from inside the Site building within the southern manufacturing area between January and February 2022. I also uploaded the data submittal to the RR Portal.

REL/Jagemann Plating would like to discuss a few things by phone related to the new data and steps moving forward to the remedial action phase of the CVOCs. Would we be able to schedule a phone call to discuss with you? Please let us know what might work for you and if you need further information prior to discussing.

Thank you,
Nicole

Nicole L. LaPlant
Project Manager/Geologist
920-662-9641 | nlaplant@releeinc.com
Robert E. Lee & Associates, Inc.

Robert E. Lee & Associates, Inc.
Engineering | Environmental | Surveying | Ecological

1250 Centennial Centre Blvd
Hobart, WI 54155
920-662-9641
releeinc.com

March 23, 2022

Mr. Tauren Beggs
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay, WI 54331-6727

RE: NR 716.14 Data Transmittal – Soil and Groundwater Sampling Results
Jagemann Plating Company, 1324 S. 26th Street Manitowoc, WI; BRRTS #02-36-555544

Dear Mr. Beggs:

On behalf of Jagemann Plating Company, Robert E. Lee & Associates, Inc. (REL) is providing the Wisconsin Department of Natural Resources (WDNR) the enclosed soil analytical results for soil samples collected from six soil borings (B20 through B25) and groundwater analytical results for groundwater samples collected from six temporary monitoring wells (TW20 through TW25) at Jagemann Plating Company, 1324 South 26th Street, Manitowoc, Wisconsin (the Site). The soil samples were collected on January 9, 2022; during the advancement, the soil borings and the groundwater samples were collected on February 2, 2022. The soil and groundwater samples were collected in accordance with the approved Site Investigation Work Plan, dated November 8, 2021 and approved by WDNR on December 9, 2021.

The soil boring and monitoring well locations are shown in the two draft figures included in *Attachment* A. The soil analytical results are summarized in Tables A.2.a through A.2.c. included in *Attachment* B. the laboratory analytical reports are included in *Attachment* C.

We trust this information meets your needs. If you have any questions, please feel free to contact REL at (920) 662-9641.

Sincerely,

ROBERT E. LEE & ASSOCIATES, INC.

Nicole L. LaPlant
Project Manager/Geologist

Bruce D. Meissner, VP, PG
Environmental Compliance Manager

NLL/BDM/NJM

ENC.

CC/ENC: Mike Jagemann, Jagemann Plating Company

A

ATTACHMENT A

Tables

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-1								
			10/15/2010	6/15/2011	9/29/2011	7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)											
1,1,1,2-Tetrachloroethane	**70**	**7**	< 18.4	< 9.2	< 18.4	<16.5	<3.3	<4.8	<2.7	<2.7	<3.6
1,1,1-Trichloroethane	**200**	**40**	< 18.0	< 9.0	< 18.0	<16.5	<3.3	<8.4	<2.4	<2.4	<3.0
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 4.0	< 2.0	< 4.0	<22.5	<4.5	<5.2	<2.8	<2.8	<3.8
1,1,2-Trichloroethane	**5**	**0.5**	< 8.4	< 4.2	< 8.4	<17	<3.4	<4.8	<5.5	<5.5	<3.4
1,1-Dichloroethane	**850**	**85**	< 15.0	< 7.5	< 15.0	<15	<3	<11	3.7 J	3.9J	3.5 J
1,1-Dichloroethene	**7**	**0.7**	**13.8 J**	**14.6**	< 11.4	<20	**25.9**	<6.5	**17.5**	**16.1**	**20.1**
1,1-Dichloropropene	**NE**	**NE**	< 15.0	< 7.5	< 15.0	---	---	---	<5.4	<5.4	< 4.1
1,2,3-Trichlorobenzene	**NE**	**NE**	< 14.8	< 7.4	< 14.8	<90	<18	<27	<6.3	<6.3	<10.2
1,2,3-Trichloropropane	**60**	**12**	< 19.8	< 9.9	< 19.8	---	---	---	<5.9	<5.9	<5.6
1,2,4-Trichlorobenzene	**70**	**14**	< 19.4	< 9.7	< 19.4	<49	<9.8	<17	<9.5	<9.5	<9.5
1,2,4-Trimethylbenzene	**480***	**96***	< 19.4	< 9.7	< 19.4	<110	<22	<16	<8.4	<8.4	<4.5
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 33.6	< 16.8	< 33.6	<44	<8.8	<14	<17.6	<17.6	<23.7
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 11.2	< 5.6	< 11.2	<22	<4.4	<6.3	<8.3	<8.3	<3.1
1,2-Dichlorobenzene	**600**	**60**	< 16.6	< 8.3	< 16.6	<18	<3.6	<4.6	<7.1	<7.1	<3.3
1,2-Dichloroethane	**5**	**0.5**	< 7.2	< 3.6	< 7.2	<20.5	<4.1	<4.8	<2.8	<2.8	<2.9
1,2-Dichloropropane	**5**	**0.5**	< 9.8	< 4.9	< 9.8	<16	<3.2	<4.3	<2.8	<2.8	<4.5
1,3,5-Trimethylbenzene	**480***	**96***	< 16.6	< 8.3	< 16.6	<70	<14	<15	<8.7	<8.7	<3.6
1,3-Dichlorobenzene	**600**	**120**	< 17.4	< 8.7	< 17.4	<14	<2.8	<5.2	<6.3	<6.3	<3.5
1,3-Dichloropropane	**NE**	**NE**	< 12.2	< 6.1	< 12.2	<16.5	<3.3	<4.2	<8.3	<8.3	<3.0
1,4-Dichlorobenzene	**75**	**15**	< 19.0	< 9.5	< 19.0	<15	<3	<4.9	<9.4	<9.4	<8.9
2,2-Dichloropropane	**NE**	**NE**	< 12.4	< 6.2	< 12.4	<18	<3.6	<31	<22.7	<22.7	<41.8
2-Chlorotoluene	**NE**	**NE**	< 17.0	< 8.5	< 17.0	<10.5	<2.1	<4	<9.3	<9.3	<8.9
4-Chlorotoluene	**NE**	**NE**	< 14.8	< 7.4	< 14.8	<10.5	<2.1	<6.3	<7.6	<7.6	<8.9
Benzene	**5**	**0.5**	< 8.2	< 4.1	< 8.2	<12	<2.4	<4.4	<2.5	<2.5	<3.0
Bromobenzene	**NE**	**NE**	< 16.4	< 8.2	< 16.4	<16	<3.2	<4.8	<2.4	<2.4	<3.6
Bromochloromethane	**NE**	**NE**	< 19.4	< 9.7	< 19.4	---	---	---	<3.6	<3.6	<3.6
Bromodichloromethane	**0.6**	**0.06**	< 11.2	< 5.6	< 11.2	<18.5	<3.7	<4.6	<3.6	<3.6	<4.2
Bromoform	**4.4**	**0.44**	< 18.8	< 9.4	< 18.8	<17.5	<3.5	<4.6	<39.7	<39.7	<38.0
Bromomethane	**10**	**1**	< 18.2	< 9.1	< 18.2	---	---	---	<9.7	<9.7	<11.9
Carbon Tetrachloride	**5**	**0.5**	< 9.8	< 4.9	< 9.8	<16.5	<3.3	<5.1	<1.7	<1.7	<3.7
Chlorobenzene	**NE**	**NE**	< 8.2	< 4.1	< 8.2	<12	<2.4	<4.6	<7.1	<7.1	<8.6
Chloroethane	**400**	**80**	< 19.4	< 9.7	< 19.4	<31.5	<6.3	<6.5	<13.4	<13.4	<13.8
Chloroform	**6**	**0.6**	< 26.0	< 13.0	< 26.0	<14	<2.8	<4.3	<12.7	<12.7	<11.8
Chloromethane	**30**	**3**	< 4.8	< 2.4	< 4.8	<40.5	<8.1	<19	<21.9	<21.9	<16.4
Dibromochloromethane	**60**	**6**	< 16.2	< 8.1	< 16.2	<11	<2.2	<4.5	<26.0	<26.0	<26.4
Dibromomethane	**NE**	**NE**	< 12.0	< 6.0	< 12.0	---	---	---	<9.4	<9.4	<9.9
Dichlorodifluoromethane	**NE**	**NE**	< 19.8	< 9.9	< 19.8	<22	<4.4	<8.7	<5.0	<5.0	<4.6
Diisopropyl ether	**NE**	**NE**	< 15.2	< 7.6	< 15.2	<11.5	<2.3	<4.4	<18.9	<18.9	<11.0
Ethylbenzene	**700**	**140**	< 10.8	< 5.4	< 10.8	<27.5	<5.5	<7.1	<2.2	<2.2	<3.3
Hexachloro-1,3-butadiene	**NE**	**NE**	< 13.4	< 6.7	< 13.4	<75	<15	<22	<11.8	<11.8	<27.4
Isopropylbenzene	**NE**	**NE**	< 11.8	< 5.9	< 11.8	<15	<3	<8.2	<3.9	<3.9	<10.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 12.2	< 6.1	< 12.2	<11.5	<2.3	<11	<12.5	<12.5	<11.3
Methylene Chloride	**5**	**0.5**	< 8.6	< 4.3	< 8.6	<25	<5	<13	<5.8	<5.8	<3.2
Naphthalene	**100**	**10**	< 17.8	< 8.9	< 17.8	<85	<17	<16	<11.8	<11.8	<11.3
Styrene	**100**	**10**	< 17.2	< 8.6	< 17.2	---	---	---	<4.7	<4.7	<3.6
Tetrachloroethene	**5**	**0.5**	< 9.0	< 4.5	< 9.0	<16.5	<3.3	<4.9	<3.3	<3.3	<4.1
Toluene	**800**	**160**	< 13.4	< 6.7	< 13.4	<34.5	<6.9	<4.4	<1.7	<1.7	<2.9
Trichloroethene	**5**	**0.5**	**1,930**	**1,600**	**1,440**	**540**	**1,330**	**390**	**703**	**895**	**946**
Trichlorofluoromethane	**3490**	**698**	< 15.8	< 7.9	< 15.8	<35.5	<7.1	<8.7	<2.1	<2.1	<4.2
Vinyl chloride	**0.2**	**0.02**	**599**	**444**	**169**	**230**	**730**	**125**	**430**	**410**	**697**
cis-1,2-Dichloroethene	**70**	**7**	**554**	**425**	**206**	**200**	**490**	**148**	**252**	**316**	**400**
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 4.0	< 2.0	< 4.0	---	---	---	<36.3	<36.3	<3.6
Xylenes	**2000**	**400**	<52.6	< 26.3	< 52.6	<66	<13.2	<31	<7.3	<7.3	<10.9
n-Butylbenzene	**NE**	**NE**	<18.6	< 9.3	< 18.6	<17.5	<3.5	<10	<7.1	<7.1	<8.6
n-Propylbenzene	**NE**	**NE**	< 16.2	< 8.1	< 16.2	<12.5	<2.5	<7.7	<8.1	<8.1	<3.5
p-Isopropyltoluene	**NE**	**NE**	< 13.4	< 6.7	< 13.4	<15.5	<3.1	<11	<8.0	<8.0	<10.4
sec-Butylbenzene	**NE**	**NE**	< 17.8	< 8.9	< 17.8	<16.5	<3.3	<12	<8.5	<8.5	<4.2
tert-Butylbenzene	**NE**	**NE**	< 19.4	< 9.7	< 19.4	<18	<3.6	<11	<3.0	<3.0	<5.9
trans-1,2-Dichloroethene	**100**	**20**	***28.6***	***22.9***	< 17.8	17.5 J	***39***	9 J	***23.6 J***	***24.6 J***	***33.5***
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 3.8	< 1.9	< 3.8	---	---	---	<43.7	<43.7	<34.6

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-2								
			10/15/2010	6/15/2011	9/29/2011	7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)											
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92	< 0.92	<0.33	<0.33	<0.48	NS	<0.27	<0.36
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90	< 0.90	<0.33	<0.33	<0.84	NS	<0.24	<0.30
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20	< 0.20	<0.45	<0.45	<0.52	NS	<0.28	<0.38
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42	< 0.42	<0.34	<0.34	<0.48	NS	<0.55	<0.34
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75	< 0.75	<0.3	<0.3	<1.1	NS	<0.27	<0.30
1,1-Dichloroethene	**7**	**0.7**	***6.9***	**9.9**	***5.1***	***1.7***	***2.28***	<0.65	NS	***2.6***	0.97 J
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75	< 0.75	---	---	---	NS	<0.54	< 0.41
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74	< 0.74	<1.8	<1.8	<2.7	NS	<0.63	<1.0
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99	< 0.99	---	---	---	NS	<0.59	<0.56
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97	< 0.97	<0.98	<0.98	<1.7	NS	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97	< 0.97	<2.2	<2.2	<1.6	NS	<0.84	<0.45
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7	< 1.7	<0.88	<0.88	<1.4	NS	<1.8	<2.4
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56	< 0.56	<0.44	<0.44	<0.63	NS	<0.83	<0.31
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83	< 0.83	<0.36	<0.36	<0.46	NS	<0.71	<0.33
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36	< 0.36	<0.41	<0.41	<0.48	NS	<0.28	<0.29
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49	< 0.49	<0.32	<0.32	<0.43	NS	<0.28	<0.45
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83	< 0.83	<1.4	<1.4	<1.5	NS	<0.87	<0.36
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87	< 0.87	<0.28	<0.28	<0.52	NS	<0.63	<0.35
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61	< 0.61	<0.33	<0.33	<0.42	NS	<0.83	<0.30
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95	< 0.95	<0.3	<0.3	<0.49	NS	<0.94	<0.89
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62	< 0.62	<0.36	<0.36	<3.1	NS	<2.3	<4.2
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85	< 0.85	<0.21	<0.21	<0.4	NS	<0.93	<0.89
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74	< 0.74	<0.21	<0.21	<0.63	NS	<0.76	<0.89
Benzene	**5**	**0.5**	< 0.41	< 0.41	< 0.41	<0.24	<0.24	<0.44	NS	<0.25	<0.30
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82	< 0.82	<0.32	<0.32	<0.48	NS	<0.24	<0.36
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97	< 0.97	---	---	---	NS	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56	< 0.56	<0.37	<0.37	<0.46	NS	<0.36	<0.42
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94	< 0.94	<0.35	<0.35	<0.46	NS	<4.0	<3.8
Bromomethane	**10**	**1**	< 0.91	< 0.91	< 0.91	---	---	---	NS	<0.97	<1.2
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49	< 0.49	<0.33	<0.33	<0.51	NS	<0.17	<0.37
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41	< 0.41	<0.24	<0.24	<0.46	NS	<0.71	<0.86
Chloroethane	**400**	**80**	< 0.97	< 0.97	< 0.97	<0.63	<0.63	<0.65	NS	<1.3	<1.4
Chloroform	**6**	**0.6**	< 1.3	< 1.3	< 1.3	<0.28	<0.28	<0.43	NS	<1.3	<1.2
Chloromethane	**30**	**3**	< 0.24	< 0.24	< 0.24	<0.81	<0.81	<1.9	NS	<2.2	***9.8***
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81	< 0.81	<0.22	<0.22	<0.45	NS	<2.6	<2.6
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60	< 0.60	---	---	---	NS	<0.94	<0.99
Dichlorodifluoromethane	**NE**	**NE**	10.5	17.2	21.0	13.2	13.5	1.53 J	NS	5.3	13.7
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76	< 0.76	<0.23	<0.23	<0.44	NS	<1.9	<1.1
Ethylbenzene	**700**	**140**	< 0.54	< 0.54	< 0.54	<0.55	<0.55	<0.71	NS	<0.22	<0.33
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67	< 0.67	<1.5	<1.5	<2.2	NS	<1.2	<2.7
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59	< 0.59	<0.3	<0.3	<0.82	NS	<0.39	<1.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61	< 0.61	<0.23	<0.23	<1.1	NS	<1.2	<1.1
Methylene Chloride	**5**	**0.5**	< 0.43	< 0.43	< 0.43	<0.5	<0.5	<1.3	NS	<0.58	<0.32
Naphthalene	**100**	**10**	< 0.89	< 0.89	< 0.89	<1.7	<1.7	<1.1	NS	<1.2	<1.1
Styrene	**100**	**10**	< 0.86	< 0.86	< 0.86	---	---	---	NS	<0.47	<0.36
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45	< 0.45	<0.33	<0.33	<0.49	NS	<0.33	<0.41
Toluene	**800**	**160**	< 0.67	< 0.67	< 0.67	<0.69	<0.69	<0.44	NS	<0.17	<0.29
Trichloroethene	**5**	**0.5**	**9**	**12.9**	**5.4**	***0.67 J***	***1***	***1.33 J***	NS	***1.9***	<0.32
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79	< 0.79	<0.71	<0.71	<0.87	NS	<0.21	<0.42
Vinyl chloride	**0.2**	**0.02**	**38.5**	**78.6**	**53.8**	**69**	**36**	**4.9**	NS	**15.4**	**34.5**
cis-1,2-Dichloroethene	**70**	**7**	**114**	**92**	**72.5**	***42***	***30.9***	4.2	NS	***19.5***	***24.6***
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20	< 0.20	---	---	---	NS	<3.6	<0.36
Xylenes	**2000**	**400**	< 2.63	< 2.63	< 2.63	<1.32	<1.32	<3.1	NS	<0.73	<1.05
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93	< 0.93	<0.35	<0.35	<1	NS	<0.71	<0.86
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81	< 0.81	<0.25	<0.25	<0.77	NS	<0.81	<0.35
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67	< 0.67	<0.31	<0.31	<1.1	NS	<0.80	<1.0
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89	< 0.89	<0.33	<0.33	<1.2	NS	<0.85	<0.42
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97	< 0.97	<0.36	<0.36	<1.1	NS	<0.30	<0.59
trans-1,2-Dichloroethene	**100**	**20**	3.5	1.9	1.7	0.41 J	<0.35	<0.54	NS	<1.1	<0.53
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19	< 0.19	---	---	---	NS	<4.4	<3.5

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-3								
			10/15/2010	6/15/2011	9/29/2011	7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)											
1,1,1,2-Tetrachloroethane	**70**	**7**	< 3.7	< 0.92	< 1.8	<0.33	<0.33	<0.48	<0.27	<0.27	<0.36
1,1,1-Trichloroethane	**200**	**40**	< 3.6	< 0.90	< 1.8	<0.33	<0.33	<0.84	<0.24	<0.24	<0.30
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.80	< 0.20	< 0.40	<0.45	<0.45	<0.52	<0.28	<0.28	<0.38
1,1,2-Trichloroethane	**5**	**0.5**	< 1.7	< 0.42	< 0.84	<0.34	<0.34	<0.48	<0.55	<0.55	<0.34
1,1-Dichloroethane	**850**	**85**	< 3.0	< 0.75	< 1.5	<0.3	<0.3	<1.1	<0.27	<0.27	<0.30
1,1-Dichloroethene	**7**	**0.7**	***2.3 J***	***1.4***	***1.6 J***	***2.48***	***2.27***	***1.22 J***	***1.0***	***1.3***	***1.9***
1,1-Dichloropropene	**NE**	**NE**	< 3.0	< 0.75	< 1.5	---	---	---	<0.54	<0.54	< 0.41
1,2,3-Trichlorobenzene	**NE**	**NE**	< 3.0	< 0.74	< 1.5	<1.8	<1.8	<2.7	<0.63	<0.63	<1.0
1,2,3-Trichloropropane	**60**	**12**	< 4.0	< 0.99	< 2.0	---	---	---	<0.59	<0.59	<0.56
1,2,4-Trichlorobenzene	**70**	**14**	< 3.9	< 0.97	< 1.9	<0.98	<0.98	<1.7	<0.95	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	< 3.9	< 0.97	< 1.9	<2.2	<2.2	<1.6	<0.84	<0.84	<0.45
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 6.7	< 1.7	< 3.4	<0.88	<0.88	<1.4	<1.8	<1.8	<0.31
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 2.2	< 0.56	< 1.1	<0.44	<0.44	<0.63	<0.83	<0.83	<0.31
1,2-Dichlorobenzene	**600**	**60**	< 3.3	< 0.83	< 1.7	<0.36	<0.36	<0.46	<0.71	<0.71	<0.33
1,2-Dichloroethane	**5**	**0.5**	< 1.4	< 0.36	< 0.72	<0.41	<0.41	<0.48	<0.28	<0.28	<0.29
1,2-Dichloropropane	**5**	**0.5**	< 2.0	< 0.49	< 0.98	<0.32	<0.32	<0.43	<0.28	<0.28	<0.45
1,3,5-Trimethylbenzene	**480***	**96***	< 3.3	< 0.83	< 1.7	<1.4	<1.4	<1.5	<0.87	<0.87	<0.36
1,3-Dichlorobenzene	**600**	**120**	< 3.5	< 0.87	< 1.7	<0.28	<0.28	<0.52	<0.63	<0.63	<0.35
1,3-Dichloropropane	**NE**	**NE**	< 2.4	< 0.61	< 1.2	<0.33	<0.33	<0.42	<0.83	<0.83	<0.30
1,4-Dichlorobenzene	**75**	**15**	< 3.8	< 0.95	< 1.9	<0.3	<0.3	<0.49	<0.94	<0.94	<0.89
2,2-Dichloropropane	**NE**	**NE**	< 2.5	< 0.62	< 1.2	<0.36	<0.36	<3.1	<2.3	<2.3	<4.2
2-Chlorotoluene	**NE**	**NE**	< 3.4	< 0.85	< 1.7	<0.21	<0.21	<0.4	<0.93	<0.93	<0.89
4-Chlorotoluene	**NE**	**NE**	< 3.0	< 0.74	< 1.5	<0.21	<0.21	<0.63	<0.76	<0.76	<0.89
Benzene	**5**	**0.5**	< 1.6	< 0.41	< 0.82	<0.24	<0.24	<0.44	<0.25	<0.25	<0.30
Bromobenzene	**NE**	**NE**	< 3.3	< 0.82	< 1.6	<0.32	<0.32	<0.48	<0.24	<0.24	<0.36
Bromochloromethane	**NE**	**NE**	< 3.9	< 0.97	< 1.9	---	---	---	<0.36	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	< 2.2	< 0.56	< 1.1	<0.37	<0.37	<0.46	<0.36	<0.36	<0.42
Bromoform	**4.4**	**0.44**	< 3.8	< 0.94	< 1.9	<0.35	<0.35	<0.46	<4.0	<4.0	<3.8
Bromomethane	**10**	**1**	< 3.6	< 0.91	< 1.8	---	---	---	<0.97	<0.97	<1.2
Carbon Tetrachloride	**5**	**0.5**	< 2.0	< 0.49	< 0.98	<0.33	<0.33	<0.51	<0.17	<0.17	<0.37
Chlorobenzene	**NE**	**NE**	< 1.6	< 0.41	< 0.82	<0.24	<0.24	<0.46	<0.71	<0.71	<0.86
Chloroethane	**400**	**80**	< 3.9	< 0.97	< 1.9	<0.63	<0.63	<0.65	<1.3	<1.3	<1.4
Chloroform	**6**	**0.6**	< 5.2	< 1.3	< 2.6	<0.28	<0.28	<0.43	<1.3	<1.3	<1.2
Chloromethane	**30**	**3**	< 9.6	< 0.24	< 0.48	<0.81	<0.81	<1.9	<2.2	<2.2	<0.37
Dibromochloromethane	**60**	**6**	< 3.2	< 0.81	< 1.6	<0.22	<0.22	<0.45	<2.6	<2.6	<2.6
Dibromomethane	**NE**	**NE**	< 2.4	< 0.60	< 1.2	---	---	---	<0.94	<0.94	<0.99
Dichlorodifluoromethane	**NE**	**NE**	8.5	8.6	14.9	10.7	14.2	9.9	5.3	5.8	7.0
Diisopropyl ether	**NE**	**NE**	< 3.0	< 0.76	< 1.5	<0.23	<0.23	<0.44	<1.9	<1.9	<1.1
Ethylbenzene	**700**	**140**	< 2.2	< 0.54	< 1.1	<0.55	<0.55	<0.71	<0.22	<0.22	<0.33
Hexachloro-1,3-butadiene	**NE**	**NE**	< 2.7	< 0.67	< 1.3	<1.5	<1.5	<2.2	<1.2	<1.2	<2.7
Isopropylbenzene	**NE**	**NE**	< 2.4	< 0.59	< 1.2	<0.3	<0.3	<0.82	<0.39	<0.39	<1.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 2.4	< 0.61	< 1.2	<0.23	<0.23	<1.1	<1.2	<1.2	<1.1
Methylene Chloride	**5**	**0.5**	< 1.7	< 0.43	< 0.86	<0.5	<0.5	<1.3	<0.58	<0.58	<0.32
Naphthalene	**100**	**10**	< 3.6	< 0.89	< 1.8	<1.7	<1.7	<1.6	<1.2	<1.2	<1.1
Styrene	**100**	**10**	< 3.4	< 0.86	< 1.7	---	---	---	<0.47	<0.47	<0.36
Tetrachloroethene	**5**	**0.5**	< 1.8	< 0.45	< 0.90	<0.33	<0.33	<0.49	***0.52 J***	***0.50J***	0.46 J
Toluene	**800**	**160**	< 2.7	< 0.67	< 1.3	<0.98	<0.69	<0.44	<0.17	<0.17	<0.29
Trichloroethene	**5**	**0.5**	**66.9**	**59.2**	**97.1**	**38**	**60**	**75**	**36.9**	**56.1**	**67.3**
Trichlorofluoromethane	**3490**	**698**	< 3.2	< 0.79	< 1.6	<0.71	<0.71	<0.87	<0.21	<0.21	<0.42
Vinyl chloride	**0.2**	**0.02**	**42.1**	**12.9**	**13.4**	**44**	**21.5**	**3.5**	**0.49 J**	**1.6**	**3.6**
cis-1,2-Dichloroethene	**70**	**7**	**256**	**121**	**125**	**128**	**139**	**73**	***49***	***53.8***	**54.7**
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.80	< 0.20	< 0.40	---	---	---	<3.6	<3.6	<0.36
Xylenes	**2000**	**400**	< 10.5	< 2.63	< 5.3	<1.32	<1.32	<3.1	<0.73	<0.73	<1.05
n-Butylbenzene	**NE**	**NE**	< 3.7	< 0.81	< 1.9	<0.35	<0.35	<1	<0.71	<0.71	<0.86
n-Propylbenzene	**NE**	**NE**	< 3.2	< 0.83	< 1.6	<0.25	<0.25	<0.77	<0.81	<0.81	<0.35
p-Isopropyltoluene	**NE**	**NE**	< 2.7	< 0.67	< 1.3	<0.31	<0.31	<1.1	<0.80	<0.80	<1.0
sec-Butylbenzene	**NE**	**NE**	< 3.6	< 0.89	< 1.8	<0.33	<0.33	<1.2	<0.85	<0.85	<0.42
tert-Butylbenzene	**NE**	**NE**	< 3.9	< 0.97	< 1.9	<0.36	<0.36	<1.1	<0.30	<0.30	<0.59
trans-1,2-Dichloroethene	**100**	**20**	15.9	5.8	8	5.3	7.2	3.2	1.6 J	1.7 J	1.2
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.76	< 0.19	< 0.38	---	---	---	<4.4	<4.4	<3.5

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-4		
			6/15/2011	9/29/2011	7/31/2013
VOCs (ug/L)					
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92	<0.33
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90	<0.33
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20	<0.45
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42	<0.34
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75	<0.3
1,1-Dichloroethene	**7**	**0.7**	< 0.57	< 0.57	<0.4
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75	---
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74	<1.8
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99	---
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97	<0.98
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97	<2.2
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7	<0.88
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56	<0.44
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83	<0.36
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36	<0.41
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49	<0.32
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83	<1.4
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87	<0.28
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61	<0.33
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95	<0.3
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62	<0.36
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85	<0.21
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74	<0.21
Benzene	**5**	**0.5**	< 0.41	< 0.41	<0.24
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82	<0.32
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97	---
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56	<0.37
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94	<0.35
Bromomethane	**10**	**1**	< 0.91	< 0.91	---
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49	<0.33
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41	<0.24
Chloroethane	**400**	**80**	< 0.97	< 0.97	<0.63
Chloroform	**6**	**0.6**	< 1.3	< 1.3	<0.28
Chloromethane	**30**	**3**	< 0.24	< 0.24	<0.81
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81	<0.22
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60	---
Dichlorodifluoromethane	**NE**	**NE**	< 0.99	< 0.99	<0.44
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76	<0.23
Ethylbenzene	**700**	**140**	< 0.54	< 0.54	<0.55
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67	<1.5
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59	<0.3
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61	<0.23
Methylene Chloride	**5**	**0.5**	< 0.43	< 0.43	<0.5
Naphthalene	**100**	**10**	< 0.89	< 0.89	<1.7
Styrene	**100**	**10**	< 0.86	< 0.86	---
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45	<0.33
Toluene	**800**	**160**	< 0.67	< 0.67	<0.69
Trichloroethene	**5**	**0.5**	< 0.48	< 0.48	<0.33
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79	<0.71
Vinyl chloride	**0.2**	**0.02**	< 0.18	< 0.18	<0.18
cis-1,2-Dichloroethene	**70**	**7**	< 0.83	< 0.83	<0.38
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20	---
Xylenes	**2000**	**400**	< 2.63	< 2.63	<1.32
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93	<0.35
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81	<0.25
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67	<0.31
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89	<0.33
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97	<0.36
trans-1,2-Dichloroethene	**100**	**20**	< 0.89	< 0.89	<0.35
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19	---

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-5						
			6/15/2011	9/29/2011	7/31/2013	4/1/2014	12/29/2016	3/28/2019	6/19/2019
VOCs (ug/L)									
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92	<0.33	<0.33	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90	<0.33	<0.33	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20	<0.45	<0.45	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42	<0.34	<0.34	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75	<0.3	<0.3	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	< 0.57	< 0.57	<0.4	<0.4	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75	---	---	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74	<1.8	<1.8	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99	---	---	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97	<0.98	<0.98	<1.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97	<2.2	<2.2	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7	<0.88	<0.88	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56	<0.44	<0.44	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83	<0.36	<0.36	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36	<0.41	<0.41	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49	<0.32	<0.32	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83	<1.4	<1.4	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87	<0.28	<0.28	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61	<0.33	<0.33	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95	<0.3	<0.3	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62	<0.36	<0.36	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85	<0.21	<0.21	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74	<0.21	<0.21	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	< 0.41	< 0.41	<0.24	<0.24	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82	<0.32	<0.32	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97	---	---	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56	<0.37	<0.37	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94	<0.35	<0.35	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	< 0.91	< 0.91	---	---	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49	<0.33	<0.33	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41	<0.24	<0.24	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	< 0.97	< 0.97	<0.63	<0.63	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	< 1.3	< 1.3	<0.28	<0.28	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	< 0.24	< 0.24	<0.81	<0.81	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81	<0.22	<0.22	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60	---	---	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	< 0.99	< 0.99	<0.44	<0.44	<0.87	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76	<0.23	<0.23	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	< 0.54	< 0.54	<0.55	<0.55	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67	<1.5	<1.5	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59	<0.3	<0.3	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61	<0.23	<0.23	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	< 0.43	< 0.43	<0.5	<0.5	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	< 0.89	< 0.89	<1.7	<1.7	<1.6	<1.2	<1.2
Styrene	**100**	**10**	< 0.86	< 0.86	---	---	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45	<0.33	<0.33	<0.49	<0.33	<0.33
Toluene	**800**	**160**	< 0.67	< 0.67	<0.69	<0.69	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	< 0.48	< 0.48	<0.33	<0.33	<0.47	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79	<0.71	<0.71	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	< 0.18	< 0.18	<0.18	<0.18	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	< 0.83	< 0.83	<0.38	<0.38	<0.45	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20	---	---	<0.45	<3.6	<3.6
Xylenes	**2000**	**400**	< 2.63	< 2.63	<1.32	<1.32	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93	<0.35	<0.35	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81	<0.25	<0.25	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67	<0.31	<0.31	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89	<0.33	<0.33	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97	<0.36	<0.36	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	< 0.89	< 0.89	<0.35	<0.35	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19	---	---	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-6			
			6/15/2011	9/29/2011	7/31/2013	4/1/2014
VOCs (ug/L)						
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92	<0.33	<0.33
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90	<0.33	<0.33
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20	<0.45	<0.45
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42	<0.34	<0.34
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75	<0.3	<0.3
1,1-Dichloroethene	**7**	**0.7**	< 0.57	< 0.57	<0.4	<0.4
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75	---	---
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74	<1.8	<1.8
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99	---	---
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97	<0.98	<0.98
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97	<2.2	<2.2
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7	<0.88	<0.88
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56	<0.44	<0.44
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83	<0.36	<0.36
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36	<0.41	<0.41
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49	<0.32	<0.32
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83	<1.4	<1.4
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87	<0.28	<0.28
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61	<0.33	<0.33
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95	<0.3	<0.3
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62	<0.36	<0.36
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85	<0.21	<0.21
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74	<0.21	<0.21
Benzene	**5**	**0.5**	< 0.41	< 0.41	<0.24	<0.24
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82	<0.32	<0.32
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97	---	---
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56	<0.37	<0.37
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94	<0.35	<0.35
Bromomethane	**10**	**1**	< 0.91	< 0.91	---	---
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49	<0.33	<0.33
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41	<0.24	<0.24
Chloroethane	**400**	**80**	< 0.97	< 0.97	<0.63	<0.63
Chloroform	**6**	**0.6**	< 1.3	< 1.3	<0.28	<0.28
Chloromethane	**30**	**3**	< 0.24	< 0.24	<0.81	<0.81
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81	<0.22	<0.22
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60	---	---
Dichlorodifluoromethane	**NE**	**NE**	< 0.99	< 0.99	<0.44	<0.44
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76	<0.23	<0.23
Ethylbenzene	**700**	**140**	< 0.54	< 0.54	<0.55	<0.55
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67	<1.5	<1.5
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59	<0.3	<0.3
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61	<0.23	<0.23
Methylene Chloride	**5**	**0.5**	0.62 J	< 0.43	<0.5	<0.5
Naphthalene	**100**	**10**	< 0.89	< 0.89	<1.7	<1.7
Styrene	**100**	**10**	< 0.86	< 0.86	---	---
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45	<0.33	<0.33
Toluene	**800**	**160**	< 0.67	< 0.67	<0.69	<0.69
Trichloroethene	**5**	**0.5**	< 0.48	< 0.48	<0.33	<0.33
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79	<0.71	<0.71
Vinyl chloride	**0.2**	**0.02**	< 0.18	< 0.18	<0.18	<0.18
cis-1,2-Dichloroethene	**70**	**7**	< 0.83	< 0.83	<0.38	<0.38
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20	---	---
Xylenes	**2000**	**400**	< 2.63	< 2.63	<1.32	<1.32
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93	<0.35	<0.35
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81	<0.25	<0.25
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67	<0.31	<0.31
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89	<0.33	<0.33
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97	<0.36	<0.36
trans-1,2-Dichloroethene	**100**	**20**	< 0.89	< 0.89	<0.35	<0.35
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19	---	---

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-7				
			7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019
VOCs (ug/L)							
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.33	<0.33	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.33	<0.33	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.45	<0.45	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.34	<0.34	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<0.3	<0.3	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.4	<0.4	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	---	---	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<1.8	<1.8	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	---	---	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<0.98	<0.98	<1.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<2.2	<2.2	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<0.88	<0.88	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.44	<0.44	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.36	<0.36	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.41	<0.41	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.32	<0.32	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<1.4	<1.4	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.28	<0.28	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.33	<0.33	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.3	<0.33	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<0.36	<0.36	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.21	<0.21	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.21	<0.21	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	<0.24	<0.24	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.32	<0.32	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	---	---	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.37	<0.37	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<0.35	<0.35	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	---	---	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.33	<0.33	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.24	<0.24	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	<0.63	<0.63	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	<0.28	<0.28	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	<0.81	<0.81	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<0.22	<0.22	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	---	---	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	1.06 J	1.46	1.74 J	1.9 J	0.76J
Diisopropyl ether	**NE**	**NE**	<0.23	<0.23	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.55	<0.55	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<1.5	<1.5	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.3	<0.3	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<0.23	<0.23	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<0.5	<0.5	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	<1.7	<1.7	<1.6	<1.2	<1.2
Styrene	**100**	**10**	---	---	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.33	<0.33	<0.49	<0.33	<0.33
Toluene	**800**	**160**	<0.69	<0.69	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	***0.81 J***	0.34 J	**5.8**	0.38 J	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.71	<0.71	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.18	<0.18	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.38	<0.38	0.78 J	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<3.6	<3.6
Xylenes	**2000**	**400**	<1.32	<1.32	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<0.35	<0.35	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.25	<0.25	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<0.31	<0.31	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<0.33	<0.33	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<0.36	<0.36	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<0.35	<0.35	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-8					
			7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)								
1,1,1,2-Tetrachloroethane	**70**	**7**	<16.5	<3.3	<4.8	<2.7	<1.1	<3.6
1,1,1-Trichloroethane	**200**	**40**	<16.5	<3.3	<8.4	<2.4	<0.98	<3.0
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<22.5	<4.5	<5.2	<2.8	<1.1	<3.8
1,1,2-Trichloroethane	**5**	**0.5**	<17	<3.4	<4.8	<5.5	<2.2	<3.4
1,1-Dichloroethane	**850**	**85**	<15	<3	<11	<2.7	<1.1	< 3.0
1,1-Dichloroethene	**7**	**0.7**	<20	***4.3 J***	***7.3 J***	***5.5 J***	***5.8***	<5.8
1,1-Dichloropropene	**NE**	**NE**	---	---	---	<5.4	<2.2	< 4.1
1,2,3-Trichlorobenzene	**NE**	**NE**	<90	<18	<27	<6.3	<2.5	<10.2
1,2,3-Trichloropropane	**60**	**12**	---	---	---	<5.9	<2.4	<5.6
1,2,4-Trichlorobenzene	**70**	**14**	<49	<9.8	<4.9	<9.5	<3.8	<9.5
1,2,4-Trimethylbenzene	**480***	**96***	<110	<22	<16	<8.4	<3.4	<4.5
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<44	<8.8	<14	<17.6	<7.1	<23.7
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<22	<4.4	<6.3	<8.3	<3.3	<3.1
1,2-Dichlorobenzene	**600**	**60**	<18	<3.6	<4.6	<7.1	<2.8	<3.3
1,2-Dichloroethane	**5**	**0.5**	<20.5	<4.1	<4.8	<2.8	<1.1	<2.9
1,2-Dichloropropane	**5**	**0.5**	<16	<3.2	<4.3	<2.8	<1.1	<4.5
1,3,5-Trimethylbenzene	**480***	**96***	<70	<14	<15	<8.7	<3.5	<3.6
1,3-Dichlorobenzene	**600**	**120**	<14	<2.8	<5.2	<6.3	<2.5	<3.5
1,3-Dichloropropane	**NE**	**NE**	<16.5	<3.3	<4.2	<8.3	<3.3	<3.0
1,4-Dichlorobenzene	**75**	**15**	<15	<3	<4.9	<9.4	<3.8	<8.9
2,2-Dichloropropane	**NE**	**NE**	<18	<3.6	<31	<22.7	<9.1	<41.8
2-Chlorotoluene	**NE**	**NE**	<10.5	<2.1	<4	<9.3	<3.7	<8.9
4-Chlorotoluene	**NE**	**NE**	<10.5	<2.1	<6.3	<7.6	<3.0	<8.9
Benzene	**5**	**0.5**	<12	<2.4	<4.4	<2.5	<0.99	<3.0
Bromobenzene	**NE**	**NE**	<16	<3.2	<4.8	<2.4	<0.96	<3.6
Bromochloromethane	**NE**	**NE**	---	---	---	<3.6	<1.4	<3.6
Bromodichloromethane	**0.6**	**0.06**	<18.5	<3.7	<4.6	<3.6	<1.5	<4.2
Bromoform	**4.4**	**0.44**	<17.5	<3.5	<4.6	<39.7	<15.9	<38.0
Bromomethane	**10**	**1**	---	---	---	<9.7	<3.9	<11.9
Carbon Tetrachloride	**5**	**0.5**	<16.5	<3.3	<5.1	<1.7	<0.66	<3.7
Chlorobenzene	**NE**	**NE**	<12	<2.4	<4.6	<7.1	<2.8	<8.6
Chloroethane	**400**	**80**	<31.5	<6.3	<6.5	<13.4	<5.4	<13.8
Chloroform	**6**	**0.6**	<14	<2.8	<4.3	<12.7	<5.1	<11.8
Chloromethane	**30**	**3**	<40.5	<8.1	<19	<21.9	<8.8	<16.4
Dibromochloromethane	**60**	**6**	<11	<2.2	<4.5	<26.0	<10.4	<26.4
Dibromomethane	**NE**	**NE**	---	---	---	<9.4	<3.7	<9.9
Dichlorodifluoromethane	**NE**	**NE**	<22	<4.4	<8.7	<5.0	<2.0	<4.6
Diisopropyl ether	**NE**	**NE**	<11.5	<2.3	<4.4	<18.9	<7.6	<11.0
Ethylbenzene	**700**	**140**	<27.5	<5.5	<7.1	<2.2	<0.87	<3.3
Hexachloro-1,3-butadiene	**NE**	**NE**	<75	<15	<22	<11.8	<4.7	<27.4
Isopropylbenzene	**NE**	**NE**	<15	<3	<8.2	<3.9	<1.6	<10.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<11.5	<2.3	<11	<12.5	<5.0	<11.3
Methylene Chloride	**5**	**0.5**	<25	<5	<13	<5.8	<2.3	<3.2
Naphthalene	**100**	**10**	<85	<17	<16	<11.8	<4.7	<11.3
Styrene	**100**	**10**	---	---	---	<4.7	<1.9	<3.6
Tetrachloroethene	**5**	**0.5**	<16.5	<3.3	<4.9	<3.3	<1.3	<4.1
Toluene	**800**	**160**	<34.5	<6.9	<4.4	<1.7	<0.69	<2.9
Trichloroethene	**5**	**0.5**	**166**	**209**	**153**	**57.7**	**73.4**	**61.2**
Trichlorofluoromethane	**3490**	**698**	<35.5	<7.1	<8.7	<2.1	<0.86	<4.2
Vinyl chloride	**0.2**	**0.02**	**37**	**43**	**60**	**56.1**	**63.4**	**111**
cis-1,2-Dichloroethene	**70**	**7**	**450**	**500**	**490**	**431**	**425**	**586**
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<36.3	<14.5	<3.6
Xylenes	**2000**	**400**	<66.0	<13.2	<31	<7.3	<2.9	<10.9
n-Butylbenzene	**NE**	**NE**	<17.5	<3.5	<10	<7.1	<2.8	<8.6
n-Propylbenzene	**NE**	**NE**	<12.5	<2.5	<7.7	<8.1	<3.2	<3.5
p-Isopropyltoluene	**NE**	**NE**	<15.5	<3.1	<11	<8.0	<3.2	<10.4
sec-Butylbenzene	**NE**	**NE**	<16.5	<3.3	<12	<8.5	<3.4	<4.2
tert-Butylbenzene	**NE**	**NE**	<18	<3.6	<11	<3.0	<1.2	<5.9
trans-1,2-Dichloroethene	**100**	**20**	***46 J***	*44*	*49*	***78.4***	***49.2***	***59.3***
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<43.7	<17.5	<34.6

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	TW-1		
			7/31/2013	9/26/2013	4/1/2014
VOCs (ug/L)					
1,1,1,2-Tetrachloroethane	**70**	**7**	<1650	< 330	<330
1,1,1-Trichloroethane	**200**	**40**	<1650	< 330	<330
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<2250	< 450	<450
1,1,2-Trichloroethane	**5**	**0.5**	<1700	< 340	<340
1,1-Dichloroethane	**850**	**85**	<1500	< 300	<300
1,1-Dichloroethene	**7**	**0.7**	<2000	< 400	<400
1,1-Dichloropropene	**NE**	**NE**	---	---	---
1,2,3-Trichlorobenzene	**NE**	**NE**	<9000	< 1800	<1800
1,2,3-Trichloropropane	**60**	**12**	---	---	---
1,2,4-Trichlorobenzene	**70**	**14**	<4900	< 980	<980
1,2,4-Trimethylbenzene	**480***	**96***	<11000	< 2200	<2200
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<4400	< 880	<880
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<2200	< 440	<440
1,2-Dichlorobenzene	**600**	**60**	<1800	< 360	<360
1,2-Dichloroethane	**5**	**0.5**	<2050	< 410	<410
1,2-Dichloropropane	**5**	**0.5**	<1600	< 320	<320
1,3,5-Trimethylbenzene	**480***	**96***	<7000	< 1400	<1400
1,3-Dichlorobenzene	**600**	**120**	<1400	< 280	<280
1,3-Dichloropropane	**NE**	**NE**	<1650	< 330	<330
1,4-Dichlorobenzene	**75**	**15**	<1500	< 300	<300
2,2-Dichloropropane	**NE**	**NE**	<1800	< 360	<360
2-Chlorotoluene	**NE**	**NE**	<1050	< 210	<210
4-Chlorotoluene	**NE**	**NE**	<1050	< 210	<210
Benzene	**5**	**0.5**	<1200	< 240	<240
Bromobenzene	**NE**	**NE**	<1600	< 320	<320
Bromochloromethane	**NE**	**NE**	---	---	---
Bromodichloromethane	**0.6**	**0.06**	<1850	< 370	<370
Bromoform	**4.4**	**0.44**	<1750	< 350	<350
Bromomethane	**10**	**1**	---	---	---
Carbon Tetrachloride	**5**	**0.5**	<1650	< 330	<330
Chlorobenzene	**NE**	**NE**	<1200	< 240	<240
Chloroethane	**400**	**80**	<3150	< 630	<630
Chloroform	**6**	**0.6**	<1400	< 280	<280
Chloromethane	**30**	**3**	<4050	< 810	<810
Dibromochloromethane	**60**	**6**	<1100	< 220	<220
Dibromomethane	**NE**	**NE**	---	---	---
Dichlorodifluoromethane	**NE**	**NE**	<2200	< 440	<440
Diisopropyl ether	**NE**	**NE**	<1150	< 230	<230
Ethylbenzene	**700**	**140**	<2750	< 550	<550
Hexachloro-1,3-butadiene	**NE**	**NE**	<7500	< 1500	<1500
Isopropylbenzene	**NE**	**NE**	<1500	< 300	<300
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1150	< 230	<230
Methylene Chloride	**5**	**0.5**	<2500	< 500	<500
Naphthalene	**100**	**10**	<8500	< 1700	<1700
Styrene	**100**	**10**	---	---	---
Tetrachloroethene	**5**	**0.5**	<1650	< 330	<330
Toluene	**800**	**160**	<3450	< 690	<690
Trichloroethene	**5**	**0.5**	**34,000**	**117,000**	**11,000**
Trichlorofluoromethane	**3490**	**698**	<3550	< 710	<710
Vinyl chloride	**0.2**	**0.02**	**14,500**	**23,500**	**5,700**
cis-1,2-Dichloroethene	**70**	**7**	**89,000**	**119,000**	**17,600**
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---
Xylenes	**2000**	**400**	<6600	< 1320	<1320
n-Butylbenzene	**NE**	**NE**	<1750	< 350	<350
n-Propylbenzene	**NE**	**NE**	<1250	< 250	<250
p-Isopropyltoluene	**NE**	**NE**	<1550	< 310	<310
sec-Butylbenzene	**NE**	**NE**	<1650	< 330	<330
tert-Butylbenzene	**NE**	**NE**	<1800	< 360	<360
trans-1,2-Dichloroethene	**100**	**20**	<1750	**2710**	<350
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	PZ-3				
			7/31/2013	4/1/2014	12/30/2016	3/28/2019	6/20/2019
VOCs (ug/L)							
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.33	<0.33	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.33	<0.33	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.45	<0.45	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.34	<0.34	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<0.3	<0.3	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.4	<0.4	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	---	---	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<1.8	<1.8	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	---	---	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<0.98	<0.98	<1.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<2.2	<2.2	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<0.88	<0.88	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.44	<0.44	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.36	<0.36	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.41	<0.41	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.32	<0.32	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<1.4	<1.4	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.28	<0.28	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.28	<0.33	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.3	<0.3	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<0.36	<0.36	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.21	<0.21	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.21	<0.21	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	<0.24	<0.24	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.32	<0.32	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	---	---	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.37	<0.37	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<0.35	<0.35	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	---	---	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.33	<0.33	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.24	<0.24	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	<0.63	<0.63	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	<0.28	<0.28	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	<0.81	<0.81	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<0.22	<0.22	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	---	---	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	<0.44	<0.44	<0.87	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	<0.23	<0.23	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.55	<0.55	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<1.5	<1.5	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.3	<0.3	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<0.23	<0.23	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<0.5	<0.5	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	<1.7	<1.7	<1.6	<1.2	<1.2
Styrene	**100**	**10**	---	---	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.33	<0.33	<0.49	<0.33	<0.33
Toluene	**800**	**160**	<0.69	<0.69	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	***1.93***	***1.33***	***4.8***	0.49 J	0.51J
Trichlorofluoromethane	**3490**	**698**	<0.71	<0.71	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	**0.53 J**	<0.18	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	4.3	1.61	1.45	1.1	0.58J
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<3.6	<3.6
Xylenes	**2000**	**400**	<1.32	<1.32	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<0.35	<0.35	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.25	<0.25	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<0.31	<0.31	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<0.33	<0.33	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<0.36	<0.36	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<0.35	<0.35	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	---	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	PZ-4			
			6/15/2011	9/29/2011	7/31/2013	4/1/2014
VOCs (ug/L)						
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92	<0.33	<0.33
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90	<0.33	<0.33
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20	<0.45	<0.45
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42	<0.34	<0.34
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75	<0.3	<0.3
1,1-Dichloroethene	**7**	**0.7**	< 0.57	< 0.57	<0.4	<0.4
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75	---	---
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74	<1.8	<1.8
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99	---	---
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97	<0.98	<0.98
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97	<2.2	<2.2
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7	<0.88	<0.88
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56	<0.44	<0.44
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83	<0.36	<0.36
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36	<0.41	<0.41
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49	<0.32	<0.32
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83	<1.4	<1.4
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87	<0.28	<0.28
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61	<0.33	<0.33
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95	<0.3	<0.3
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62	<0.36	<0.36
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85	<0.21	<0.21
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74	<0.21	<0.21
Benzene	**5**	**0.5**	< 0.41	< 0.41	<0.24	<0.24
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82	<0.32	<0.32
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97	---	---
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56	<0.37	<0.37
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94	<0.35	<0.35
Bromomethane	**10**	**1**	< 0.91	< 0.91	---	---
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49	<0.33	<0.33
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41	<0.24	<0.24
Chloroethane	**400**	**80**	< 0.97	< 0.97	<0.63	<0.63
Chloroform	**6**	**0.6**	< 1.3	< 1.3	<0.28	<0.28
Chloromethane	**30**	**3**	< 0.24	< 0.24	<0.81	<0.81
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81	<0.22	<0.22
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60	---	---
Dichlorodifluoromethane	**NE**	**NE**	< 0.99	< 0.99	<0.44	<0.44
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76	<0.23	<0.23
Ethylbenzene	**700**	**140**	< 0.54	< 0.54	<0.55	<0.55
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67	<1.5	<1.5
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59	<0.3	<0.3
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61	<0.23	<0.23
Methylene Chloride	**5**	**0.5**	< 0.43	< 0.43	<0.5	<0.5
Naphthalene	**100**	**10**	< 0.89	< 0.89	<1.7	<1.7
Styrene	**100**	**10**	< 0.86	< 0.86	---	---
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45	<0.33	<0.33
Toluene	**800**	**160**	< 0.67	< 0.67	<0.69	<0.69
Trichloroethene	**5**	**0.5**	< 0.48	< 0.48	<0.33	<0.33
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79	<0.71	<0.71
Vinyl chloride	**0.2**	**0.02**	< 0.18	< 0.18	<0.18	<0.18
cis-1,2-Dichloroethene	**70**	**7**	< 0.83	< 0.83	<0.38	<0.38
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20	---	---
Xylenes	**2000**	**400**	< 2.63	< 2.63	<1.32	<1.32
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93	<0.35	<0.35
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81	<0.25	<0.25
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67	<0.31	<0.31
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89	<0.33	<0.33
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97	<0.36	<0.36
trans-1,2-Dichloroethene	**100**	**20**	< 0.89	< 0.89	<0.35	<0.35
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19	---	---

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	PZ-13		
			12/29/2016	3/28/2019	6/20/2019
VOCs (ug/L)					
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<1.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	<0.87	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	<1.6	<1.2	<1.2
Styrene	**100**	**10**	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.49	<0.33	<0.33
Toluene	**800**	**160**	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	<0.47	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.45	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	<3.6	<3.6
Xylenes	**2000**	**400**	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-14			
			12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)						
1,1,1,2-Tetrachloroethane	**70**	**7**	<96	<67.3	<67.3	<88.8
1,1,1-Trichloroethane	**200**	**40**	<168	<61.2	<61.2	<75.6
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<104	<68.8	<68.8	<94.5
1,1,2-Trichloroethane	**5**	**0.5**	<96	<138	<138	<86.1
1,1-Dichloroethane	**850**	**85**	<220	<68.1	<68.1	<73.9
1,1-Dichloroethene	**7**	**0.7**	<130	**181 J**	**253**	**<146**
1,1-Dichloropropene	**NE**	**NE**	---	<135	<135	<103
1,2,3-Trichlorobenzene	**NE**	**NE**	<540	<156	<156	<255
1,2,3-Trichloropropane	**60**	**12**	---	<148	<148	<139
1,2,4-Trichlorobenzene	**70**	**14**	<340	<238	<238	<238
1,2,4-Trimethylbenzene	**480***	**96***	<320	<210	<210	<112
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<280	<441	<441	<592
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<126	<207	<207	<77.3
1,2-Dichlorobenzene	**600**	**60**	<92	<176	<176	<81.5
1,2-Dichloroethane	**5**	**0.5**	<96	<70.0	<70.0	<72.9
1,2-Dichloropropane	**5**	**0.5**	<86	<70.7	<70.7	<112
1,3,5-Trimethylbenzene	**480***	**96***	<300	<218	<218	<89.3
1,3-Dichlorobenzene	**600**	**120**	<104	<157	<157	<87.8
1,3-Dichloropropane	**NE**	**NE**	<84	<206	<206	<76.2
1,4-Dichlorobenzene	**75**	**15**	<98	<236	<236	<223
2,2-Dichloropropane	**NE**	**NE**	<620	<566	<566	<1040
2-Chlorotoluene	**NE**	**NE**	<80	<232	<232	<222
4-Chlorotoluene	**NE**	**NE**	<126	<189	<189	<224
Benzene	**5**	**0.5**	<88	<61.6	<61.6	<73.9
Bromobenzene	**NE**	**NE**	<96	<60.3	<60.3	<90.2
Bromochloromethane	**NE**	**NE**	---	<90.5	<90.5	<89.2
Bromodichloromethane	**0.6**	**0.06**	<92	<90.9	<90.9	<104
Bromoform	**4.4**	**0.44**	<92	<993	<993	<950
Bromomethane	**10**	**1**	---	<243	<243	<298
Carbon Tetrachloride	**5**	**0.5**	<102	<41.5	<41.5	<92.3
Chlorobenzene	**NE**	**NE**	<92	<178	<178	<214
Chloroethane	**400**	**80**	<130	<336	<336	<345
Chloroform	**6**	**0.6**	<86	<318	<318	<296
Chloromethane	**30**	**3**	<380	<547	<547	<409
Dibromochloromethane	**60**	**6**	<90	<650	<650	<661
Dibromomethane	**NE**	**NE**	---	<234	<234	<248
Dichlorodifluoromethane	**NE**	**NE**	<174	<125	<125	<114
Diisopropyl ether	**NE**	**NE**	<88	<472	<472	<275
Ethylbenzene	**700**	**140**	<142	<54.5	<54.5	<81.3
Hexachloro-1,3-butadiene	**NE**	**NE**	<440	<296	<296	<684
Isopropylbenzene	**NE**	**NE**	<164	<98.2	<98.2	<250
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<220	<311	<311	<282
Methylene Chloride	**5**	**0.5**	<260	<145	<145	<79.9
Naphthalene	**100**	**10**	<320	<294	<294	<282
Styrene	**100**	**10**	---	<116	<116	<89.1
Tetrachloroethene	**5**	**0.5**	<98	<81.6	<81.6	<102
Toluene	**800**	**160**	<88	<43.0	<43.0	<72.0
Trichloroethene	**5**	**0.5**	**36,000**	**12,800**	**15,000**	**16,200**
Trichlorofluoromethane	**3490**	**698**	<174	<53.7	<53.7	<105
Vinyl chloride	**0.2**	**0.02**	**5,900**	**5,150**	**5,540**	**6,410**
cis-1,2-Dichloroethene	**70**	**7**	**31,400**	**14,000**	**16,500**	**17,600**
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	<907	<907	<89.5
Xylenes	**2000**	**400**	<620	<181.5	<181.5	<261.9
n-Butylbenzene	**NE**	**NE**	<200	<177	<177	<214
n-Propylbenzene	**NE**	**NE**	<154	<203	<203	<86.9
p-Isopropyltoluene	**NE**	**NE**	<220	<200	<200	<261
sec-Butylbenzene	**NE**	**NE**	<200	<212	<212	<106
tert-Butylbenzene	**NE**	**NE**	<240	<76.0	<76.0	<147
trans-1,2-Dichloroethene	**100**	**20**	**870**	**669 J**	**824 J**	**861**
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	<1090	<1090	<866

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-15			
			12/30/2016	3/28/2019	6/20/2019	6/24/2021
VOCs (ug/L)						
1,1,1,2-Tetrachloroethane	**70**	**7**	<4.8	<0.54	<0.54	<0.71
1,1,1-Trichloroethane	**200**	**40**	<8.4	<0.49	<0.49	<0.61
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<5.2	<0.55	<0.55	<0.76
1,1,2-Trichloroethane	**5**	**0.5**	<4.8	<1.1	<1.1	<0.69
1,1-Dichloroethane	**850**	**85**	<11	<0.55	<0.55	<0.59
1,1-Dichloroethene	**7**	**0.7**	**82**	**42.7**	**67.8**	**73**
1,1-Dichloropropene	**NE**	**NE**	---	<1.1	<1.1	<0.82
1,2,3-Trichlorobenzene	**NE**	**NE**	<27	<1.3	<1.3	<2.0
1,2,3-Trichloropropane	**60**	**12**	---	<1.2	<1.2	<1.1
1,2,4-Trichlorobenzene	**70**	**14**	<17	<1.9	<1.9	<1.9
1,2,4-Trimethylbenzene	**480***	**96***	<16	<1.7	<1.7	<0.90
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<14	<3.5	<3.5	<4.7
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<6.3	<1.7	<1.7	<0.62
1,2-Dichlorobenzene	**600**	**60**	<4.6	<1.4	<1.4	<0.65
1,2-Dichloroethane	**5**	**0.5**	<4.8	<0.56	<0.56	<0.58
1,2-Dichloropropane	**5**	**0.5**	<4.3	<0.57	<0.57	<0.90
1,3,5-Trimethylbenzene	**480***	**96***	<15	<1.7	<1.7	<0.71
1,3-Dichlorobenzene	**600**	**120**	<5.2	<1.3	<1.3	<0.70
1,3-Dichloropropane	**NE**	**NE**	<4.2	<1.7	<1.7	<0.61
1,4-Dichlorobenzene	**75**	**15**	<4.9	<1.9	<1.9	<1.8
2,2-Dichloropropane	**NE**	**NE**	<31	<4.5	<4.5	<8.4
2-Chlorotoluene	**NE**	**NE**	<4	<1.9	<1.9	<1.8
4-Chlorotoluene	**NE**	**NE**	<6.3	<1.5	<1.5	<1.8
Benzene	**5**	**0.5**	<4.4	<0.49	<0.49	<0.59
Bromobenzene	**NE**	**NE**	<4.8	<0.48	<0.48	<0.72
Bromochloromethane	**NE**	**NE**	---	<0.72	<0.72	<0.72
Bromodichloromethane	**0.6**	**0.06**	<4.6	<0.73	<0.73	<0.83
Bromoform	**4.4**	**0.44**	<4.6	<7.9	<7.9	<7.6
Bromomethane	**10**	**1**	---	<1.9	<1.9	<2.4
Carbon Tetrachloride	**5**	**0.5**	<5.1	<0.33	<0.33	<0.74
Chlorobenzene	**NE**	**NE**	<4.6	<1.4	<1.4	<1.7
Chloroethane	**400**	**80**	<6.5	<2.7	<2.7	<2.8
Chloroform	**6**	**0.6**	<4.5	<2.5	<2.5	<2.4
Chloromethane	**30**	**3**	<19	<4.4	<4.4	**16.3**
Dibromochloromethane	**60**	**6**	<4.5	<5.2	<5.2	<5.3
Dibromomethane	**NE**	**NE**	---	<1.9	<1.9	<2.0
Dichlorodifluoromethane	**NE**	**NE**	23.5 J	6.8 J	14.5	13.2
Diisopropyl ether	**NE**	**NE**	<4.4	<3.8	<3.8	<2.2
Ethylbenzene	**700**	**140**	<7.1	<0.44	<0.44	<0.65
Hexachloro-1,3-butadiene	**NE**	**NE**	<22	<2.4	<2.4	<5.5
Isopropylbenzene	**NE**	**NE**	<8.2	<0.79	<0.79	<2.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<11	<2.5	<2.5	<2.3
Methylene Chloride	**5**	**0.5**	<13	<1.2	<1.2	<0.64
Naphthalene	**100**	**10**	<16	<2.4	<2.4	<2.3
Styrene	**100**	**10**	---	<0.93	<0.93	<0.71
Tetrachloroethene	**5**	**0.5**	<4.9	<0.65	<0.65	<0.82
Toluene	**800**	**160**	<4.4	<0.34	<0.34	<0.58
Trichloroethene	**5**	**0.5**	**1,660**	**350**	**820**	**370**
Trichlorofluoromethane	**3490**	**698**	<8.7	<0.43	<0.43	<0.84
Vinyl chloride	**0.2**	**0.02**	**191**	**234**	**167**	**233**
cis-1,2-Dichloroethene	**70**	**7**	**390**	**176**	**190**	**162**
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	<7.3	<7.3	<0.72
Xylenes	**2000**	**400**	<31	<1.45	<1.45	<2.1
n-Butylbenzene	**NE**	**NE**	<10	<1.4	<1.4	<1.7
n-Propylbenzene	**NE**	**NE**	<7.7	<1.6	<1.6	<0.69
p-Isopropyltoluene	**NE**	**NE**	<11	<1.6	<1.6	<2.1
sec-Butylbenzene	**NE**	**NE**	<12	<1.7	<1.7	<0.85
tert-Butylbenzene	**NE**	**NE**	<11	<0.61	<0.61	<1.2
trans-1,2-Dichloroethene	**100**	**20**	<37	5.2 J	11.7	4.7
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	<8.7	<8.7	<6.9

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	PZ-16		
			12/29/2016	3/27/2019	6/19/2019
VOCs (ug/L)					
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<2.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	<0.87	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	<1.6	<1.2	<1.2
Styrene	**100**	**10**	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.49	<0.33	<0.33
Toluene	**800**	**160**	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	<0.47	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.45	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	<3.6	<3.6
Xylenes	**2000**	**400**	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-17		
			12/29/2016	3/27/2019	6/19/2019
VOCs (ug/L)					
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.48	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.84	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.52	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.48	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<1.1	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.65	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	---	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<2.7	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	---	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<1.7	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<1.6	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1.4	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.63	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.46	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.48	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.43	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<1.5	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.52	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.42	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.49	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<3.1	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.4	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.63	<0.76	<0.76
Benzene	**5**	**0.5**	<0.44	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.48	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	---	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.46	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<0.46	<4.0	<4.0
Bromomethane	**10**	**1**	---	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.51	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.46	<0.71	<0.71
Chloroethane	**400**	**80**	<0.65	<1.3	<1.3
Chloroform	**6**	**0.6**	<0.43	<1.3	<1.3
Chloromethane	**30**	**3**	<1.9	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<0.45	<2.6	<2.6
Dibromomethane	**NE**	**NE**	---	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	<0.87	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	<0.44	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.71	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<2.2	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.82	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1.1	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<1.3	<0.58	<0.58
Naphthalene	**100**	**10**	<1.6	<1.2	<1.2
Styrene	**100**	**10**	---	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.49	<0.33	<0.33
Toluene	**800**	**160**	<0.44	<0.17	<0.17
Trichloroethene	**5**	**0.5**	<0.47	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.87	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.17	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.45	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	---	<3.6	<3.6
Xylenes	**2000**	**400**	<3.1	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<1	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.77	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<1.1	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<1.2	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<1.1	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<0.54	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	---	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	SUMP-1 (Groundwater Pit) 10/15/2010	SUMP-1 (Groundwater Pit) 6/15/2011
VOCs (ug/L)				
1,1,1,2-Tetrachloroethane	**70**	**7**	< 46.0	< 46.0
1,1,1-Trichloroethane	**200**	**40**	< 45.0	< 45.0
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 10.0	< 10.0
1,1,2-Trichloroethane	**5**	**0.5**	< 21.0	< 21.0
1,1-Dichloroethane	**850**	**85**	< 37.5	< 37.5
1,1-Dichloroethene	**7**	**0.7**	< 28.5	***33.5 J***
1,1-Dichloropropene	**NE**	**NE**	< 37.5	< 37.5
1,2,3-Trichlorobenzene	**NE**	**NE**	< 37.0	< 37.0
1,2,3-Trichloropropane	**60**	**12**	< 49.5	< 49.5
1,2,4-Trichlorobenzene	**70**	**14**	< 48.5	< 48.5
1,2,4-Trimethylbenzene	**480***	**96***	< 48.5	< 48.5
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 84.0	< 84.0
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 28.0	< 28.0
1,2-Dichlorobenzene	**600**	**60**	< 41.5	< 41.5
1,2-Dichloroethane	**5**	**0.5**	< 18.0	< 18.0
1,2-Dichloropropane	**5**	**0.5**	< 24.5	< 24.5
1,3,5-Trimethylbenzene	**480***	**96***	< 41.5	< 41.5
1,3-Dichlorobenzene	**600**	**120**	< 43.5	< 43.5
1,3-Dichloropropane	**NE**	**NE**	< 30.5	< 30.5
1,4-Dichlorobenzene	**75**	**15**	< 47.5	< 47.5
2,2-Dichloropropane	**NE**	**NE**	< 31.0	< 31.0
2-Chlorotoluene	**NE**	**NE**	< 42.5	< 42.5
4-Chlorotoluene	**NE**	**NE**	< 37.0	< 37.0
Benzene	**5**	**0.5**	< 20.5	< 20.5
Bromobenzene	**NE**	**NE**	< 41.0	< 41.0
Bromochloromethane	**NE**	**NE**	< 48.5	< 48.5
Bromodichloromethane	**0.6**	**0.06**	< 28.0	< 28.0
Bromoform	**4.4**	**0.44**	< 47.0	< 47.0
Bromomethane	**10**	**1**	< 45.5	< 45.5
Carbon Tetrachloride	**5**	**0.5**	< 24.5	< 24.5
Chlorobenzene	**NE**	**NE**	< 20.5	< 20.5
Chloroethane	**400**	**80**	< 48.5	< 48.5
Chloroform	**6**	**0.6**	< 65.0	< 65.0
Chloromethane	**30**	**3**	< 12.0	< 12.0
Dibromochloromethane	**60**	**6**	< 40.5	< 40.5
Dibromomethane	**NE**	**NE**	< 30.0	< 30.0
Dichlorodifluoromethane	**NE**	**NE**	< 49.5	< 49.5
Diisopropyl ether	**NE**	**NE**	< 38.0	< 38.0
Ethylbenzene	**700**	**140**	< 27.0	< 27.0
Hexachloro-1,3-butadiene	**NE**	**NE**	< 33.5	< 33.5
Isopropylbenzene	**NE**	**NE**	< 29.5	< 29.5
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 30.5	< 30.5
Methylene Chloride	**5**	**0.5**	< 21.5	< 21.5
Naphthalene	**100**	**10**	< 44.5	< 44.5
Styrene	**100**	**10**	< 43.0	< 43.0
Tetrachloroethene	**5**	**0.5**	< 22.5	< 22.5
Toluene	**800**	**160**	< 33.5	< 33.5
Trichloroethene	**5**	**0.5**	**3,940**	**8,100**
Trichlorofluoromethane	**3490**	**698**	< 39.5	< 39.5
Vinyl chloride	**0.2**	**0.02**	**1,990**	**2,950**
cis-1,2-Dichloroethene	**70**	**7**	**3,270**	**4,480**
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 10.0	< 10.0
Xylenes	**2000**	**400**	<131.5	< 131.5
n-Butylbenzene	**NE**	**NE**	< 46.5	< 46.5
n-Propylbenzene	**NE**	**NE**	< 40.5	< 40.5
p-Isopropyltoluene	**NE**	**NE**	< 33.5	< 33.5
sec-Butylbenzene	**NE**	**NE**	< 44.5	< 44.5
tert-Butylbenzene	**NE**	**NE**	< 48.5	< 48.5
trans-1,2-Dichloroethene	**100**	**20**	**156**	**192**
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 9.5	< 9.5

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	SUMP-2 (Basement)	
			10/15/2010	6/15/2011
VOCs (ug/L)				
1,1,1,2-Tetrachloroethane	**70**	**7**	< 0.92	< 0.92
1,1,1-Trichloroethane	**200**	**40**	< 0.90	< 0.90
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	< 0.20	< 0.20
1,1,2-Trichloroethane	**5**	**0.5**	< 0.42	< 0.42
1,1-Dichloroethane	**850**	**85**	< 0.75	< 0.75
1,1-Dichloroethene	**7**	**0.7**	***0.73 J***	< 0.57
1,1-Dichloropropene	**NE**	**NE**	< 0.75	< 0.75
1,2,3-Trichlorobenzene	**NE**	**NE**	< 0.74	< 0.74
1,2,3-Trichloropropane	**60**	**12**	< 0.99	< 0.99
1,2,4-Trichlorobenzene	**70**	**14**	< 0.97	< 0.97
1,2,4-Trimethylbenzene	**480***	**96***	< 0.97	< 0.97
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	< 1.7	< 1.7
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	< 0.56	< 0.56
1,2-Dichlorobenzene	**600**	**60**	< 0.83	< 0.83
1,2-Dichloroethane	**5**	**0.5**	< 0.36	< 0.36
1,2-Dichloropropane	**5**	**0.5**	< 0.49	< 0.49
1,3,5-Trimethylbenzene	**480***	**96***	< 0.83	< 0.83
1,3-Dichlorobenzene	**600**	**120**	< 0.87	< 0.87
1,3-Dichloropropane	**NE**	**NE**	< 0.61	< 0.61
1,4-Dichlorobenzene	**75**	**15**	< 0.95	< 0.95
2,2-Dichloropropane	**NE**	**NE**	< 0.62	< 0.62
2-Chlorotoluene	**NE**	**NE**	< 0.85	< 0.85
4-Chlorotoluene	**NE**	**NE**	< 0.74	< 0.74
Benzene	**5**	**0.5**	< 0.41	< 0.41
Bromobenzene	**NE**	**NE**	< 0.82	< 0.82
Bromochloromethane	**NE**	**NE**	< 0.97	< 0.97
Bromodichloromethane	**0.6**	**0.06**	< 0.56	< 0.56
Bromoform	**4.4**	**0.44**	< 0.94	< 0.94
Bromomethane	**10**	**1**	< 0.91	< 0.91
Carbon Tetrachloride	**5**	**0.5**	< 0.49	< 0.49
Chlorobenzene	**NE**	**NE**	< 0.41	< 0.41
Chloroethane	**400**	**80**	< 0.97	< 0.97
Chloroform	**6**	**0.6**	< 1.3	< 1.3
Chloromethane	**30**	**3**	< 0.24	< 0.24
Dibromochloromethane	**60**	**6**	< 0.81	< 0.81
Dibromomethane	**NE**	**NE**	< 0.60	< 0.60
Dichlorodifluoromethane	**NE**	**NE**	1.8	< 0.99
Diisopropyl ether	**NE**	**NE**	< 0.76	< 0.76
Ethylbenzene	**700**	**140**	< 0.54	< 0.54
Hexachloro-1,3-butadiene	**NE**	**NE**	< 0.67	< 0.67
Isopropylbenzene	**NE**	**NE**	< 0.59	< 0.59
Methyl-tert-butyl ether (MTBE)	**60**	**12**	< 0.61	< 0.61
Methylene Chloride	**5**	**0.5**	< 0.43	< 0.43
Naphthalene	**100**	**10**	< 0.89	< 0.89
Styrene	**100**	**10**	< 0.86	< 0.86
Tetrachloroethene	**5**	**0.5**	< 0.45	< 0.45
Toluene	**800**	**160**	< 0.67	< 0.67
Trichloroethene	**5**	**0.5**	**84.7**	**72**
Trichlorofluoromethane	**3490**	**698**	< 0.79	< 0.79
Vinyl chloride	**0.2**	**0.02**	**0.66 J**	**0.31 J**
cis-1,2-Dichloroethene	**70**	**7**	**106**	***45.3***
cis-1,3-Dichloropropene	**0.4**	**0.04**	< 0.20	< 0.20
Xylenes	**2000**	**400**	< 2.63	< 2.63
n-Butylbenzene	**NE**	**NE**	< 0.93	< 0.93
n-Propylbenzene	**NE**	**NE**	< 0.81	< 0.81
p-Isopropyltoluene	**NE**	**NE**	< 0.67	< 0.67
sec-Butylbenzene	**NE**	**NE**	< 0.89	< 0.89
tert-Butylbenzene	**NE**	**NE**	< 0.97	< 0.97
trans-1,2-Dichloroethene	**100**	**20**	4.8	2
trans-1,3-Dichloropropene	**0.4**	**0.04**	< 0.19	< 0.19

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-18	
			3/28/2019	6/20/2019
VOCs (ug/L)				
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.76	<0.76
Benzene	**5**	**0.5**	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<4.0	<4.0
Bromomethane	**10**	**1**	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.71	<0.71
Chloroethane	**400**	**80**	<1.3	<1.3
Chloroform	**6**	**0.6**	<1.3	<1.3
Chloromethane	**30**	**3**	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<2.6	<2.6
Dibromomethane	**NE**	**NE**	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	0.51 J	<0.50
Diisopropyl ether	**NE**	**NE**	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<0.58	<0.58
Naphthalene	**100**	**10**	<1.2	<1.2
Styrene	**100**	**10**	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.33	<0.33
Toluene	**800**	**160**	<0.17	<0.17
Trichloroethene	**5**	**0.5**	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	<3.6	<3.6
Xylenes	**2000**	**400**	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	MW-19	
			3/28/2019	6/20/2019
VOCs (ug/L)				
1,1,1,2-Tetrachloroethane	**70**	**7**	<0.27	<0.27
1,1,1-Trichloroethane	**200**	**40**	<0.24	<0.24
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<0.28	<0.28
1,1,2-Trichloroethane	**5**	**0.5**	<0.55	<0.55
1,1-Dichloroethane	**850**	**85**	<0.27	<0.27
1,1-Dichloroethene	**7**	**0.7**	<0.24	<0.24
1,1-Dichloropropene	**NE**	**NE**	<0.54	<0.54
1,2,3-Trichlorobenzene	**NE**	**NE**	<0.63	<0.63
1,2,3-Trichloropropane	**60**	**12**	<0.59	<0.59
1,2,4-Trichlorobenzene	**70**	**14**	<0.95	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<0.84	<0.84
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1.8	<1.8
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<0.83	<0.83
1,2-Dichlorobenzene	**600**	**60**	<0.71	<0.71
1,2-Dichloroethane	**5**	**0.5**	<0.28	<0.28
1,2-Dichloropropane	**5**	**0.5**	<0.28	<0.28
1,3,5-Trimethylbenzene	**480***	**96***	<0.87	<0.87
1,3-Dichlorobenzene	**600**	**120**	<0.63	<0.63
1,3-Dichloropropane	**NE**	**NE**	<0.83	<0.83
1,4-Dichlorobenzene	**75**	**15**	<0.94	<0.94
2,2-Dichloropropane	**NE**	**NE**	<2.3	<2.3
2-Chlorotoluene	**NE**	**NE**	<0.93	<0.93
4-Chlorotoluene	**NE**	**NE**	<0.76	<0.76
Benzene	**5**	**0.5**	<0.25	<0.25
Bromobenzene	**NE**	**NE**	<0.24	<0.24
Bromochloromethane	**NE**	**NE**	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<0.36	<0.36
Bromoform	**4.4**	**0.44**	<4.0	<4.0
Bromomethane	**10**	**1**	<0.97	<0.97
Carbon Tetrachloride	**5**	**0.5**	<0.17	<0.17
Chlorobenzene	**NE**	**NE**	<0.71	<0.71
Chloroethane	**400**	**80**	<1.3	<1.3
Chloroform	**6**	**0.6**	<1.3	<1.3
Chloromethane	**30**	**3**	<2.2	<2.2
Dibromochloromethane	**60**	**6**	<2.6	<2.6
Dibromomethane	**NE**	**NE**	<0.94	<0.94
Dichlorodifluoromethane	**NE**	**NE**	<0.50	<0.50
Diisopropyl ether	**NE**	**NE**	<1.9	<1.9
Ethylbenzene	**700**	**140**	<0.22	<0.22
Hexachloro-1,3-butadiene	**NE**	**NE**	<1.2	<1.2
Isopropylbenzene	**NE**	**NE**	<0.39	<0.39
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<1.2	<1.2
Methylene Chloride	**5**	**0.5**	<0.58	<0.58
Naphthalene	**100**	**10**	<1.2	<1.2
Styrene	**100**	**10**	<0.47	<0.47
Tetrachloroethene	**5**	**0.5**	<0.33	<0.33
Toluene	**800**	**160**	<0.17	<0.17
Trichloroethene	**5**	**0.5**	<0.26	<0.26
Trichlorofluoromethane	**3490**	**698**	<0.21	<0.21
Vinyl chloride	**0.2**	**0.02**	<0.17	<0.17
cis-1,2-Dichloroethene	**70**	**7**	<0.27	<0.27
cis-1,3-Dichloropropene	**0.4**	**0.04**	<3.6	<3.6
Xylenes	**2000**	**400**	<0.73	<0.73
n-Butylbenzene	**NE**	**NE**	<0.71	<0.71
n-Propylbenzene	**NE**	**NE**	<0.81	<0.81
p-Isopropyltoluene	**NE**	**NE**	<0.80	<0.80
sec-Butylbenzene	**NE**	**NE**	<0.85	<0.85
tert-Butylbenzene	**NE**	**NE**	<0.30	<0.30
trans-1,2-Dichloroethene	**100**	**20**	<1.1	<1.1
trans-1,3-Dichloropropene	**0.4**	**0.04**	<4.4	<4.4

Table A.1.a - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Parameter	NR 140 ES	NR 140 PAL	TW-20 2/2/2022	TW-21 2/2/2022	TW-22 2/2/2022	TW-23 2/2/2022	TW-24 2/2/2022	TW-25 2/2/2022
VOCs (µg/L)								
1,1,1,2-Tetrachloroethane	**70**	**7**	<222	<3.6	<0.71	<0.71	<0.36	<0.36
1,1,1-Trichloroethane	**200**	**40**	<189	<3.0	<0.61	<0.61	<0.30	<0.30
1,1,2,2-Tetrachloroethane	**0.2**	**0.02**	<236	<3.8	<0.76	<0.76	<0.38	<0.38
1,1,2-Trichloroethane	**5**	**0.5**	<215	<3.4	<0.69	<0.69	<0.34	<0.34
1,1-Dichloroethane	**850**	**85**	***542 J***	<3.0	0.94 J	<0.59	<0.30	<0.30
1,1-Dichloroethene	**7**	**0.7**	**867**	**14.8**	<1.2	**10.9**	**34.3**	<0.58
1,1-Dichloropropene	**NE**	**NE**	<256	<4.1	<0.82	<0.82	<0.41	<0.41
1,2,3-Trichlorobenzene	**NE**	**NE**	<636	<10.2	<2.0	<2.0	<1.0	<1.0
1,2,3-Trichloropropane	**60**	**12**	<347	<5.6	<1.1	<1.1	<0.56	<0.56
1,2,4-Trichlorobenzene	**70**	**14**	<594	<9.5	<1.9	<1.9	1.3 J	<0.95
1,2,4-Trimethylbenzene	**480***	**96***	<280	<4.5	<0.90	<0.90	<0.45	<0.45
1,2-Dibromo-3-chloropropane	**0.2**	**0.02**	<1480	<23.7	<4.7	<4.7	<2.4	<2.4
1,2-Dibromoethane (EDB)	**0.05**	**0.005**	<193	<3.1	<0.62	<0.62	<0.31	<0.31
1,2-Dichlorobenzene	**600**	**60**	<204	<3.3	<0.65	<0.65	<0.33	<0.33
1,2-Dichloroethane	**5**	**0.5**	<182	<2.9	<0.58	<0.58	<0.29	<0.29
1,2-Dichloropropane	**5**	**0.5**	<280	<4.5	<0.90	<0.90	<0.45	<0.45
1,3,5-Trimethylbenzene	**480***	**96***	<223	<3.6	<0.71	<0.71	<0.36	<0.36
1,3-Dichlorobenzene	**600**	**120**	<219	<3.5	<0.70	<0.70	<0.35	<0.35
1,3-Dichloropropane	**NE**	**NE**	<190	<3.0	<0.61	<0.61	<0.30	<0.30
1,4-Dichlorobenzene	**75**	**15**	<558	<8.9	<1.8	<1.8	<0.89	<0.89
2,2-Dichloropropane	**NE**	**NE**	<2610	<41.8	<8.4	<8.4	<4.2	<4.2
2-Chlorotoluene	**NE**	**NE**	<556	<8.9	<1.8	<1.8	<0.89	<0.89
4-Chlorotoluene	**NE**	**NE**	<559	<8.9	<1.8	<1.8	<0.89	<0.89
Benzene	**5**	**0.5**	<185	<3.0	<0.59	<0.59	<0.30	<0.30
Bromobenzene	**NE**	**NE**	<226	<3.6	<0.72	<0.72	<0.36	<0.36
Bromochloromethane	**NE**	**NE**	<224	<3.6	<0.72	<0.72	<0.36	<0.36
Bromodichloromethane	**0.6**	**0.06**	<260	<4.2	<7.6	<0.83	<0.42	<0.42
Bromoform	**4.4**	**0.44**	<2370	<38.0	<0.83	<7.6	<3.8	<3.8
Bromomethane	**10**	**1**	<745	<11.9	<2.4	<2.4	<1.2	<1.2
Carbon Tetrachloride	**5**	**0.5**	<231	<3.7	<0.74	<0.74	<0.37	<0.37
Chlorobenzene	**NE**	**NE**	<535	<8.6	<1.7	<1.7	<0.86	<0.86
Chloroethane	**400**	**80**	<862	<13.8	<2.8	<2.8	<1.4	<1.4
Chloroform	**6**	**0.6**	<739	<11.8	<2.4	<2.4	<1.2	<1.2
Chloromethane	**30**	**3**	<1020	<16.4	<3.3	<3.3	<1.6	<1.6
Dibromochloromethane	**60**	**6**	<1650	<26.4	<5.3	<5.3	<2.6	<2.6
Dibromomethane	**NE**	**NE**	<619	<9.9	<2.0	<2.0	<0.99	<0.99
Dichlorodifluoromethane	**NE**	**NE**	<285	<4.6	<0.91	19.6	135	22.6
Diisopropyl ether	**NE**	**NE**	<688	<11.0	<2.2	<2.2	<1.1	<1.1
Ethylbenzene	**700**	**140**	<203	<3.3	<0.65	<0.65	<0.33	<0.33
Hexachloro-1,3-butadiene	**NE**	**NE**	<1710	<27.4	<5.5	<5.5	<2.7	<2.7
Isopropylbenzene	**NE**	**NE**	<625	<10.0	<2.0	<2.0	<1.0	<1.0
Methyl-tert-butyl ether (MTBE)	**60**	**12**	<706	<11.3	<2.3	<2.3	<1.1	<1.1
Methylene Chloride	**5**	**0.5**	<200	<3.2	<0.64	<0.64	<0.32	<0.32
Naphthalene	**100**	**10**	<706	<11.3	<2.3	<2.3	<1.1	<1.1
Styrene	**100**	**10**	<223	<3.6	<0.71	<0.71	<0.36	<0.36
Tetrachloroethene	**5**	**0.5**	<255	<4.1	<0.82	<0.82	<0.41	<0.41
Toluene	**800**	**160**	<180	<2.9	<0.58	<0.58	<0.29	<0.29
Trichloroethene	**5**	**0.5**	**78,300**	**345**	**8.1**	**109**	**125**	<0.32
Trichlorofluoromethane	**3490**	**698**	<262	<4.2	<0.84	<0.84	<0.42	<0.42
Vinyl chloride	**0.2**	**0.02**	**47,800**	**166**	**166**	**19.9**	**409**	<0.17
cis-1,2-Dichloroethene	**70**	**7**	**183,000**	**842**	**126**	**163**	**84.1**	<0.47
cis-1,3-Dichloropropene	**0.4**	**0.04**	<234	<3.6	<0.72	<0.72	<0.36	<0.36
Xylenes	**2000**	**400**	<655	<10.5	<2.1	<2.1	<1.05	<1.05
n-Butylbenzene	**NE**	**NE**	<536	<8.6	<1.7	<1.7	<0.86	<0.86
n-Propylbenzene	**NE**	**NE**	<216	<3.5	<0.69	<0.69	<0.35	<0.35
p-Isopropyltoluene	**NE**	**NE**	<652	<10.4	<2.1	<2.1	<1.0	<1.0
sec-Butylbenzene	**NE**	**NE**	<265	<4.2	<0.85	<0.85	<0.42	<0.42
tert-Butylbenzene	**NE**	**NE**	<366	<5.9	<1.2	<1.2	<0.59	<0.59
trans-1,2-Dichloroethene	**100**	**20**	**2,660**	**129**	9.9	1.3 J	4.2	<0.53
trans-1,3-Dichloropropene	**0.4**	**0.04**	<2160	<34.6	<6.9	<6.9	<3.5	<3.5

Key:

VOC - Volatile Organic Compounds

J - Analyte detected between the laboratory Limit of Detection and tLimit of Quantitation

NE - Not established by Chapter NR 140 Wis. Adm. Code

µg/L - Micrograms per liter

--- - Not analyzed

5 - Exceeds Chapter NR 140 Enforcement Standard

0.5 - Exceeds Chapter NR 140 Preventive Action Limit

* - NR 140 ES and PAL values are for combined 1,2,4- and 1,3,5-Trimethylbenzene

Table A.1.b - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Well ID	Date Sampled	Relevant and Significant Metals Analytical Results (µg/L)								
		Arsenic	Barium	Cadmium	Chromium	Hexavalent Chromium	Lead	Mercury	Selenium	Silver
NR 140 Preventive Action Limit (µg/l)		1	400	0.5	10	NE	1.5	0.2	10	10
NR 140 Enforcement Standard (µg/l)		10	2000	5	100	NE	15	2	50	50
MW-1	10/15/10	***7.3 J***	***1070***	***2.3 J***	1.1 J	<3.9	<1.7	<0.10	<2.0	<0.52
	06/15/11	***6.2 J***	316	***0.63 J***	1.4 J	---	***2.9 J***	<0.10	<1.9	<0.46
	09/29/11	***5.6 J***	397	0.23 J	<0.44	---	***2.4 J***	<0.10	<1.9	<0.46
	07/31/13	<0.6	233	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	***1.9***	201	<0.5	<2.6	---	<0.7	<0.04	1.6 J	<51.5
	12/30/16	<0.6	105	<0.3	7.4	---	<0.6	<11	<1.1	<1.9
	03/28/19	<10.8	109	<1.3	***33.7***	---	<12.8	<0.084	<24.7	<3.2
	06/20/19	***8.7 J***	128	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-2	10/15/10	***2.6 J***	***422***	<0.26	<0.50	<3.9	<1.7	<0.10	<2.0	<0.52
	06/15/11	***3.5 J***	285	0.33 J	<0.44	---	***3.1 J***	<0.10	4.1 J	<0.46
	09/29/11	***6.0 J***	2.76	0.17 J	<0.44	---	***2.54 J***	<0.10	<1.9	<0.46
	07/31/13	***2.7***	179	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	***1.5 J***	291	<0.5	<2.6	---	**12.2**	<0.04	<1	<51.5
	12/30/16	***1.1 J***	39.2	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	NS	NS	NS	NS	---	NS	NS	NS	NS
	06/20/19	***8.7 J***	88.2	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-3	10/15/10	***3.2 J***	385	<0.26	<0.50	<3.9	***2.1 J***	<0.10	<2.0	<0.52
	06/15/11	***3.2 J***	156	0.19 J	4.2 J	---	<2.4	<0.10	<1.9	<0.46
	09/29/11	***4.6 J***	190	<0.13	<0.44	---	***2.1 J***	<0.10	<1.9	<0.46
	07/31/13	<0.6	161	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	***1.8 J***	105	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
	12/30/16	<0.6	101	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	***8.1 J***	86.2	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	**13.1 J**	93	<1.3	<2.5	---	<6.4	<0.084	***17.8J***	<3.2
MW-4	06/15/11	***2.9 J***	127	<0.13	<0.44	---	<2.4	<0.10	3.2 J	<0.46
	09/29/11	***4.4 J***	85.9	<0.13	<0.44	---	<1.5	<0.10	<1.9	<0.46
	07/31/13	<0.6	99.4	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	03/28/19	<5.4	---	---	---	---	---	---	---	---
	06/19/19	<8.3	---	---	---	---	---	---	---	---
TW-1	04/01/14	***1.3 J***	252	<0.5	<2.6	---	<0.7	<0.4	<1	<51.5
MW-5	06/15/11	***2.1 J***	157	0.24 J	<0.44	---	<2.4	<0.10	2.2 J	<0.46
	09/29/11	***4.7 J***	138	<0.13	<0.44	---	***2.5 J***	<0.10	<1.9	<0.46
	07/31/13	<0.6	137	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	<0.6	129	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
	12/29/16	<0.6	122	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	<5.4	125	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/19/19	***8.7 J***	128	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-6	06/15/11	***2.1 J***	181	0.28 J	<0.44	---	***2.9 J***	<0.10	5.3 J	<0.46
	09/29/11	***6.8 J***	178	0.13 J	<0.44	---	2.7 J	<0.10	<1.9	<0.46
	07/31/13	<0.6	162	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	<0.6	186	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
MW-7	07/31/13	<0.6	250	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	<0.6	193	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
	12/30/16	<0.6	190	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	***7.3 J***	191	<1.3	<2.5	---	***6.4 J***	<0.084	***14.0 J***	<3.2
	06/20/19	<5.4	190	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-8	07/31/13	<0.6	54.3	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	<0.6	45.4	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
	12/30/16	<0.6	27.8 J	<0.6	<1.4	---	<0.8	<0.11	<1.1	<3.8
	03/28/19	***9.3 J***	24.2	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	**18.0 J**	26.2	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
PZ-3	07/31/13	<0.6	47.3	<0.5	<2.6	---	<0.7	<0.04	<1	<10.3
	04/01/14	<0.6	29.5	<0.5	<2.6	---	<0.7	<0.04	<1	<51.5
	12/30/16	<0.6	26.9 J	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	<5.4	25.1	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	***5.9J***	24.6	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2

Table A.1.b - Groundwater Analytical Results
Jagemann Plating Co., Inc
1324 S 26th Street, Manitowoc, WI

Well ID	Date Sampled	Relevant and Significant Metals Analytical Results (µg/L)								
		Arsenic	Barium	Cadmium	Chromium	Hexavalent Chromium	Lead	Mercury	Selenium	Silver
NR 140 Preventive Action Limit (µg/l)		1	400	0.5	10	NE	1.5	0.2	10	10
NR 140 Enforcement Standard (µg/l)		10	2000	5	100	NE	15	2	50	50
PZ-4	06/15/11	<2.0	37.8	<0.13	<0.44	---	<2.4	<0.10	2.5 J	<0.46
	09/29/11	***2.0 J***	32.1	<0.13	<0.44	---	<1.5	<0.10	<1.9	<0.46
	07/31/13	<0.6	34.9	<0.5	<2.6	---	0.8 J	<0.04	<1	***20.9 J***
	04/01/14	0.6 J	22.7	<0.5	<2.6	---	***10.7***	<0.04	<1	<51.5
	03/28/19	---	---	---	---	---	<6.4	---	---	---
	06/19/19	---	---	---	---	---	<5.9	---	---	---
SUMP-1	10/15/10	<133	125 J	**6,620**	**1,150,000**	1,290,000	<173	0.13 J	<200	<51.7
	06/15/11	<17.6	113	**1,970**	**358,000**	---	**15.7 J**	<0.10	<22.5	<6.9
SUMP-2	10/15/10	<1.3	101	**36.2**	**1100**	1100	<1.7	<0.10	<2.0	<0.52
	06/15/11	<1.8	67	**8.2**	**520**	---	<1.3	<0.10	<2.2	<0.69
PZ-13	12/29/16	<0.6	24.7 J	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	<5.4	22.2	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	***5.8J***	22.5	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-14	12/30/16	<0.6	372	***0.7 J***	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	<5.4	102	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	**20.9J**	172	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-15	12/30/16	***1.9***	92.8	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/28/19	***8.2 J***	79.3	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	**23.0J**	107	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
PZ-16	12/29/16	***8.7***	52.7	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/27/19	***6.2 J***	42.5	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/19/19	***9.2 J***	41.8	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-17	12/29/16	0.8 J	109	<0.3	<0.7	---	<0.8	<0.11	<1.1	<1.9
	03/27/19	<5.4	108	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/19/19	***9.7 J***	62.8	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-18	03/28/19	**11.2 J**	102	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	***9.7 J***	97.3	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
MW-19	03/28/19	<5.4	173	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
	06/20/19	**16.0 J**	173	<1.3	<2.5	---	<6.4	<0.084	<12.3	<3.2
TW-20	02/02/22	<41.7	***1,960***	**181**	<12.7	---	<29.6	<0.066	<61.2	<16.0
TW-21	02/02/22	<8.3	98.5	<1.3	3.7 J	---	<5.9	<0.066	<12.2	<3.2
TW-22	02/02/22	<8.3	260	<1.3	<2.5	---	<5.9	<0.066	<12.2	<3.2
TW-23	02/02/22	<8.3	173	***1.7 J***	3.1 J	---	<5.9	<0.066	<12.2	<3.2
TW-24	02/02/22	<16.7	127	<2.7	***33.0***	---	<11.8	<0.066	<24.5	<6.4
TW-25	02/02/22	<83.4	67.8	<13.3	<25.5	---	<59.1	<0.066	<122	<32.0

Key:

J	- Analyte detected between the Laboratory Limit of Detection and Laboratory Limit of Quantitation
NE	- Not established by Chapter NR 140 Wis. Adm. Code
µg/L	- Micrograms per liter
---	- Not analyzed
15	- Exceeds Chapter NR 140 Enforcement Standard
1.5	- Exceeds Chapter NR 140 Preventive Action Limit
NS	-No sample collected because water in the well was frozen on this date

Table A.1.c Groundwater Analytical Results
Jagemann Plating Co, Inc.
1324 S 26th Street, Manitowoc, Wisconsin

Parameters	CAS Number	Cycle 10 &11 Recommended Ch. NR 140 ES	Cycle 10 & 11 Recommended Ch. NR 140 PAL	MW-1	MW-2	MW-3	PZ-3	MW-5	MW-8	PZ-13	MW-14	MW-19	TW-20	TW-21	TW-22	TW-23	TW-24	TW-25	Trip Blank	FBR (Field Reagent Blank)	
				12/09/21	12/08/21	12/08/21	12/08/21	12/08/21	12/09/21	12/08/21	12/09/21	12/08/21	2/02/22	2/02/22	2/02/22	2/02/22	2/02/22	2/02/22	12/09/21	12/09/21	2/02/22
Perfluoroalkyl & Polyfluoroalkyl Substances (PFAS) Results (ng/L)																					
Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)																					
Perfluoro-n-butanoic acid (PFBA)	375-22-4	10,000	2,000	16	49	27	ND	5.1	14	ND	25	4.6	ND	11 J	31	37	2.5 J	8.5	ND	ND	ND
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	---	---	11	23	49	ND	ND	4.5	ND	18	2.6 J	ND	ND	14	120	4.4	6.6	ND	ND	ND
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	150,000	30,000	16	5.7	20	ND	ND	7.9	ND	52	1.9 J	ND	ND	14	35	5.5	11	ND	ND	ND
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	---	---	6.7	5.1	7.3 J	ND	0.57 J	5.9	ND	26	0.63 J	2.7 J	8.4 J	8.7	39	3.1 J	17	ND	ND	ND
Perfluoro-n-octanoic acid (PFOA)	335-67-1	20*	2*	**20**	***12***	***17***	0.85 J	***4.3***	***19***	ND	**97**	***2.9 J***	***10***	**53 J**	**31**	**24**	***15***	***14***	ND	ND	ND
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	30	3	0.83 J	0.69 J	ND	ND	ND	ND	ND	0.70 J	ND	ND	ND	ND	***5.2***	2.9 J	ND	ND	ND	ND
Perfluoro-n-decanoic acid (PFDA)	335-76-2	300	60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	ND	ND	ND	ND
Perfluoro-n-undecanoic acid (PFUnDA)	2058-94-8	3,000	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	10,000	2,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroalkyl Sulfonates/Sulfonic Acids (PFSA)																					
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	450,000	90,000	760	280	170	0.55 J	3.8	110	ND	180	6.9	110	130	310	50	38	170	ND	ND	ND
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	---	---	48	5	11 J	ND	ND	53	ND	86	0.62 J	ND	32 J	20	6.6	6.5	11	ND	ND	ND
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	40	4	**120**	***21***	**51**	ND	1.4 J	**190**	ND	**350**	0.95 J	***11***	**160**	**54**	**75**	***34***	***30***	ND	ND	ND
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	---	---	20	4.4	14 J	ND	ND	25	ND	120	ND	1.0 J	78	5.1	52	30	1.2 J	ND	ND	ND
Perfluorooctanesulfonicacid (PFOS)	1763-23-1	20*	2*	**1,100**	**300**	**1,000**	***9.2***	***5***	**650**	ND	**5,200**	ND	**57**	**3,800**	**95**	**7,500**	**3,500**	**57**	ND	ND	ND
Perfluoro-1-nonesulfonic acid (PFNS)	68259-12-1	---	---	ND	ND	ND	ND	ND	ND	ND	1.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroalkane Sulfonamides/Sufonamidoacetic Acids, Sulfonamidoethanols (FASA)																					
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	---	---	ND	ND	ND	ND	ND	ND	ND	ND	2.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	20*	2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-ethylperfluoro -1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	20*	2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	20*	2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotelomer Substances (FTS)																					
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	---	---	ND	17	19 J	ND	ND	ND	ND	20	ND	2.0 J	ND	ND	41	16	8.2 J	ND	ND	ND
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9 JQ	3.7 J	ND	ND	ND	ND
Replacement Chemicals																					
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	300	30	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,8-dioxa-3H-perfluorononanioc acid (DONA)	919005-14-4	3	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	---	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PFOA and PFOS		20*	2*	**1,120**	**312**	**1,017**	***10.05***	***9.3***	**669**	ND	**5,297**	***2.9J***	**67**	**3,853**	**126**	**7,524**	**3,515**	**71**	ND	ND	ND
Total EtFOSE, EtFOSA, and EtFOSAA		20*	2*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Key/Notes:

WI DNR PFAS List - 33 Comounds laboratory analysis was completed using Modified USEPA Method 537

* = Wisconsin Department of Health Services recommends a combined standard for EtFOSE, EtFOSA, and EtFOSAA; and PFOS and PFOA.

ng/L = nanogram per liter

J = Analyte detected between the Laboratory Method Detection Limit and Laboratory Limit of Quantitation

--- = No Recommendations by WDNR for a Ch. 140 PAL or ES standard

ND = Not Detected

Q = Surrogate failure

Highlighted bold values exceed the current recommended Ch. NR 140 Enforcement Standards (ES) for individual and/or combined values

Underlined Ibold talics v alues exceed the current recommended Ch. NR 140 Preventive Action Limits (PAL) for individual and/or combined values

Table A.2.a Soil Analytical Results Table
Jagemann Plating Co., Inc.
1324 S 26th Street, Manitowoc, WI

Sample ID & Depth (In Feet)	Date Sampled	VOC Laboratory Analytical Results (µg/kg)																													
		Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	tert-Butylbenzene	sec-Butylbenzene	n-Butylbenzene	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,2-Dibromo-3-chloropropane	Dibromochloromethane	1,2-Dibromoethane (EDB)	Dibromomethane	1,4-Dichlorobenzene	1,3-Dichlorobenzene	1,2-Dichlorobenzene	Dichlorodifluoromethane	1,2-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	2,2-Dichloropropane
Industrial Direct Contact RCL		7,070	679,000	906,000	1,830	113,000	43,000	183,000	145,000	108,000	4,030	761,000	NE	1,980	669,000	907,000	253,000	92	38,900	NE	143,000	16,400	297,000	376,000	530,000	2,870	22,200	1,190,000	2,340,000	1,850,000	1,780	191,000
Non-Industrial Direct Contact RCL		1,600	342,000	216,000	418	25,400	9,600	183,000	145,000	108,000	916	370,000	NE	454	159,000	907,000	253,000	8	8,280	NE	34,000	3,740	297,000	376,000	126,000	652	5,060	320,000	156,000	1,560,000	406	191,000
Groundwater Pathway RCL		5.1	NE	NE	0.3	2.3	5.1	NE	NE	NE	3.9	NE	226.6	3.3	15.5	NE	NE	0.2	32	0.0282	NE	144	1,152.8	1,168	3,086.3	2.8	483.4	5	41.2	62.6	3.3	NE
B-1 (0 -4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***387***	<25	<25	<25
B-2 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***7,590***	***794***	<25	<25
B-3 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
B-3 (6 - 8')*	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***7,510***	***339***	<25	<25
B-4 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***955***	45.2 J	<25	<25
B-4 (6 - 8')*	9/21/2010	<250	<250	<250	<250	<259	<250	<404	<250	<250	<250	<250	<250	<250	<250	<250	<250	<823	<250	<250	<250	<444	<250	<250	<250	<250	<250	<250	***31,600***	***592 J***	<250	<250
B-5 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***137***	42.3 J	<25	<25
B-6 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	33.9 J	<25	<25	<25
B-7 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
B-8 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	***79.7***	<25	<25	<25
PZ-4 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
MW-5 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
MW-6 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25.9	<25	<40.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<82.3	<25	<25	<25	<44.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
B-9 (2.5 - 4.5')	5/7/2013	<9.2	<13	---	<27	<30	---	<26	<41	<20	<25	<16	<42	<49	<181	<16	<14	<48	<14	<20	---	<38	<30	<33	<57	<19	<36	<21	<24	<29	<9.5	<21
B-10 (2.5 - 4.5')	5/7/2013	<9.2	<13	---	<27	<30	---	<26	<41	<20	<25	<16	<42	<49	<181	<16	<14	<48	<14	<20	---	<38	<30	<33	<57	<19	<36	<21	<24	<29	<9.5	<21
B-11 (2.5 - 4.5')	5/7/2013	<9.2	<13	---	<27	<30	---	<26	<41	<20	<25	<16	<42	<49	<181	<16	<14	<48	<14	<20	---	<38	<30	<33	<57	<19	<36	<21	40 J	<29	<9.5	<21
B-12 (2 - 4')*	6/5/2013	<9.2	<13	---	<27	<30	---	<26	<41	<20	<25	<16	<42	<49	<181	<16	<14	<48	<14	<20	---	<38	<30	<33	<57	<19	<36	<21	***400***	<29	<9.5	<21
B-13 (2.5 - 4.5')*	11/8/2016	<16	<39	---	<15	<23	---	2,720	1,340	<35	<21	<39	<45	<26	<250	<29	<32	<78	<31	<35	---	<39	<30	<30	<43	<25	<30	<29	<94	43 J	<25	<31
B-16 (2.5 - 4.5')*	11/8/2016	<16	<39	---	<15	<23	---	<86	<36	<35	<21	<390	<45	<26	<250	<29	<32	<78	<31	<35	---	<39	<30	<30	<43	<25	<30	<29	<21	<24	<25	<31
B-18 (2.5 - 4.5')*	8/15/2018	<30	<25	---	<29	<26	---	<40	<33	<26	<16	<13	<91	<35	<76	<15	<18	<58	<25	<23	---	<28	<37	<37	<48	<34	<38	<22	<32	<28	<35	<25
B-19 (5 - 7')*	8/15/2018	<30	<25	---	<29	<26	---	<40	<33	<26	<16	<13	<91	<35	<76	<15	<18	<58	<25	<23	---	<28	<37	<37	<48	<34	<38	<22	<32	<28	<35	<25
B-20 (0 - 4')	1/9/2022	<445	<729	<512	<445	<8,220	<2,620	<587	<456	<856	<411	<224	<788	<1,340	<710	<605	<710	<1,450	<6,390	<512	<553	<512	<512	<579	<803	<430	<478	<620	***41,600***	***649 J***	<445	<504
B-20 (6 - 8')*	1/9/2022	<215	<352	<247	<215	<3,970	<1,270	<284	<220	<414	<199	<108	<381	<647	<343	<293	<343	<701	<3,090	<247	<267	<247	<247	<280	<388	<208	***526 J***	***889 J***	***143,000***	***3,930***	<215	<244
B-21 (0 - 4')	1/9/2022	<15.1	<24.7	<17.4	<15.1	<279	<88.9	<19.9	<15.5	<29.0	<13.9	<7.6	<26.8	<45.4	<24.1	<20.5	<24.1	<49.2	<217	<17.4	<18.8	<17.4	<17.4	<19.7	<27.3	<14.6	<16.2	<21.1	***159***	17.0 J	<15.1	<17.1
B-21 (6 - 8')*	1/9/2022	<17.6	<28.9	<20.3	<17.6	<326	<104	<23.3	<18.1	<33.9	<16.3	<8.9	<31.3	<53.0	<28.2	<24.0	<28.2	<57.5	<253	<20.3	<21.9	<20.3	<20.3	<23.0	<31.9	<17.0	<19.0	***98.4***	***8,950***	***2,740***	<17.6	<20.0
B-22 (0 - 4')	1/9/2022	<19.0	<31.1	<21.8	<19.0	<351	<12	<25.0	<19.5	<36.5	<17.5	<9.6	<33.6	<57.1	<30.3	<25.8	<30.3	<61.9	<273	<21.8	<23.6	<21.8	<21.8	<24.7	<34.3	<18.3	<20.4	<26.5	<17.1	<17.2	<19.0	<21.5
B-22 (6 - 8')*	1/9/2022	<18.1	<29.6	<20.8	<18.1	<334	<106	<23.8	<18.5	<34.7	<16.7	<9.1	<32.0	<54.3	<28.8	<24.6	<28.8	<58.9	<259	<20.8	<22.5	<20.8	<20.8	<23.5	<32.6	<17.4	<19.4	<25.2	***247***	48.9 J	<18.1	<20.5
B-23 (0 - 4')	1/9/2022	<17.7	<29.0	<20.4	<17.7	<327	<104	<23.3	<18.1	<34.0	<16.4	<8.9	<31.4	<53.2	<28.2	<24.1	<28.2	<57.7	<254	<20.4	<22.0	<20.4	<20.4	<23.0	<32.0	<17.1	<19.0	<24.7	18.8 J	<16.1	<17.7	<20.1
B-23 (6 - 8')*	1/9/2022	<15.9	<26.0	<18.3	<15.9	<293	<93.4	<20.9	<16.3	<30.5	<14.7	<8.0	<28.1	<47.7	<25.3	<21.6	<25.3	<51.7	<228	<18.3	<19.7	<18.3	<18.3	<20.7	56.8 J	<15.3	<17.1	***32.9 J***	***444***	31.9 J	<15.9	<18.0
B-24 (0 - 4')[1]	1/9/2022	<15.8	<25.8	<18.1	<15.8	<291	<92.8	<20.8	<16.2	<30.3	<14.6	<7.9	<27.9	<47.4	<25.2	<21.5	<25.2	<51.4	<226	<20.5	<19.6	<18.1	<18.1	<20.5	<28.5	<15.2	<17.0	<22.0	<14.2	<14.3	<15.8	<17.9
B-24 (6 - 8')*	1/9/2022	<377	<618	<434	<377	<6,980	<2,220	<498	<387	<726	<349	<190	<669	<1,140	<602	<514	<602	<1,230	<5,420	<434	<469	<434	<434	<491	<682	<365	<406	<526	***7,120***	***1,390 J***	<377	<428
B-25 (0 - 4')[1]	1/9/2022	<16.4	<26.9	<18.9	<16.4	<303	<96.6	<21.6	<16.8	<31.6	<15.2	<8.3	<29.1	<49.3	<26.2	<22.3	<26.2	<53.5	<235	<18.9	<20.4	<18.9	<18.9	<21.4	<29.6	<15.8	<17.6	<22.9	<14.7	<14.9	<16.4	<18.6
B-25 (6 - 8')*	1/9/2022	<17.7	<29.0	<20.4	<17.7	<327	<104	<23.3	<18.1	<34.1	<16.4	<8.9	<31.4	<53.2	<28.3	<24.1	<28.3	<57.7	<254	<20.4	<22.0	<20.4	<20.4	<23.1	<32.0	<17.1	<19.0	<24.7	<15.9	<16.1	<17.7	<20.1

Key:

VOC - Volatile Organic Compound
NE - Not included on WDNR's RR Program RCL Spreadsheet (December 2018)
RCL - Residual Contaminant Level per Chapter NR 720 Wis. Adm. Code
µg/kg - Micrograms per kilogram
1 - Correction made during data reporting for B24 (0-4') & B25 (0-4'). Upon further research, soil samples from these intervals were found to be inadvertantly switched in field. Table relfects correct results.

--- - Not analyzed
* - Soil sample collected below the observed historic low water table (i.e., saturated soil)
1,600 - Exceeds Non-Industrial Direct Contact RCL
7,070 - Exceeds Industrial Direct Contact RCL
5.1 - Exceeds Groundwater Pathway RCL
J - Analyte detected between the Laboratory Limit of Detection and Laboratory Limit of Quantitation

Table A.2.a Soil Analytical Results Table
Jagemann Plating Co., Inc.
1324 S 26th Street, Manitowoc, WI

Sample ID & Depth (In Feet)	Date Sampled	VOC Laboratory Analytical Results (µg/kb)																										
		1,3-Dichloropropane	1,1-Dichloropropene	cis- 1,3-Dichloropropene	trans- 1,3-Dichloropropene	Di-isopropyl ether	Ethylbenzene	Hexachloro-1,3-butadiene	Isopropylbenzene	p-Isopropyltoluene	Methyl-tert-butyl ether (MTBE)	Methylene Chloride	Naphthalene	n-Propylbenzene	Styrene	1,1,2,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	Tetrachloroethene (PCE)	Toluene	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene (TCE)	Trichlorofluoromethane	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes (Total)
Industrial Direct Contact RCL		1,490,000	NE	1,210,000	1,510,000	2,260,000	35,400	7,190	NE	162,000	282,000	1,150,000	24,100	NE	867,000	3,600	12,300	145,000	818,000	113,000	934,000	640,000	7,010	8,410	1,230,000	109	219,000	182,000	2,080	260,000 (combined)
Non-Industrial Direct Contact RCL		1,490,000	NE	1,210,000	1,510,000	2,260,000	8,020	1,630	NE	162,000	63,800	61,800	5,520	NE	867,000	810	2,780	33,000	818,000	24,000	62,600	640,000	1,590	1,300	1,230,000	5	219,000	182,000	67	260,000 (combined)
Groundwater Pathway RCL		0.3	NE	0.3 (combined)		NE	1,570	NE	NE	NE	27	2.6	658.2	NE	220	0.2	53.4	4.5	1,107.2	408	NE	140.2	3.2	3.6	NE	51.9	1,378 (combined)		0.1	3,960 (combined)
B-1 (0 -4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***1,470***	<25	<25	<25	<25	<25	<75
B-2 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***2,290***	<25	<25	<25	<25	***828***	<75
B-3 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***128***	<25	<25	<25	<25	***953***	<75
B-3 (6 - 8')*	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***89.4***	<25	<25	<25	<25	***1,480***	<75
B-4 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***5,550***	<25	<25	<25	<25	***212***	<75
B-4 (6 - 8')*	9/21/2010	<250	<250	<250	<250	<250	<250	<264	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	***527 J***	<250	<250	<250	<250	***1,140***	<750
B-5 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***255***	<25	<25	<25	<25	***1,320***	<75
B-6 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	***278***	<25	<25	<25	<25	<25	<75
B-7 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
B-8 (0 - 4')	9/21/2010	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	***115***	<25	<25	<25	<25	<25	***1,380***	<25	<25	<25	<25	<25	<75
PZ-4 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
MW-5 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
MW-6 (2 - 4')	5/3/2011	<25	<25	<25	<25	<25	<25	<26.4	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
B-9 (2.5 - 4.5')	5/7/2013	<46	---	---	---	<11	<10	<95	<25	<31	<57	<30	<114	<24	---	<23	<12	<49	<20	<129	<79	<38	<23	<28	<86	---	<26	<26	<21	<99
B-10 (2.5 - 4.5')	5/7/2013	<46	---	---	---	<11	<10	<95	<25	<31	<57	<30	<114	<24	---	<23	<12	<49	<20	<129	<79	<38	<23	<28	<86	---	<26	<26	<21	<99
B-11 (2.5 - 4.5')	5/7/2013	<46	---	---	---	<11	<10	<95	<25	<31	<57	<30	<114	<24	---	<23	<12	<49	<20	<129	<79	<38	<23	***94***	<86	---	29 J	<26	<21	<99
B-12 (2 - 4')*	6/5/2013	<46	---	---	---	<11	<10	<95	<25	77 J	<57	<30	<114	<24	---	<23	<12	<49	29 J	<129	<79	<38	<23	***580***	<86	---	<26	<26	***190***	<99
B-13 (2.5 - 4.5')*	11/8/2016	<100	---	---	---	<12	46 J	<110	197	1,000	<220	<25	510	620	---	<29	<13	<54	<13	<120	<85	<40	<33	***105 J***	<60	---	***4,200***	***2,710***	***54***	241 J
B-16 (2.5 - 4.5')*	11/8/2016	<100	---	---	---	<12	<27	<110	<37	<56	<220	<25	<87	<35	---	<29	<13	<54	<31	<120	<85	<40	<33	<42	<60	---	<78	<89	<10	<99
B-18 (2.5 - 4.5')*	8/15/2018	---	---	<39	<22	<10	<35	<85	<34	<29	<150	<50	<94	<33	---	<28	<28	<32	<32	<66	<64	<30	<33	<41	<41	---	<25	<32	<19	<116
B-19 (5 - 7')*	8/15/2018	---	---	<39	<22	<10	<35	<85	<34	<29	<150	<50	<94	<33	---	<28	<28	<32	<32	<66	<64	<30	<33	<41	<41	---	<25	<32	<19	<116
B-20 (0 - 4')	1/9/2022	<407	<605	<1,230	<5,340	<463	<445	<3,710	<504	<568	<549	<519	<583	<448	<478	<676	<448	<725	<471	<1,540	<2,080	<478	<680	***109,000***	<542	<908	<557	<602	***7,360***	<1,348
B-20 (6 - 8')*	1/9/2022	<197	<293	<596	<2,580	<224	<215	<1,800	<244	<275	<265	<251	<282	<217	<231	<327	<217	<350	<228	<744	<1010	<231	<329	***50,000***	<262	<439	<269	<291	***21,300***	<652
B-21 (0 - 4')	1/9/2022	<13.8	<20.5	<41.8	<181	<15.7	<15.1	<126	<17.1	<19.3	<18.6	<17.6	<19.8	<15.2	<16.2	<23.0	<15.2	<24.6	<16.0	<52.2	<30.8	<16.2	<23.1	***164***	<18.4	<30.8	<18.9	<20.4	***228***	<45.8
B-21 (6 - 8')*	1/9/2022	<16.2	<24.0	<48.9	<212	<18.4	<17.6	<147	<20.00	<22.5	<21.8	<20.6	<23.1	<17.8	<19.0	<26.8	<17.8	<28.7	<18.7	<61.0	<82.5	<19.0	<27.0	***19,200***	<21.5	<36.0	<22.1	<23.9	***550***	<53.5
B-22 (0 - 4')	1/9/2022	<17.4	<25.8	<52.6	<228	<19.8	<19.0	<159	<21.5	<24.2	<23.4	<22.2	<24.9	<19.1	<20.4	<28.9	<19.1	<30.9	<20.1	<65.7	<88.8	<20.4	<29.0	<29.8	<23.1	<38.7	<23.8	<25.7	<16.1	<49.7
B-22 (6 - 8')*	1/9/2022	<16.5	<24.6	<50.1	<217	<18.8	<18.1	<151	<20.5	<23.1	<22.3	<21.1	<23.7	<18.2	<19.4	<27.5	<18.2	<29.4	<19.1	<62.5	<84.5	<19.4	<27.6	***253***	<22.0	<36.9	<22.6	<24.4	***274***	<54.8
B-23 (0 - 4')	1/9/2022	<16.2	<24.1	<49.1	<213	<18.4	<17.7	<148	<20.1	<22.6	<21.9	<20.7	<23.2	<17.8	<19.0	<26.9	<17.8	<28.8	<18.7	<61.3	<82.8	<19.0	<27.1	***35.3 J***	<21.6	<36.1	<22.2	<23.9	***59.1 J***	<53.7
B-23 (6 - 8')*	1/9/2022	<14.5	<21.6	<44.0	<191	<16.5	<15.9	<132	<18.0	<20.3	<19.6	<18.5	<20.8	<16.0	<17.1	<24.1	<16.0	<25.9	<16.8	<54.9	<74.2	<17.1	<24.3	***4,700***	<19.3	<32.4	<19.9	<21.5	***77.3***	<48.1
B-24 (0 - 4')[1]	1/9/2022	<14.4	<21.5	<43.7	<189	<16.4	<15.8	<132	<17.9	<20.1	<19.5	<18.4	<20.7	<15.9	<17.0	<24.0	<15.9	<25.7	<16.7	<54.6	<73.8	<17.0	<24.1	***164***	<19.2	<32.2	<19.7	<21.3	<13.4	<47.8
B-24 (6 - 8')*	1/9/2022	<346	<514	<1,050	<4,530	<393	<377	<3,150	<428	<482	<466	<441	<495	<381	<406	<574	<381	<615	<400	<1,310	<1,770	<406	<577	***199,000***	<460	<771	<472	<511	***762 J***	<1,145
B-25 (0 - 4')[1]	1/9/2022	<15.0	<22.3	<45.5	<197	<17.1	<16.4	<137	<18.6	<20.9	<20.3	<19.2	<21.5	<16.5	<17.6	<24.9	<16.5	<26.7	<17.4	<56.8	<76.7	<17.6	<25.1	<25.8	<20.0	<33.5	<20.5	<22.2	<13.9	<48.9
B-25 (6 - 8')*	1/9/2022	<16.2	<24.1	<49.1	<213	<18.4	<17.7	<148	<20.1	<22.6	<21.9	<20.7	<23.2	<17.8	<19.0	<26.9	<17.8	<28.9	<18.7	<61.3	<72.8	<61.3	<27.1	<27.8	<21.6	<36.1	<22.2	<23.9	<15.0	<53.7

Key:

VOC -Volatile Organic Compound
NE - Not included on WDNR's RR Program RCL Spreadsheet (December 2018)
RCL - Residual Contaminant Level per Chapter NR 720 Wis. Adm. Code
µg/kg - Micrograms per kilogram
1 - Correction made during data reporting for B24 (0-4') & B25 (0-4'). Upon further research, soil samples from these intervals were found to be inadvertantly switched in field. Table relfects correct results.

--- - Not analyzed
* - Soil sample collected below the observed historic low water table (i.e., saturated soil)
1,600 - Exceeds Non-Industrial Direct Contact RCL
7,070 - Exceeds Industrial Direct Contact RCL
5.1 - Exceeds Groundwater Pathway RCL
J - Analyte detected between the Laboratory Limit of Detection and Laboratory Limit of Quantitation

A.2.b Soil Analytical Results Table
Jagemann Plating Co., Inc.
1324 S 26th Street, Manitowoc, WI

Sample ID & Depth (In Feet)	Date Sampled	Metals Laboratory Analytical Results (mg/kg)								
		Arsenic	Barium	Cadmium	Chromium	Hexavalent Chromium	Lead	Mercury	Selenium	Silver
Industrial Direct Contact RCL		3	100,000	985	100,000	6.36	800	3.13	5,840	5,840
Non-Industrial Direct Contact RCL		0.677	15,300	71.1	100,000	---	400	3.13	391	391
Groundwater Pathway RCL		0.584	164.8	0.752	NE	0.301	27	0.208	0.52	0.8491
Background Threshold Value (BTV)		8	364	1	NE	---	52	NE	NE	NE
B-1 (0 - 4')	9/21/2010	***3.2*** B	83.4	0.45 J	29.2	<0.062	9.2	0.017	0.42 J	<0.054
B-2 (0 - 4')	9/21/2010	***2.1*** B	73.7	***1.1***	21.1	<0.033	10.6	0.027	0.65 J	0.076
B-3 (0 - 4')	9/21/2010	***2.8*** B	48.3	***3.9***	17.6	<0.028	8.2	0.019	0.28 J	<0.046
B-3 (6 - 8')*	9/21/2010	***4.3*** B	99.1	0.48 J	25.5	<0.049	7.4	0.021	0.39 J	<0.053
B-4 (0 - 4')	9/21/2010	***2.6*** B	53.3	0.39 J	49.9	<0.037	6.8	0.022	0.26 J	<0.050
B-4 (6 - 8')*	9/21/2010	***2.8*** B	102	0.55	27.5	<0.049	6.4	0.019	0.22 J	<0.048
B-5 (0 - 4')	9/21/2010	***3.1*** B	79.3	0.71	33.1	<0.062	15	0.04	0.37 J	<0.051
B-6 (0 - 4')	9/21/2010	***2.8*** B	35	***0.98***	20.6	<0.046	13.9	0.042	0.42 J	<0.047
B-7 (0 - 4')	9/21/2010	***2.2*** B	24.3	***0.86***	8.5	<0.048	8.5	0.014	0.42 J	0.044 J
B-8 (0 - 4')	9/21/2010	***5.4*** B	65	***1.3***	19.2	<0.040	23.8	0.047	0.85 J	0.060 J
PZ-4 (2 - 4')	5/3/2011	***4.6*** B	99.8	0.20 J	30.6	---	7.2	0.024	<0.18	0.11 J
MW-5 (2 -4')	5/3/2011	***2.4*** B	66.1	0.17 J	23	---	6.6	0.014	0.24 J	0.11 J
MW-6 (2 -4')	5/3/2011	***3.6*** B	74.4	0.33 J	21.4	---	20.4	0.043	0.46 J	0.090 J
B-9 (2.5 -4.5')	5/7/2013	***1.18 J*** B	60	<0.08	25.9	---	9.74	0.048	<0.7	<0.34
B-10 (2.5 -4.5')	5/7/2013	<0.72	63.3	<0.08	24.1	---	5.89	0.037	<0.7	<0.34
B-11 (2.5 -4.5')	5/7/2013	<0.72	54.4	<0.08	36.1	---	8.43	0.029	<0.7	<0.34
B-12 (2 -4')*	6/5/2013	***1.20 J*** B	54.8	***135***	22.6	---	10.8	0.0695	***1.78 J***	<0.34
B-13 (2.5 -4.5')*	11/8/2016	<0.67	84.3	***239***	324	---	***220***	0.0729	***1.07 J***	<0.44
B-16 (2.5 -4.5')*	11/8/2016	<0.67	74.6	<0.8	22.8	---	2.21	0.0265 J	<0.55	<0.44
B-18 (2.5 -4.5')*	8/15/2018	<0.33	89.9	0.706	31.6	---	7.86	0.040 J	***0.827 J***	<0.57
B-19 (5 -7')*	8/15/2018	***1.49 J*** B	90.2	***1.13***	37.4	---	9.27	<0.019	<0.52	<0.57
B-20 (0 - 4')	1/9/2022	<3.6	110	<0.33	40.7	---	9.6	0.045	<3.2	<0.76
B-20 (6 - 8')*	1/9/2022	***3.1*** B	110	0.34 J	35.2	---	9.1	0.027 J	<1.6	<0.37
B-21 (0 - 4')	1/9/2022	<1.6	13.7	***9.0***	17.0	---	4.3	0.034 J	<1.4	<0.33
B-21 (6 - 8')*	1/9/2022	***3.2*** B	75.6	0.29 J	29.3	---	8.4	0.026 J	<1.6	0.49 J
B-22 (0 - 4')	1/9/2022	***2.2 J*** B	101	***0.81*** B	44.7	---	13.1	0.049	<1.6	<0.39
B-22 (6 - 8')*	1/9/2022	***2.8 J*** B	103	0.26 J	34.3	---	8.3	0.038 J	<1.6	0.45 J
B-23 (0 - 4')	1/9/2022	<1.7	13.6	0.58 J	24.4	---	4.8	0.030 J	<1.5	<0.36
B-23 (6 - 8')*	1/9/2022	***2.4 J*** B	61	***0.78*** B	37.6	---	6.2	<0.011	<1.5	<0.36
B-24 (0 - 4')	1/9/2022	***2.9 J*** B	9.9	<0.16	8.4	---	2.1 J	<0.011	<1.6	<0.36
B-24 (6 - 8')*	1/9/2022	***4.8*** B	75.5	0.32 J	31.4	---	8.4	<0.013	<1.7	<0.39
B-25 (0 - 4')	1/9/2022	<7.9	49.5	<0.72	20.1	---	6.3 J	<0.011	<7.1	<1.7
B-25 (6 - 8')*	1/9/2022	***4.0*** B	99.7	0.37 J	40.9	---	8.9	0.016 J	<1.5	<0.36

Key:

B	- Concentrations are below the BTV, thus are not considered an exceedance of the direct contact and/or groundwater pathway RCLs
J	- Analyte detected between the Laboratory Limit of Detection and Laboratory Limit of Quantitation
NE	- Not included on WDNR's RR Program RCL Spreadsheet (December 2018)
RCL	- Residual Contaminant Level per Chapter NR 720 Wis. Adm. Code
mg/kg	- Milligrams per kilogram
---	- Not Analyzed
*	- Soil sample collected below the observed historic low water table (i.e., saturated soil)
400	- Exceeds Non-Industrial Direct Contact RCL
800	- Exceeds Industrial Direct Contact RCL
27	- Exceeds Groundwater Pathway RCL

Table A.2.c Soil Analytical Results
Jagemann Plating Co., Inc.
1324 S 26th Street, Manitowoc, Wisconsin

Sample ID & Depth (In Feet)	CAS Number	Non-Industrial Direct Contact RCL	Industrial Direct Contact RCL	B-20 (0-4')	B-20 (6-8')*	B-21 (0-4')	B-21 (6-8')*	B-22 (0-4')	B-22 (6-8')*	B-23 (0-4')	B-23 (6-8')*	B-24 (0-4')	B-24 (6-8')*	B-25 (0-4')	B-25 (6-8')*
Date				1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22	1/09/22
Perfluoroalkyl & Polyfluoroalkyl Substances (PFAS) Results (ug/kg)															
Perfluoroalkyl Carboxylates/Carboxylic Acids (PFCA)															
Perfluoro-n-butanoic acid (PFBA)	375-22-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-octanoic acid (PFOA)	335-67-1	1,260	16,400	ND	ND	ND	**0.24 J**	**1.1 J**	ND	ND	ND	ND	**0.54 J**	ND	ND
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-decanoic acid (PFDA)	335-76-2	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-undecanoic acid (PFUnDA)	2058-94-8	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroalkyl Sulfonates/Sulfonic Acids (PFSA)															
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	NE	NE	ND	ND	ND	ND	**0.15 J**	ND	ND	ND	ND	**0.17 J**	ND	ND
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.36 J**	ND	ND
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NE	NE	ND	ND	ND	**1.2**	**1.1 J**	**0.19 J**	ND	ND	ND	**3.7**	ND	ND
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	NE	NE	ND	ND	ND	ND	**0.63 J**	ND	ND	ND	ND	**0.79 J**	ND	ND
Perfluorooctanesulfonicacid (PFOS)	1763-23-1	1,260	16,400	**1.0 J**	ND	**2.9**	**1.3**	**42.0**	**7.0**	**40**	**24**	**5.3**	**42**	**3.4**	ND
Perfluoro-1-nonesulfonic acid (PFNS)	68259-12-1	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perfluoroalkane Sulfonamides/Sufonamidoacetic Acids, Sulfonamidoethanols (FASA)															
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-ethylperfluoro -1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotelomer Substances (FTS)															
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	NE	NE	ND	ND	ND	ND	ND	ND	ND	**0.67 J**	ND	ND	ND	ND
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Replacement Chemicals															
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,8-dioxa-3H-perfluorononanioc acid (ADONA)	919005-14-4	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NE	NE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Key/Notes:

WI DNR PFAS List - 33 Comounds laboratory analysis was completed using Modified USEPA Method 537

ug/kg = micrograms per kilogram

RCL = Residual Contaminant Level per Chapter NR 720, Wis. Adm. Code

J = Analyte detected between the Laboratory Method Detection Limit and Laboratory Limit of Quantitation

Highlighted valyue exceeds the Industrial Direct Contact RCL

Underlined Italics values exceeds Non-Industrial Direct Contact RCL

Bold indicates laboratory detections

NE = Not Included on WDNR's RR Program RCL Spreadsheet (December 2018)

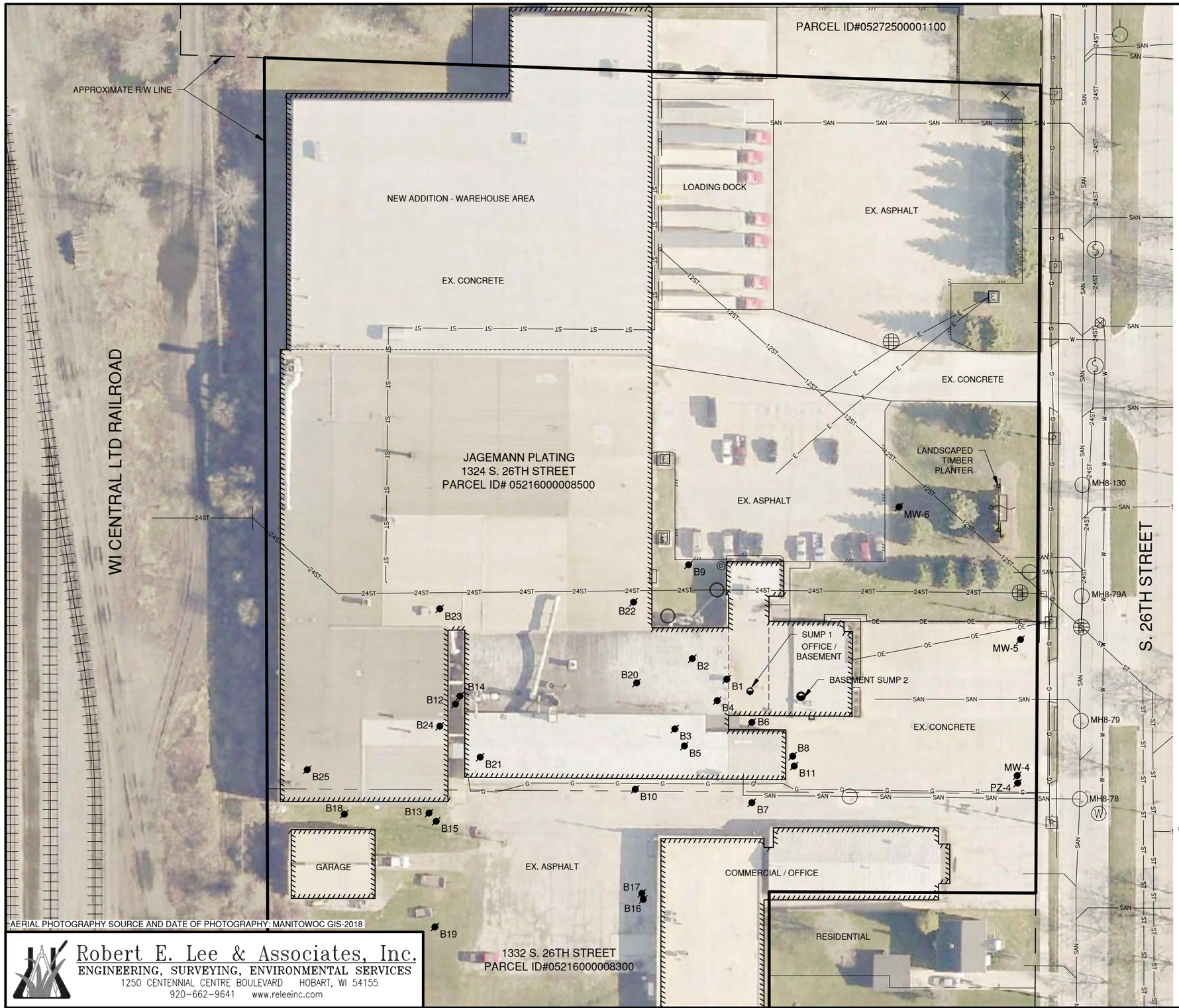
ND = Not Detected

* = Soil sample collected below the historic low water table (i.e., saturated soil)

B

ATTACHMENT B

Figures



AERIAL PHOTOGRAPHY SOURCE AND DATE OF PHOTOGRAPHY: MANITOWOC GIS-2018

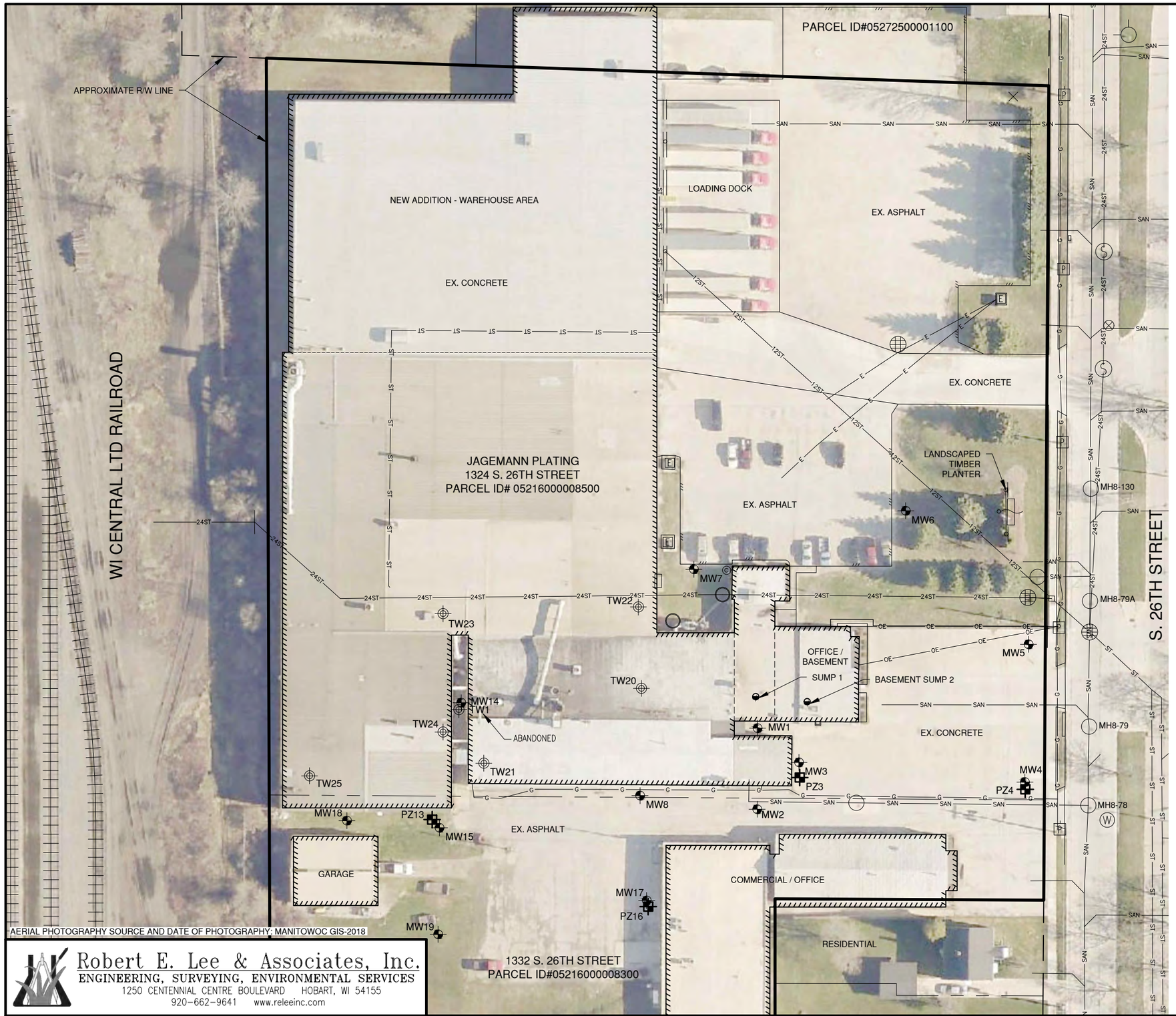
Robert E. Lee & Associates, Inc.
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES
1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155
920-662-9641 www.releeinc.com

JAGEMANN PLATING COMPANY
1324 S. 26TH STREET
MANITOWOC, WI

SOIL BORING LOCATIONS

FIGURE 4

File: R:\1100\1162\1162013\DWG\1162013_BASE.dwg
Plot Date: Mar 23, 2022 - 10:38am



AERIAL PHOTOGRAPHY SOURCE AND DATE OF PHOTOGRAPHY: MANITOWOC GIS-2018

NORTH

0' 60' 120'

SCALE IN FEET

LEGEND

- MW1 — MONITORING WELL LOCATION
- TW1 — TEMPORARY WELL LOCATION
- PZ1 — PIEZOMETER LOCATION
- SUMP
- EX. SANITARY MANHOLE
- EX. STORM SEWER MANHOLE
- EX. STORM SEWER CATCH BASIN
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. WATER MANHOLE
- EX. ELECTRIC PEDESTAL
- EX. POWER POLE
- EX. STORM SEWER
- EX. SANITARY SEWER
- EX. WATERMAIN
- EX. GAS LINE
- EX. ELECTRIC LINE
- EX. TELEPHONE LINE
- EX. FIBER OPTICS LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- SITE BOUNDARY LINE

JAGEMANN PLATING COMPANY
1324 S. 26TH STREET
MANITOWOC, WI

MONITORING WELL LOCATIONS

FIGURE 5

Robert E. Lee & Associates, Inc.
ENGINEERING, SURVEYING, ENVIRONMENTAL SERVICES
1250 CENTENNIAL CENTRE BOULEVARD HOBART, WI 54155
920-662-9641 www.releeinc.com

File: R:\1100\1162\1162013\DWG\1162013_BASE.dwg
Plot Date: Mar 23, 2022 - 10:42am

C

ATTACHMENT C

Soil and Groundwater Laboratory Reports

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 19, 2022

Nicole Laplant
ROBERT E. LEE & ASSOCIATES, IN
1250 Centennial Centre Blvd
Oneida, WI 54155

RE: Project: 1162-013
Pace Project No.: 40239263

Dear Nicole Laplant:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Cody Applekamp, Robert E Lee & Associates, Inc.
Alan Gustafson, Robert E. Lee & Associates
Bruce Meissner, Robert E. Lee & Associates, Inc
Lori Rogers, Robert E Lee

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 1162-013
Pace Project No.: 40239263

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 1162-013
Pace Project No.: 40239263

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40239263001	**B-20 (0-4')**	Solid	01/09/22 10:10	01/10/22 12:25
40239263002	**B-20 (6-8')**	Solid	01/09/22 10:30	01/10/22 12:25
40239263003	**B-21 (0-4')**	Solid	01/09/22 11:20	01/10/22 12:25
40239263004	**B-21 (6-8')**	Solid	01/09/22 11:30	01/10/22 12:25
40239263005	**B-22 (0-4')**	Solid	01/09/22 12:20	01/10/22 12:25
40239263006	**B-22 (6-8')**	Solid	01/09/22 12:35	01/10/22 12:25
40239263007	**B-23 (0-4')**	Solid	01/09/22 13:40	01/10/22 12:25
40239263008	**B-23 (6-8')**	Solid	01/09/22 13:50	01/10/22 12:25
40239263009	**B-24 (0-4')**	Solid	01/09/22 14:55	01/10/22 12:25
40239263010	**B-24 (6-8')**	Solid	01/09/22 15:05	01/10/22 12:25
40239263011	**B-25 (0-4')**	Solid	01/09/22 16:30	01/10/22 12:25
40239263012	**B-25 (6-8')**	Solid	01/09/22 16:40	01/10/22 12:25

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 1162-013
Pace Project No.: 40239263

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40239263001	**B-20 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263002	**B-20 (6-8')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263003	**B-21 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263004	**B-21 (6-8')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263005	**B-22 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263006	**B-22 (6-8')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263007	**B-23 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263008	**B-23 (6-8')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263009	**B-24 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263010	**B-24 (6-8')**	EPA 6010D	TXW	7

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 1162-013
Pace Project No.: 40239263

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263011	**B-25 (0-4')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1
40239263012	**B-25 (6-8')**	EPA 6010D	TXW	7
		EPA 7471	AJT	1
		EPA 8260	ALD	64
		ASTM D2974-87	PDV	1

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 1162-013
Pace Project No.: 40239263

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40239263001	**B-20 (0-4')**					
EPA 6010D	Barium	110	mg/kg	1.2	01/13/22 17:29	M0
EPA 6010D	Chromium	40.7	mg/kg	2.5	01/13/22 17:29	M0
EPA 6010D	Lead	9.6	mg/kg	5.0	01/13/22 17:29	
EPA 7471	Mercury	0.045	mg/kg	0.040	01/13/22 12:57	
EPA 8260	cis-1,2-Dichloroethene	41600	ug/kg	1870	01/12/22 19:44	
EPA 8260	trans-1,2-Dichloroethene	649J	ug/kg	1870	01/12/22 19:44	
EPA 8260	Trichloroethene	109000	ug/kg	1870	01/12/22 19:44	
EPA 8260	Vinyl chloride	7360	ug/kg	1870	01/12/22 19:44	
ASTM D2974-87	Percent Moisture	19.8	%	0.10	01/11/22 16:06	
40239263002	**B-20 (6-8')**					
EPA 6010D	Arsenic	3.1	mg/kg	3.0	01/12/22 18:53	
EPA 6010D	Barium	110	mg/kg	0.61	01/12/22 18:53	
EPA 6010D	Cadmium	0.34J	mg/kg	0.61	01/12/22 18:53	
EPA 6010D	Chromium	35.2	mg/kg	1.2	01/12/22 18:53	
EPA 6010D	Lead	9.1	mg/kg	2.4	01/12/22 18:53	
EPA 7471	Mercury	0.027J	mg/kg	0.041	01/13/22 13:00	
EPA 8260	1,1-Dichloroethane	526J	ug/kg	903	01/12/22 20:24	
EPA 8260	1,1-Dichloroethene	889J	ug/kg	903	01/12/22 20:24	
EPA 8260	cis-1,2-Dichloroethene	143000	ug/kg	903	01/12/22 20:24	
EPA 8260	trans-1,2-Dichloroethene	3930	ug/kg	903	01/12/22 20:24	
EPA 8260	Trichloroethene	50000	ug/kg	903	01/12/22 20:24	
EPA 8260	Vinyl chloride	21300	ug/kg	903	01/12/22 20:24	
ASTM D2974-87	Percent Moisture	18.2	%	0.10	01/11/22 16:06	
40239263003	**B-21 (0-4')**					
EPA 6010D	Barium	13.7	mg/kg	0.54	01/12/22 18:58	
EPA 6010D	Cadmium	9.0	mg/kg	0.54	01/12/22 18:58	
EPA 6010D	Chromium	17.0	mg/kg	1.1	01/12/22 18:58	
EPA 6010D	Lead	4.3	mg/kg	2.2	01/12/22 18:58	
EPA 7471	Mercury	0.034J	mg/kg	0.037	01/13/22 13:02	
EPA 8260	cis-1,2-Dichloroethene	159	ug/kg	63.4	01/12/22 16:43	
EPA 8260	trans-1,2-Dichloroethene	17.0J	ug/kg	63.4	01/12/22 16:43	
EPA 8260	Trichloroethene	164	ug/kg	63.4	01/12/22 16:43	
EPA 8260	Vinyl chloride	228	ug/kg	63.4	01/12/22 16:43	
ASTM D2974-87	Percent Moisture	11.8	%	0.10	01/11/22 16:06	
40239263004	**B-21 (6-8')**					
EPA 6010D	Arsenic	3.2	mg/kg	3.0	01/12/22 19:01	
EPA 6010D	Barium	75.6	mg/kg	0.61	01/12/22 19:01	
EPA 6010D	Cadmium	0.29J	mg/kg	0.61	01/12/22 19:01	
EPA 6010D	Chromium	29.3	mg/kg	1.2	01/12/22 19:01	
EPA 6010D	Lead	8.4	mg/kg	2.4	01/12/22 19:01	
EPA 6010D	Silver	0.49J	mg/kg	1.2	01/12/22 19:01	
EPA 7471	Mercury	0.026J	mg/kg	0.041	01/13/22 13:04	
EPA 8260	1,1-Dichloroethene	98.4	ug/kg	74.1	01/12/22 12:39	
EPA 8260	cis-1,2-Dichloroethene	8950	ug/kg	74.1	01/12/22 12:39	
EPA 8260	trans-1,2-Dichloroethene	2740	ug/kg	74.1	01/12/22 12:39	
EPA 8260	Trichloroethene	19200	ug/kg	296	01/12/22 19:24	M1

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 1162-013
Pace Project No.: 40239263

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40239263004	**B-21 (6-8')**					
EPA 8260	Vinyl chloride	550	ug/kg	74.1	01/12/22 12:39	
ASTM D2974-87	Percent Moisture	19.4	%	0.10	01/11/22 16:07	
40239263005	**B-22 (0-4')**					
EPA 6010D	Arsenic	2.2J	mg/kg	3.1	01/12/22 19:03	
EPA 6010D	Barium	101	mg/kg	0.63	01/12/22 19:03	
EPA 6010D	Cadmium	0.81	mg/kg	0.63	01/12/22 19:03	
EPA 6010D	Chromium	44.7	mg/kg	1.3	01/12/22 19:03	
EPA 6010D	Lead	13.1	mg/kg	2.5	01/12/22 19:03	
EPA 7471	Mercury	0.049	mg/kg	0.042	01/13/22 13:07	
ASTM D2974-87	Percent Moisture	22.9	%	0.10	01/11/22 16:07	
40239263006	**B-22 (6-8')**					
EPA 6010D	Arsenic	2.8J	mg/kg	3.0	01/12/22 19:06	
EPA 6010D	Barium	103	mg/kg	0.60	01/12/22 19:06	
EPA 6010D	Cadmium	0.26J	mg/kg	0.60	01/12/22 19:06	
EPA 6010D	Chromium	34.3	mg/kg	1.2	01/12/22 19:06	
EPA 6010D	Lead	8.3	mg/kg	2.4	01/12/22 19:06	
EPA 6010D	Silver	0.45J	mg/kg	1.2	01/12/22 19:06	
EPA 7471	Mercury	0.038J	mg/kg	0.042	01/13/22 13:09	
EPA 8260	cis-1,2-Dichloroethene	247	ug/kg	75.9	01/12/22 17:23	
EPA 8260	trans-1,2-Dichloroethene	48.9J	ug/kg	75.9	01/12/22 17:23	
EPA 8260	Trichloroethene	253	ug/kg	75.9	01/12/22 17:23	
EPA 8260	Vinyl chloride	274	ug/kg	75.9	01/12/22 17:23	
ASTM D2974-87	Percent Moisture	20.6	%	0.10	01/11/22 16:07	
40239263007	**B-23 (0-4')**					
EPA 6010D	Barium	13.6	mg/kg	0.59	01/12/22 19:08	
EPA 6010D	Cadmium	0.58J	mg/kg	0.59	01/12/22 19:08	
EPA 6010D	Chromium	24.4	mg/kg	1.2	01/12/22 19:08	
EPA 6010D	Lead	4.8	mg/kg	2.3	01/12/22 19:08	
EPA 7471	Mercury	0.030J	mg/kg	0.039	01/13/22 13:11	
EPA 8260	cis-1,2-Dichloroethene	18.8J	ug/kg	74.3	01/12/22 17:43	
EPA 8260	Trichloroethene	35.3J	ug/kg	74.3	01/12/22 17:43	
EPA 8260	Vinyl chloride	59.1J	ug/kg	74.3	01/12/22 17:43	
ASTM D2974-87	Percent Moisture	19.6	%	0.10	01/11/22 16:07	
40239263008	**B-23 (6-8')**					
EPA 6010D	Arsenic	2.4J	mg/kg	2.9	01/12/22 19:11	
EPA 6010D	Barium	61.0	mg/kg	0.58	01/12/22 19:11	
EPA 6010D	Cadmium	0.78	mg/kg	0.58	01/12/22 19:11	
EPA 6010D	Chromium	37.6	mg/kg	1.2	01/12/22 19:11	
EPA 6010D	Lead	6.2	mg/kg	2.3	01/12/22 19:11	
EPA 8260	Dichlorodifluoromethane	56.8J	ug/kg	66.6	01/12/22 18:03	
EPA 8260	1,1-Dichloroethene	32.9J	ug/kg	66.6	01/12/22 18:03	
EPA 8260	cis-1,2-Dichloroethene	444	ug/kg	66.6	01/12/22 18:03	
EPA 8260	trans-1,2-Dichloroethene	31.9J	ug/kg	66.6	01/12/22 18:03	
EPA 8260	Trichloroethene	4700	ug/kg	66.6	01/12/22 18:03	
EPA 8260	Vinyl chloride	77.3	ug/kg	66.6	01/12/22 18:03	

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 1162-013
Pace Project No.: 40239263

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40239263008	**B-23 (6-8')**					
ASTM D2974-87	Percent Moisture	14.3	%	0.10	01/11/22 16:07	
40239263009	**B-24 (0-4')**					
EPA 6010D	Arsenic	2.9J	mg/kg	3.0	01/12/22 19:13	
EPA 6010D	Barium	9.9	mg/kg	0.59	01/12/22 19:13	
EPA 6010D	Chromium	8.4	mg/kg	1.2	01/12/22 19:13	
EPA 6010D	Lead	2.1J	mg/kg	2.4	01/12/22 19:13	
ASTM D2974-87	Percent Moisture	15.9	%	0.10	01/11/22 16:07	
40239263010	**B-24 (6-8')**					
EPA 6010D	Arsenic	4.8	mg/kg	3.2	01/12/22 19:16	
EPA 6010D	Barium	75.5	mg/kg	0.64	01/12/22 19:16	
EPA 6010D	Cadmium	0.32J	mg/kg	0.64	01/12/22 19:16	
EPA 6010D	Chromium	31.4	mg/kg	1.3	01/12/22 19:16	
EPA 6010D	Lead	8.4	mg/kg	2.6	01/12/22 19:16	
EPA 8260	cis-1,2-Dichloroethene	7120	ug/kg	1590	01/12/22 20:04	
EPA 8260	trans-1,2-Dichloroethene	1390J	ug/kg	1590	01/12/22 20:04	
EPA 8260	Trichloroethene	199000	ug/kg	1590	01/12/22 20:04	
EPA 8260	Vinyl chloride	762J	ug/kg	1590	01/12/22 20:04	
ASTM D2974-87	Percent Moisture	22.6	%	0.10	01/11/22 16:07	
40239263011	**B-25 (0-4')**					
EPA 6010D	Barium	49.5	mg/kg	2.7	01/13/22 17:48	
EPA 6010D	Chromium	20.1	mg/kg	5.4	01/13/22 17:48	
EPA 6010D	Lead	6.3J	mg/kg	10.8	01/13/22 17:48	D3
EPA 8260	Trichloroethene	164	ug/kg	66.2	01/12/22 18:44	
ASTM D2974-87	Percent Moisture	14.0	%	0.10	01/11/22 16:07	
40239263012	**B-25 (6-8')**					
EPA 6010D	Arsenic	4.0	mg/kg	2.9	01/12/22 19:26	
EPA 6010D	Barium	99.7	mg/kg	0.58	01/12/22 19:26	
EPA 6010D	Cadmium	0.37J	mg/kg	0.58	01/12/22 19:26	
EPA 6010D	Chromium	40.9	mg/kg	1.2	01/12/22 19:26	
EPA 6010D	Lead	8.9	mg/kg	2.3	01/12/22 19:26	
EPA 7471	Mercury	0.016J	mg/kg	0.041	01/13/22 13:27	
ASTM D2974-87	Percent Moisture	19.6	%	0.10	01/11/22 16:07	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-20 (0-4') **Lab ID: 40239263001** Collected: 01/09/22 10:10 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**<3.6**	mg/kg	6.2	3.6	2	01/12/22 06:19	01/13/22 17:29	7440-38-2	D3
Barium	**110**	mg/kg	1.2	0.37	2	01/12/22 06:19	01/13/22 17:29	7440-39-3	M0
Cadmium	**<0.33**	mg/kg	1.2	0.33	2	01/12/22 06:19	01/13/22 17:29	7440-43-9	D3
Chromium	**40.7**	mg/kg	2.5	0.69	2	01/12/22 06:19	01/13/22 17:29	7440-47-3	M0
Lead	**9.6**	mg/kg	5.0	1.5	2	01/12/22 06:19	01/13/22 17:29	7439-92-1	
Selenium	**<3.2**	mg/kg	9.9	3.2	2	01/12/22 06:19	01/13/22 17:29	7782-49-2	D3
Silver	**<0.76**	mg/kg	2.5	0.76	2	01/12/22 06:19	01/13/22 17:29	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.045**	mg/kg	0.040	0.011	1	01/13/22 09:28	01/13/22 12:57	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<445**	ug/kg	747	445	25	01/12/22 09:00	01/12/22 19:44	71-43-2	
Bromobenzene	**<729**	ug/kg	1870	729	25	01/12/22 09:00	01/12/22 19:44	108-86-1	
Bromochloromethane	**<512**	ug/kg	1870	512	25	01/12/22 09:00	01/12/22 19:44	74-97-5	
Bromodichloromethane	**<445**	ug/kg	1870	445	25	01/12/22 09:00	01/12/22 19:44	75-27-4	
Bromoform	**<8220**	ug/kg	9340	8220	25	01/12/22 09:00	01/12/22 19:44	75-25-2	
Bromomethane	**<2620**	ug/kg	9340	2620	25	01/12/22 09:00	01/12/22 19:44	74-83-9	
n-Butylbenzene	**<856**	ug/kg	1870	856	25	01/12/22 09:00	01/12/22 19:44	104-51-8	
sec-Butylbenzene	**<456**	ug/kg	1870	456	25	01/12/22 09:00	01/12/22 19:44	135-98-8	
tert-Butylbenzene	**<587**	ug/kg	1870	587	25	01/12/22 09:00	01/12/22 19:44	98-06-6	
Carbon tetrachloride	**<411**	ug/kg	1870	411	25	01/12/22 09:00	01/12/22 19:44	56-23-5	
Chlorobenzene	**<224**	ug/kg	1870	224	25	01/12/22 09:00	01/12/22 19:44	108-90-7	
Chloroethane	**<788**	ug/kg	9340	788	25	01/12/22 09:00	01/12/22 19:44	75-00-3	
Chloroform	**<1340**	ug/kg	9340	1340	25	01/12/22 09:00	01/12/22 19:44	67-66-3	
Chloromethane	**<710**	ug/kg	1870	710	25	01/12/22 09:00	01/12/22 19:44	74-87-3	
2-Chlorotoluene	**<605**	ug/kg	1870	605	25	01/12/22 09:00	01/12/22 19:44	95-49-8	
4-Chlorotoluene	**<710**	ug/kg	1870	710	25	01/12/22 09:00	01/12/22 19:44	106-43-4	
1,2-Dibromo-3-chloropropane	**<1450**	ug/kg	9340	1450	25	01/12/22 09:00	01/12/22 19:44	96-12-8	L1
Dibromochloromethane	**<6390**	ug/kg	9340	6390	25	01/12/22 09:00	01/12/22 19:44	124-48-1	
1,2-Dibromoethane (EDB)	**<512**	ug/kg	1870	512	25	01/12/22 09:00	01/12/22 19:44	106-93-4	
Dibromomethane	**<553**	ug/kg	1870	553	25	01/12/22 09:00	01/12/22 19:44	74-95-3	
1,2-Dichlorobenzene	**<579**	ug/kg	1870	579	25	01/12/22 09:00	01/12/22 19:44	95-50-1	
1,3-Dichlorobenzene	**<512**	ug/kg	1870	512	25	01/12/22 09:00	01/12/22 19:44	541-73-1	
1,4-Dichlorobenzene	**<512**	ug/kg	1870	512	25	01/12/22 09:00	01/12/22 19:44	106-46-7	
Dichlorodifluoromethane	**<803**	ug/kg	1870	803	25	01/12/22 09:00	01/12/22 19:44	75-71-8	
1,1-Dichloroethane	**<478**	ug/kg	1870	478	25	01/12/22 09:00	01/12/22 19:44	75-34-3	
1,2-Dichloroethane	**<430**	ug/kg	1870	430	25	01/12/22 09:00	01/12/22 19:44	107-06-2	
1,1-Dichloroethene	**<620**	ug/kg	1870	620	25	01/12/22 09:00	01/12/22 19:44	75-35-4	
cis-1,2-Dichloroethene	**41600**	ug/kg	1870	400	25	01/12/22 09:00	01/12/22 19:44	156-59-2	
trans-1,2-Dichloroethene	**649J**	ug/kg	1870	404	25	01/12/22 09:00	01/12/22 19:44	156-60-5	
1,2-Dichloropropane	**<445**	ug/kg	1870	445	25	01/12/22 09:00	01/12/22 19:44	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-20 (0-4') **Lab ID: 40239263001** Collected: 01/09/22 10:10 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<407**	ug/kg	1870	407	25	01/12/22 09:00	01/12/22 19:44	142-28-9	
2,2-Dichloropropane	**<504**	ug/kg	1870	504	25	01/12/22 09:00	01/12/22 19:44	594-20-7	
1,1-Dichloropropene	**<605**	ug/kg	1870	605	25	01/12/22 09:00	01/12/22 19:44	563-58-6	
cis-1,3-Dichloropropene	**<1230**	ug/kg	9340	1230	25	01/12/22 09:00	01/12/22 19:44	10061-01-5	
trans-1,3-Dichloropropene	**<5340**	ug/kg	9340	5340	25	01/12/22 09:00	01/12/22 19:44	10061-02-6	
Diisopropyl ether	**<463**	ug/kg	1870	463	25	01/12/22 09:00	01/12/22 19:44	108-20-3	
Ethylbenzene	**<445**	ug/kg	1870	445	25	01/12/22 09:00	01/12/22 19:44	100-41-4	
Hexachloro-1,3-butadiene	**<3710**	ug/kg	9340	3710	25	01/12/22 09:00	01/12/22 19:44	87-68-3	
Isopropylbenzene (Cumene)	**<504**	ug/kg	1870	504	25	01/12/22 09:00	01/12/22 19:44	98-82-8	
p-Isopropyltoluene	**<568**	ug/kg	1870	568	25	01/12/22 09:00	01/12/22 19:44	99-87-6	
Methylene Chloride	**<519**	ug/kg	1870	519	25	01/12/22 09:00	01/12/22 19:44	75-09-2	
Methyl-tert-butyl ether	**<549**	ug/kg	1870	549	25	01/12/22 09:00	01/12/22 19:44	1634-04-4	
Naphthalene	**<583**	ug/kg	9340	583	25	01/12/22 09:00	01/12/22 19:44	91-20-3	
n-Propylbenzene	**<448**	ug/kg	1870	448	25	01/12/22 09:00	01/12/22 19:44	103-65-1	
Styrene	**<478**	ug/kg	1870	478	25	01/12/22 09:00	01/12/22 19:44	100-42-5	
1,1,1,2-Tetrachloroethane	**<448**	ug/kg	1870	448	25	01/12/22 09:00	01/12/22 19:44	630-20-6	
1,1,2,2-Tetrachloroethane	**<676**	ug/kg	1870	676	25	01/12/22 09:00	01/12/22 19:44	79-34-5	
Tetrachloroethene	**<725**	ug/kg	1870	725	25	01/12/22 09:00	01/12/22 19:44	127-18-4	
Toluene	**<471**	ug/kg	1870	471	25	01/12/22 09:00	01/12/22 19:44	108-88-3	
1,2,3-Trichlorobenzene	**<2080**	ug/kg	9340	2080	25	01/12/22 09:00	01/12/22 19:44	87-61-6	
1,2,4-Trichlorobenzene	**<1540**	ug/kg	9340	1540	25	01/12/22 09:00	01/12/22 19:44	120-82-1	
1,1,1-Trichloroethane	**<478**	ug/kg	1870	478	25	01/12/22 09:00	01/12/22 19:44	71-55-6	
1,1,2-Trichloroethane	**<680**	ug/kg	1870	680	25	01/12/22 09:00	01/12/22 19:44	79-00-5	
Trichloroethene	**109000**	ug/kg	1870	699	25	01/12/22 09:00	01/12/22 19:44	79-01-6	
Trichlorofluoromethane	**<542**	ug/kg	1870	542	25	01/12/22 09:00	01/12/22 19:44	75-69-4	
1,2,3-Trichloropropane	**<908**	ug/kg	1870	908	25	01/12/22 09:00	01/12/22 19:44	96-18-4	
1,2,4-Trimethylbenzene	**<557**	ug/kg	1870	557	25	01/12/22 09:00	01/12/22 19:44	95-63-6	
1,3,5-Trimethylbenzene	**<602**	ug/kg	1870	602	25	01/12/22 09:00	01/12/22 19:44	108-67-8	
Vinyl chloride	**7360**	ug/kg	1870	377	25	01/12/22 09:00	01/12/22 19:44	75-01-4	
m&p-Xylene	**<788**	ug/kg	3740	788	25	01/12/22 09:00	01/12/22 19:44	179601-23-1	
o-Xylene	**<560**	ug/kg	1870	560	25	01/12/22 09:00	01/12/22 19:44	95-47-6	
Surrogates									
Toluene-d8 (S)	61	%	67-159		25	01/12/22 09:00	01/12/22 19:44	2037-26-5	S4
4-Bromofluorobenzene (S)	70	%	66-153		25	01/12/22 09:00	01/12/22 19:44	460-00-4	S4
1,2-Dichlorobenzene-d4 (S)	127	%	82-158		25	01/12/22 09:00	01/12/22 19:44	2199-69-1	S4
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**19.8**	%	0.10	0.10	1		01/11/22 16:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-20 (6-8') **Lab ID: 40239263002** Collected: 01/09/22 10:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Silver	**<0.37**	mg/kg	1.2	0.37	1	01/12/22 06:19	01/12/22 18:53	7440-22-4	
Arsenic	**3.1**	mg/kg	3.0	1.8	1	01/12/22 06:19	01/12/22 18:53	7440-38-2	
Barium	**110**	mg/kg	0.61	0.18	1	01/12/22 06:19	01/12/22 18:53	7440-39-3	
Cadmium	**0.34J**	mg/kg	0.61	0.16	1	01/12/22 06:19	01/12/22 18:53	7440-43-9	
Chromium	**35.2**	mg/kg	1.2	0.34	1	01/12/22 06:19	01/12/22 18:53	7440-47-3	
Lead	**9.1**	mg/kg	2.4	0.73	1	01/12/22 06:19	01/12/22 18:53	7439-92-1	
Selenium	**<1.6**	mg/kg	4.9	1.6	1	01/12/22 06:19	01/12/22 18:53	7782-49-2	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.027J**	mg/kg	0.041	0.012	1	01/13/22 09:28	01/13/22 13:00	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<215**	ug/kg	361	215	12.5	01/12/22 09:00	01/12/22 20:24	71-43-2	
Bromobenzene	**<352**	ug/kg	903	352	12.5	01/12/22 09:00	01/12/22 20:24	108-86-1	
Bromochloromethane	**<247**	ug/kg	903	247	12.5	01/12/22 09:00	01/12/22 20:24	74-97-5	
Bromodichloromethane	**<215**	ug/kg	903	215	12.5	01/12/22 09:00	01/12/22 20:24	75-27-4	
Bromoform	**<3970**	ug/kg	4520	3970	12.5	01/12/22 09:00	01/12/22 20:24	75-25-2	
Bromomethane	**<1270**	ug/kg	4520	1270	12.5	01/12/22 09:00	01/12/22 20:24	74-83-9	
n-Butylbenzene	**<414**	ug/kg	903	414	12.5	01/12/22 09:00	01/12/22 20:24	104-51-8	
sec-Butylbenzene	**<220**	ug/kg	903	220	12.5	01/12/22 09:00	01/12/22 20:24	135-98-8	
tert-Butylbenzene	**<284**	ug/kg	903	284	12.5	01/12/22 09:00	01/12/22 20:24	98-06-6	
Carbon tetrachloride	**<199**	ug/kg	903	199	12.5	01/12/22 09:00	01/12/22 20:24	56-23-5	
Chlorobenzene	**<108**	ug/kg	903	108	12.5	01/12/22 09:00	01/12/22 20:24	108-90-7	
Chloroethane	**<381**	ug/kg	4520	381	12.5	01/12/22 09:00	01/12/22 20:24	75-00-3	
Chloroform	**<647**	ug/kg	4520	647	12.5	01/12/22 09:00	01/12/22 20:24	67-66-3	
Chloromethane	**<343**	ug/kg	903	343	12.5	01/12/22 09:00	01/12/22 20:24	74-87-3	
2-Chlorotoluene	**<293**	ug/kg	903	293	12.5	01/12/22 09:00	01/12/22 20:24	95-49-8	
4-Chlorotoluene	**<343**	ug/kg	903	343	12.5	01/12/22 09:00	01/12/22 20:24	106-43-4	
1,2-Dibromo-3-chloropropane	**<701**	ug/kg	4520	701	12.5	01/12/22 09:00	01/12/22 20:24	96-12-8	L1
Dibromochloromethane	**<3090**	ug/kg	4520	3090	12.5	01/12/22 09:00	01/12/22 20:24	124-48-1	
1,2-Dibromoethane (EDB)	**<247**	ug/kg	903	247	12.5	01/12/22 09:00	01/12/22 20:24	106-93-4	
Dibromomethane	**<267**	ug/kg	903	267	12.5	01/12/22 09:00	01/12/22 20:24	74-95-3	
1,2-Dichlorobenzene	**<280**	ug/kg	903	280	12.5	01/12/22 09:00	01/12/22 20:24	95-50-1	
1,3-Dichlorobenzene	**<247**	ug/kg	903	247	12.5	01/12/22 09:00	01/12/22 20:24	541-73-1	
1,4-Dichlorobenzene	**<247**	ug/kg	903	247	12.5	01/12/22 09:00	01/12/22 20:24	106-46-7	
Dichlorodifluoromethane	**<388**	ug/kg	903	388	12.5	01/12/22 09:00	01/12/22 20:24	75-71-8	
1,1-Dichloroethane	**526J**	ug/kg	903	231	12.5	01/12/22 09:00	01/12/22 20:24	75-34-3	
1,2-Dichloroethane	**<208**	ug/kg	903	208	12.5	01/12/22 09:00	01/12/22 20:24	107-06-2	
1,1-Dichloroethene	**889J**	ug/kg	903	300	12.5	01/12/22 09:00	01/12/22 20:24	75-35-4	
cis-1,2-Dichloroethene	**143000**	ug/kg	903	193	12.5	01/12/22 09:00	01/12/22 20:24	156-59-2	
trans-1,2-Dichloroethene	**3930**	ug/kg	903	195	12.5	01/12/22 09:00	01/12/22 20:24	156-60-5	
1,2-Dichloropropane	**<215**	ug/kg	903	215	12.5	01/12/22 09:00	01/12/22 20:24	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-20 (6-8') **Lab ID: 40239263002** Collected: 01/09/22 10:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<197**	ug/kg	903	197	12.5	01/12/22 09:00	01/12/22 20:24	142-28-9	
2,2-Dichloropropane	**<244**	ug/kg	903	244	12.5	01/12/22 09:00	01/12/22 20:24	594-20-7	
1,1-Dichloropropene	**<293**	ug/kg	903	293	12.5	01/12/22 09:00	01/12/22 20:24	563-58-6	
cis-1,3-Dichloropropene	**<596**	ug/kg	4520	596	12.5	01/12/22 09:00	01/12/22 20:24	10061-01-5	
trans-1,3-Dichloropropene	**<2580**	ug/kg	4520	2580	12.5	01/12/22 09:00	01/12/22 20:24	10061-02-6	
Diisopropyl ether	**<224**	ug/kg	903	224	12.5	01/12/22 09:00	01/12/22 20:24	108-20-3	
Ethylbenzene	**<215**	ug/kg	903	215	12.5	01/12/22 09:00	01/12/22 20:24	100-41-4	
Hexachloro-1,3-butadiene	**<1800**	ug/kg	4520	1800	12.5	01/12/22 09:00	01/12/22 20:24	87-68-3	
Isopropylbenzene (Cumene)	**<244**	ug/kg	903	244	12.5	01/12/22 09:00	01/12/22 20:24	98-82-8	
p-Isopropyltoluene	**<275**	ug/kg	903	275	12.5	01/12/22 09:00	01/12/22 20:24	99-87-6	
Methylene Chloride	**<251**	ug/kg	903	251	12.5	01/12/22 09:00	01/12/22 20:24	75-09-2	
Methyl-tert-butyl ether	**<265**	ug/kg	903	265	12.5	01/12/22 09:00	01/12/22 20:24	1634-04-4	
Naphthalene	**<282**	ug/kg	4520	282	12.5	01/12/22 09:00	01/12/22 20:24	91-20-3	
n-Propylbenzene	**<217**	ug/kg	903	217	12.5	01/12/22 09:00	01/12/22 20:24	103-65-1	
Styrene	**<231**	ug/kg	903	231	12.5	01/12/22 09:00	01/12/22 20:24	100-42-5	
1,1,1,2-Tetrachloroethane	**<217**	ug/kg	903	217	12.5	01/12/22 09:00	01/12/22 20:24	630-20-6	
1,1,2,2-Tetrachloroethane	**<327**	ug/kg	903	327	12.5	01/12/22 09:00	01/12/22 20:24	79-34-5	
Tetrachloroethene	**<350**	ug/kg	903	350	12.5	01/12/22 09:00	01/12/22 20:24	127-18-4	
Toluene	**<228**	ug/kg	903	228	12.5	01/12/22 09:00	01/12/22 20:24	108-88-3	
1,2,3-Trichlorobenzene	**<1010**	ug/kg	4520	1010	12.5	01/12/22 09:00	01/12/22 20:24	87-61-6	
1,2,4-Trichlorobenzene	**<744**	ug/kg	4520	744	12.5	01/12/22 09:00	01/12/22 20:24	120-82-1	
1,1,1-Trichloroethane	**<231**	ug/kg	903	231	12.5	01/12/22 09:00	01/12/22 20:24	71-55-6	
1,1,2-Trichloroethane	**<329**	ug/kg	903	329	12.5	01/12/22 09:00	01/12/22 20:24	79-00-5	
Trichloroethene	**50000**	ug/kg	903	338	12.5	01/12/22 09:00	01/12/22 20:24	79-01-6	
Trichlorofluoromethane	**<262**	ug/kg	903	262	12.5	01/12/22 09:00	01/12/22 20:24	75-69-4	
1,2,3-Trichloropropane	**<439**	ug/kg	903	439	12.5	01/12/22 09:00	01/12/22 20:24	96-18-4	
1,2,4-Trimethylbenzene	**<269**	ug/kg	903	269	12.5	01/12/22 09:00	01/12/22 20:24	95-63-6	
1,3,5-Trimethylbenzene	**<291**	ug/kg	903	291	12.5	01/12/22 09:00	01/12/22 20:24	108-67-8	
Vinyl chloride	**21300**	ug/kg	903	182	12.5	01/12/22 09:00	01/12/22 20:24	75-01-4	
m&p-Xylene	**<381**	ug/kg	1810	381	12.5	01/12/22 09:00	01/12/22 20:24	179601-23-1	
o-Xylene	**<271**	ug/kg	903	271	12.5	01/12/22 09:00	01/12/22 20:24	95-47-6	
Surrogates									
Toluene-d8 (S)	123	%	67-159		12.5	01/12/22 09:00	01/12/22 20:24	2037-26-5	S4
4-Bromofluorobenzene (S)	107	%	66-153		12.5	01/12/22 09:00	01/12/22 20:24	460-00-4	S4
1,2-Dichlorobenzene-d4 (S)	139	%	82-158		12.5	01/12/22 09:00	01/12/22 20:24	2199-69-1	S4
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**18.2**	%	0.10	0.10	1		01/11/22 16:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-21 (0-4') **Lab ID: 40239263003** Collected: 01/09/22 11:20 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**<1.6**	mg/kg	2.7	1.6	1	01/12/22 06:19	01/12/22 18:58	7440-38-2	
Barium	**13.7**	mg/kg	0.54	0.16	1	01/12/22 06:19	01/12/22 18:58	7440-39-3	
Cadmium	**9.0**	mg/kg	0.54	0.14	1	01/12/22 06:19	01/12/22 18:58	7440-43-9	
Chromium	**17.0**	mg/kg	1.1	0.30	1	01/12/22 06:19	01/12/22 18:58	7440-47-3	
Lead	**4.3**	mg/kg	2.2	0.65	1	01/12/22 06:19	01/12/22 18:58	7439-92-1	
Selenium	**<1.4**	mg/kg	4.3	1.4	1	01/12/22 06:19	01/12/22 18:58	7782-49-2	
Silver	**<0.33**	mg/kg	1.1	0.33	1	01/12/22 06:19	01/12/22 18:58	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.034J**	mg/kg	0.037	0.010	1	01/13/22 09:28	01/13/22 13:02	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<15.1**	ug/kg	25.4	15.1	1	01/12/22 09:00	01/12/22 16:43	71-43-2	
Bromobenzene	**<24.7**	ug/kg	63.4	24.7	1	01/12/22 09:00	01/12/22 16:43	108-86-1	
Bromochloromethane	**<17.4**	ug/kg	63.4	17.4	1	01/12/22 09:00	01/12/22 16:43	74-97-5	
Bromodichloromethane	**<15.1**	ug/kg	63.4	15.1	1	01/12/22 09:00	01/12/22 16:43	75-27-4	
Bromoform	**<279**	ug/kg	317	279	1	01/12/22 09:00	01/12/22 16:43	75-25-2	
Bromomethane	**<88.9**	ug/kg	317	88.9	1	01/12/22 09:00	01/12/22 16:43	74-83-9	
n-Butylbenzene	**<29.0**	ug/kg	63.4	29.0	1	01/12/22 09:00	01/12/22 16:43	104-51-8	
sec-Butylbenzene	**<15.5**	ug/kg	63.4	15.5	1	01/12/22 09:00	01/12/22 16:43	135-98-8	
tert-Butylbenzene	**<19.9**	ug/kg	63.4	19.9	1	01/12/22 09:00	01/12/22 16:43	98-06-6	
Carbon tetrachloride	**<13.9**	ug/kg	63.4	13.9	1	01/12/22 09:00	01/12/22 16:43	56-23-5	
Chlorobenzene	**<7.6**	ug/kg	63.4	7.6	1	01/12/22 09:00	01/12/22 16:43	108-90-7	
Chloroethane	**<26.8**	ug/kg	317	26.8	1	01/12/22 09:00	01/12/22 16:43	75-00-3	
Chloroform	**<45.4**	ug/kg	317	45.4	1	01/12/22 09:00	01/12/22 16:43	67-66-3	
Chloromethane	**<24.1**	ug/kg	63.4	24.1	1	01/12/22 09:00	01/12/22 16:43	74-87-3	
2-Chlorotoluene	**<20.5**	ug/kg	63.4	20.5	1	01/12/22 09:00	01/12/22 16:43	95-49-8	
4-Chlorotoluene	**<24.1**	ug/kg	63.4	24.1	1	01/12/22 09:00	01/12/22 16:43	106-43-4	
1,2-Dibromo-3-chloropropane	**<49.2**	ug/kg	317	49.2	1	01/12/22 09:00	01/12/22 16:43	96-12-8	L1
Dibromochloromethane	**<217**	ug/kg	317	217	1	01/12/22 09:00	01/12/22 16:43	124-48-1	
1,2-Dibromoethane (EDB)	**<17.4**	ug/kg	63.4	17.4	1	01/12/22 09:00	01/12/22 16:43	106-93-4	
Dibromomethane	**<18.8**	ug/kg	63.4	18.8	1	01/12/22 09:00	01/12/22 16:43	74-95-3	
1,2-Dichlorobenzene	**<19.7**	ug/kg	63.4	19.7	1	01/12/22 09:00	01/12/22 16:43	95-50-1	
1,3-Dichlorobenzene	**<17.4**	ug/kg	63.4	17.4	1	01/12/22 09:00	01/12/22 16:43	541-73-1	
1,4-Dichlorobenzene	**<17.4**	ug/kg	63.4	17.4	1	01/12/22 09:00	01/12/22 16:43	106-46-7	
Dichlorodifluoromethane	**<27.3**	ug/kg	63.4	27.3	1	01/12/22 09:00	01/12/22 16:43	75-71-8	
1,1-Dichloroethane	**<16.2**	ug/kg	63.4	16.2	1	01/12/22 09:00	01/12/22 16:43	75-34-3	
1,2-Dichloroethane	**<14.6**	ug/kg	63.4	14.6	1	01/12/22 09:00	01/12/22 16:43	107-06-2	
1,1-Dichloroethene	**<21.1**	ug/kg	63.4	21.1	1	01/12/22 09:00	01/12/22 16:43	75-35-4	
cis-1,2-Dichloroethene	**159**	ug/kg	63.4	13.6	1	01/12/22 09:00	01/12/22 16:43	156-59-2	
trans-1,2-Dichloroethene	**17.0J**	ug/kg	63.4	13.7	1	01/12/22 09:00	01/12/22 16:43	156-60-5	
1,2-Dichloropropane	**<15.1**	ug/kg	63.4	15.1	1	01/12/22 09:00	01/12/22 16:43	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-21 (0-4') **Lab ID: 40239263003** Collected: 01/09/22 11:20 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<13.8**	ug/kg	63.4	13.8	1	01/12/22 09:00	01/12/22 16:43	142-28-9	
2,2-Dichloropropane	**<17.1**	ug/kg	63.4	17.1	1	01/12/22 09:00	01/12/22 16:43	594-20-7	
1,1-Dichloropropene	**<20.5**	ug/kg	63.4	20.5	1	01/12/22 09:00	01/12/22 16:43	563-58-6	
cis-1,3-Dichloropropene	**<41.8**	ug/kg	317	41.8	1	01/12/22 09:00	01/12/22 16:43	10061-01-5	
trans-1,3-Dichloropropene	**<181**	ug/kg	317	181	1	01/12/22 09:00	01/12/22 16:43	10061-02-6	
Diisopropyl ether	**<15.7**	ug/kg	63.4	15.7	1	01/12/22 09:00	01/12/22 16:43	108-20-3	
Ethylbenzene	**<15.1**	ug/kg	63.4	15.1	1	01/12/22 09:00	01/12/22 16:43	100-41-4	
Hexachloro-1,3-butadiene	**<126**	ug/kg	317	126	1	01/12/22 09:00	01/12/22 16:43	87-68-3	
Isopropylbenzene (Cumene)	**<17.1**	ug/kg	63.4	17.1	1	01/12/22 09:00	01/12/22 16:43	98-82-8	
p-Isopropyltoluene	**<19.3**	ug/kg	63.4	19.3	1	01/12/22 09:00	01/12/22 16:43	99-87-6	
Methylene Chloride	**<17.6**	ug/kg	63.4	17.6	1	01/12/22 09:00	01/12/22 16:43	75-09-2	
Methyl-tert-butyl ether	**<18.6**	ug/kg	63.4	18.6	1	01/12/22 09:00	01/12/22 16:43	1634-04-4	
Naphthalene	**<19.8**	ug/kg	317	19.8	1	01/12/22 09:00	01/12/22 16:43	91-20-3	
n-Propylbenzene	**<15.2**	ug/kg	63.4	15.2	1	01/12/22 09:00	01/12/22 16:43	103-65-1	
Styrene	**<16.2**	ug/kg	63.4	16.2	1	01/12/22 09:00	01/12/22 16:43	100-42-5	
1,1,1,2-Tetrachloroethane	**<15.2**	ug/kg	63.4	15.2	1	01/12/22 09:00	01/12/22 16:43	630-20-6	
1,1,2,2-Tetrachloroethane	**<23.0**	ug/kg	63.4	23.0	1	01/12/22 09:00	01/12/22 16:43	79-34-5	
Tetrachloroethene	**<24.6**	ug/kg	63.4	24.6	1	01/12/22 09:00	01/12/22 16:43	127-18-4	
Toluene	**<16.0**	ug/kg	63.4	16.0	1	01/12/22 09:00	01/12/22 16:43	108-88-3	
1,2,3-Trichlorobenzene	**<70.6**	ug/kg	317	70.6	1	01/12/22 09:00	01/12/22 16:43	87-61-6	
1,2,4-Trichlorobenzene	**<52.2**	ug/kg	317	52.2	1	01/12/22 09:00	01/12/22 16:43	120-82-1	
1,1,1-Trichloroethane	**<16.2**	ug/kg	63.4	16.2	1	01/12/22 09:00	01/12/22 16:43	71-55-6	
1,1,2-Trichloroethane	**<23.1**	ug/kg	63.4	23.1	1	01/12/22 09:00	01/12/22 16:43	79-00-5	
Trichloroethene	**164**	ug/kg	63.4	23.7	1	01/12/22 09:00	01/12/22 16:43	79-01-6	
Trichlorofluoromethane	**<18.4**	ug/kg	63.4	18.4	1	01/12/22 09:00	01/12/22 16:43	75-69-4	
1,2,3-Trichloropropane	**<30.8**	ug/kg	63.4	30.8	1	01/12/22 09:00	01/12/22 16:43	96-18-4	
1,2,4-Trimethylbenzene	**<18.9**	ug/kg	63.4	18.9	1	01/12/22 09:00	01/12/22 16:43	95-63-6	
1,3,5-Trimethylbenzene	**<20.4**	ug/kg	63.4	20.4	1	01/12/22 09:00	01/12/22 16:43	108-67-8	
Vinyl chloride	**228**	ug/kg	63.4	12.8	1	01/12/22 09:00	01/12/22 16:43	75-01-4	
m&p-Xylene	**<26.8**	ug/kg	127	26.8	1	01/12/22 09:00	01/12/22 16:43	179601-23-1	
o-Xylene	**<19.0**	ug/kg	63.4	19.0	1	01/12/22 09:00	01/12/22 16:43	95-47-6	
Surrogates									
Toluene-d8 (S)	115	%	67-159		1	01/12/22 09:00	01/12/22 16:43	2037-26-5	
4-Bromofluorobenzene (S)	107	%	66-153		1	01/12/22 09:00	01/12/22 16:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	112	%	82-158		1	01/12/22 09:00	01/12/22 16:43	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**11.8**	%	0.10	0.10	1		01/11/22 16:06		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-21 (6-8') **Lab ID: 40239263004** Collected: 01/09/22 11:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**3.2**	mg/kg	3.0	1.8	1	01/12/22 06:19	01/12/22 19:01	7440-38-2	
Barium	**75.6**	mg/kg	0.61	0.18	1	01/12/22 06:19	01/12/22 19:01	7440-39-3	
Cadmium	**0.29J**	mg/kg	0.61	0.16	1	01/12/22 06:19	01/12/22 19:01	7440-43-9	
Chromium	**29.3**	mg/kg	1.2	0.34	1	01/12/22 06:19	01/12/22 19:01	7440-47-3	
Lead	**8.4**	mg/kg	2.4	0.73	1	01/12/22 06:19	01/12/22 19:01	7439-92-1	
Selenium	**<1.6**	mg/kg	4.9	1.6	1	01/12/22 06:19	01/12/22 19:01	7782-49-2	
Silver	**0.49J**	mg/kg	1.2	0.37	1	01/12/22 06:19	01/12/22 19:01	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.026J**	mg/kg	0.041	0.012	1	01/13/22 09:28	01/13/22 13:04	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<17.6**	ug/kg	29.6	17.6	1	01/12/22 09:00	01/12/22 12:39	71-43-2	
Bromobenzene	**<28.9**	ug/kg	74.1	28.9	1	01/12/22 09:00	01/12/22 12:39	108-86-1	
Bromochloromethane	**<20.3**	ug/kg	74.1	20.3	1	01/12/22 09:00	01/12/22 12:39	74-97-5	
Bromodichloromethane	**<17.6**	ug/kg	74.1	17.6	1	01/12/22 09:00	01/12/22 12:39	75-27-4	
Bromoform	**<326**	ug/kg	370	326	1	01/12/22 09:00	01/12/22 12:39	75-25-2	
Bromomethane	**<104**	ug/kg	370	104	1	01/12/22 09:00	01/12/22 12:39	74-83-9	
n-Butylbenzene	**<33.9**	ug/kg	74.1	33.9	1	01/12/22 09:00	01/12/22 12:39	104-51-8	
sec-Butylbenzene	**<18.1**	ug/kg	74.1	18.1	1	01/12/22 09:00	01/12/22 12:39	135-98-8	
tert-Butylbenzene	**<23.3**	ug/kg	74.1	23.3	1	01/12/22 09:00	01/12/22 12:39	98-06-6	
Carbon tetrachloride	**<16.3**	ug/kg	74.1	16.3	1	01/12/22 09:00	01/12/22 12:39	56-23-5	
Chlorobenzene	**<8.9**	ug/kg	74.1	8.9	1	01/12/22 09:00	01/12/22 12:39	108-90-7	
Chloroethane	**<31.3**	ug/kg	370	31.3	1	01/12/22 09:00	01/12/22 12:39	75-00-3	
Chloroform	**<53.0**	ug/kg	370	53.0	1	01/12/22 09:00	01/12/22 12:39	67-66-3	
Chloromethane	**<28.2**	ug/kg	74.1	28.2	1	01/12/22 09:00	01/12/22 12:39	74-87-3	
2-Chlorotoluene	**<24.0**	ug/kg	74.1	24.0	1	01/12/22 09:00	01/12/22 12:39	95-49-8	
4-Chlorotoluene	**<28.2**	ug/kg	74.1	28.2	1	01/12/22 09:00	01/12/22 12:39	106-43-4	
1,2-Dibromo-3-chloropropane	**<57.5**	ug/kg	370	57.5	1	01/12/22 09:00	01/12/22 12:39	96-12-8	L1,M0
Dibromochloromethane	**<253**	ug/kg	370	253	1	01/12/22 09:00	01/12/22 12:39	124-48-1	
1,2-Dibromoethane (EDB)	**<20.3**	ug/kg	74.1	20.3	1	01/12/22 09:00	01/12/22 12:39	106-93-4	
Dibromomethane	**<21.9**	ug/kg	74.1	21.9	1	01/12/22 09:00	01/12/22 12:39	74-95-3	
1,2-Dichlorobenzene	**<23.0**	ug/kg	74.1	23.0	1	01/12/22 09:00	01/12/22 12:39	95-50-1	
1,3-Dichlorobenzene	**<20.3**	ug/kg	74.1	20.3	1	01/12/22 09:00	01/12/22 12:39	541-73-1	
1,4-Dichlorobenzene	**<20.3**	ug/kg	74.1	20.3	1	01/12/22 09:00	01/12/22 12:39	106-46-7	
Dichlorodifluoromethane	**<31.9**	ug/kg	74.1	31.9	1	01/12/22 09:00	01/12/22 12:39	75-71-8	
1,1-Dichloroethane	**<19.0**	ug/kg	74.1	19.0	1	01/12/22 09:00	01/12/22 12:39	75-34-3	
1,2-Dichloroethane	**<17.0**	ug/kg	74.1	17.0	1	01/12/22 09:00	01/12/22 12:39	107-06-2	M1
1,1-Dichloroethene	**98.4**	ug/kg	74.1	24.6	1	01/12/22 09:00	01/12/22 12:39	75-35-4	
cis-1,2-Dichloroethene	**8950**	ug/kg	74.1	15.9	1	01/12/22 09:00	01/12/22 12:39	156-59-2	
trans-1,2-Dichloroethene	**2740**	ug/kg	74.1	16.0	1	01/12/22 09:00	01/12/22 12:39	156-60-5	
1,2-Dichloropropane	**<17.6**	ug/kg	74.1	17.6	1	01/12/22 09:00	01/12/22 12:39	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-21 (6-8') **Lab ID: 40239263004** Collected: 01/09/22 11:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<16.2**	ug/kg	74.1	16.2	1	01/12/22 09:00	01/12/22 12:39	142-28-9	
2,2-Dichloropropane	**<20.0**	ug/kg	74.1	20.0	1	01/12/22 09:00	01/12/22 12:39	594-20-7	
1,1-Dichloropropene	**<24.0**	ug/kg	74.1	24.0	1	01/12/22 09:00	01/12/22 12:39	563-58-6	
cis-1,3-Dichloropropene	**<48.9**	ug/kg	370	48.9	1	01/12/22 09:00	01/12/22 12:39	10061-01-5	
trans-1,3-Dichloropropene	**<212**	ug/kg	370	212	1	01/12/22 09:00	01/12/22 12:39	10061-02-6	
Diisopropyl ether	**<18.4**	ug/kg	74.1	18.4	1	01/12/22 09:00	01/12/22 12:39	108-20-3	
Ethylbenzene	**<17.6**	ug/kg	74.1	17.6	1	01/12/22 09:00	01/12/22 12:39	100-41-4	
Hexachloro-1,3-butadiene	**<147**	ug/kg	370	147	1	01/12/22 09:00	01/12/22 12:39	87-68-3	
Isopropylbenzene (Cumene)	**<20.0**	ug/kg	74.1	20.0	1	01/12/22 09:00	01/12/22 12:39	98-82-8	
p-Isopropyltoluene	**<22.5**	ug/kg	74.1	22.5	1	01/12/22 09:00	01/12/22 12:39	99-87-6	
Methylene Chloride	**<20.6**	ug/kg	74.1	20.6	1	01/12/22 09:00	01/12/22 12:39	75-09-2	
Methyl-tert-butyl ether	**<21.8**	ug/kg	74.1	21.8	1	01/12/22 09:00	01/12/22 12:39	1634-04-4	
Naphthalene	**<23.1**	ug/kg	370	23.1	1	01/12/22 09:00	01/12/22 12:39	91-20-3	
n-Propylbenzene	**<17.8**	ug/kg	74.1	17.8	1	01/12/22 09:00	01/12/22 12:39	103-65-1	
Styrene	**<19.0**	ug/kg	74.1	19.0	1	01/12/22 09:00	01/12/22 12:39	100-42-5	
1,1,1,2-Tetrachloroethane	**<17.8**	ug/kg	74.1	17.8	1	01/12/22 09:00	01/12/22 12:39	630-20-6	
1,1,2,2-Tetrachloroethane	**<26.8**	ug/kg	74.1	26.8	1	01/12/22 09:00	01/12/22 12:39	79-34-5	
Tetrachloroethene	**<28.7**	ug/kg	74.1	28.7	1	01/12/22 09:00	01/12/22 12:39	127-18-4	
Toluene	**<18.7**	ug/kg	74.1	18.7	1	01/12/22 09:00	01/12/22 12:39	108-88-3	
1,2,3-Trichlorobenzene	**<82.5**	ug/kg	370	82.5	1	01/12/22 09:00	01/12/22 12:39	87-61-6	
1,2,4-Trichlorobenzene	**<61.0**	ug/kg	370	61.0	1	01/12/22 09:00	01/12/22 12:39	120-82-1	
1,1,1-Trichloroethane	**<19.0**	ug/kg	74.1	19.0	1	01/12/22 09:00	01/12/22 12:39	71-55-6	
1,1,2-Trichloroethane	**<27.0**	ug/kg	74.1	27.0	1	01/12/22 09:00	01/12/22 12:39	79-00-5	
Trichloroethene	**19200**	ug/kg	296	111	4	01/12/22 09:00	01/12/22 19:24	79-01-6	M1
Trichlorofluoromethane	**<21.5**	ug/kg	74.1	21.5	1	01/12/22 09:00	01/12/22 12:39	75-69-4	
1,2,3-Trichloropropane	**<36.0**	ug/kg	74.1	36.0	1	01/12/22 09:00	01/12/22 12:39	96-18-4	
1,2,4-Trimethylbenzene	**<22.1**	ug/kg	74.1	22.1	1	01/12/22 09:00	01/12/22 12:39	95-63-6	
1,3,5-Trimethylbenzene	**<23.9**	ug/kg	74.1	23.9	1	01/12/22 09:00	01/12/22 12:39	108-67-8	
Vinyl chloride	**550**	ug/kg	74.1	15.0	1	01/12/22 09:00	01/12/22 12:39	75-01-4	
m&p-Xylene	**<31.3**	ug/kg	148	31.3	1	01/12/22 09:00	01/12/22 12:39	179601-23-1	
o-Xylene	**<22.2**	ug/kg	74.1	22.2	1	01/12/22 09:00	01/12/22 12:39	95-47-6	
Surrogates									
Toluene-d8 (S)	130	%	67-159		1	01/12/22 09:00	01/12/22 12:39	2037-26-5	
4-Bromofluorobenzene (S)	133	%	66-153		1	01/12/22 09:00	01/12/22 12:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	127	%	82-158		1	01/12/22 09:00	01/12/22 12:39	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**19.4**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-22 (0-4') **Lab ID: 40239263005** Collected: 01/09/22 12:20 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**2.2J**	mg/kg	3.1	1.8	1	01/12/22 06:19	01/12/22 19:03	7440-38-2	
Barium	**101**	mg/kg	0.63	0.19	1	01/12/22 06:19	01/12/22 19:03	7440-39-3	
Cadmium	**0.81**	mg/kg	0.63	0.17	1	01/12/22 06:19	01/12/22 19:03	7440-43-9	
Chromium	**44.7**	mg/kg	1.3	0.35	1	01/12/22 06:19	01/12/22 19:03	7440-47-3	
Lead	**13.1**	mg/kg	2.5	0.75	1	01/12/22 06:19	01/12/22 19:03	7439-92-1	
Selenium	**<1.6**	mg/kg	5.0	1.6	1	01/12/22 06:19	01/12/22 19:03	7782-49-2	
Silver	**<0.39**	mg/kg	1.3	0.39	1	01/12/22 06:19	01/12/22 19:03	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.049**	mg/kg	0.042	0.012	1	01/13/22 09:28	01/13/22 13:07	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<19.0**	ug/kg	31.9	19.0	1	01/12/22 09:00	01/12/22 17:03	71-43-2	
Bromobenzene	**<31.1**	ug/kg	79.7	31.1	1	01/12/22 09:00	01/12/22 17:03	108-86-1	
Bromochloromethane	**<21.8**	ug/kg	79.7	21.8	1	01/12/22 09:00	01/12/22 17:03	74-97-5	
Bromodichloromethane	**<19.0**	ug/kg	79.7	19.0	1	01/12/22 09:00	01/12/22 17:03	75-27-4	
Bromoform	**<351**	ug/kg	399	351	1	01/12/22 09:00	01/12/22 17:03	75-25-2	
Bromomethane	**<112**	ug/kg	399	112	1	01/12/22 09:00	01/12/22 17:03	74-83-9	
n-Butylbenzene	**<36.5**	ug/kg	79.7	36.5	1	01/12/22 09:00	01/12/22 17:03	104-51-8	
sec-Butylbenzene	**<19.5**	ug/kg	79.7	19.5	1	01/12/22 09:00	01/12/22 17:03	135-98-8	
tert-Butylbenzene	**<25.0**	ug/kg	79.7	25.0	1	01/12/22 09:00	01/12/22 17:03	98-06-6	
Carbon tetrachloride	**<17.5**	ug/kg	79.7	17.5	1	01/12/22 09:00	01/12/22 17:03	56-23-5	
Chlorobenzene	**<9.6**	ug/kg	79.7	9.6	1	01/12/22 09:00	01/12/22 17:03	108-90-7	
Chloroethane	**<33.6**	ug/kg	399	33.6	1	01/12/22 09:00	01/12/22 17:03	75-00-3	
Chloroform	**<57.1**	ug/kg	399	57.1	1	01/12/22 09:00	01/12/22 17:03	67-66-3	
Chloromethane	**<30.3**	ug/kg	79.7	30.3	1	01/12/22 09:00	01/12/22 17:03	74-87-3	
2-Chlorotoluene	**<25.8**	ug/kg	79.7	25.8	1	01/12/22 09:00	01/12/22 17:03	95-49-8	
4-Chlorotoluene	**<30.3**	ug/kg	79.7	30.3	1	01/12/22 09:00	01/12/22 17:03	106-43-4	
1,2-Dibromo-3-chloropropane	**<61.9**	ug/kg	399	61.9	1	01/12/22 09:00	01/12/22 17:03	96-12-8	L1
Dibromochloromethane	**<273**	ug/kg	399	273	1	01/12/22 09:00	01/12/22 17:03	124-48-1	
1,2-Dibromoethane (EDB)	**<21.8**	ug/kg	79.7	21.8	1	01/12/22 09:00	01/12/22 17:03	106-93-4	
Dibromomethane	**<23.6**	ug/kg	79.7	23.6	1	01/12/22 09:00	01/12/22 17:03	74-95-3	
1,2-Dichlorobenzene	**<24.7**	ug/kg	79.7	24.7	1	01/12/22 09:00	01/12/22 17:03	95-50-1	
1,3-Dichlorobenzene	**<21.8**	ug/kg	79.7	21.8	1	01/12/22 09:00	01/12/22 17:03	541-73-1	
1,4-Dichlorobenzene	**<21.8**	ug/kg	79.7	21.8	1	01/12/22 09:00	01/12/22 17:03	106-46-7	
Dichlorodifluoromethane	**<34.3**	ug/kg	79.7	34.3	1	01/12/22 09:00	01/12/22 17:03	75-71-8	
1,1-Dichloroethane	**<20.4**	ug/kg	79.7	20.4	1	01/12/22 09:00	01/12/22 17:03	75-34-3	
1,2-Dichloroethane	**<18.3**	ug/kg	79.7	18.3	1	01/12/22 09:00	01/12/22 17:03	107-06-2	
1,1-Dichloroethene	**<26.5**	ug/kg	79.7	26.5	1	01/12/22 09:00	01/12/22 17:03	75-35-4	
cis-1,2-Dichloroethene	**<17.1**	ug/kg	79.7	17.1	1	01/12/22 09:00	01/12/22 17:03	156-59-2	
trans-1,2-Dichloroethene	**<17.2**	ug/kg	79.7	17.2	1	01/12/22 09:00	01/12/22 17:03	156-60-5	
1,2-Dichloropropane	**<19.0**	ug/kg	79.7	19.0	1	01/12/22 09:00	01/12/22 17:03	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-22 (0-4') **Lab ID: 40239263005** Collected: 01/09/22 12:20 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<17.4**	ug/kg	79.7	17.4	1	01/12/22 09:00	01/12/22 17:03	142-28-9	
2,2-Dichloropropane	**<21.5**	ug/kg	79.7	21.5	1	01/12/22 09:00	01/12/22 17:03	594-20-7	
1,1-Dichloropropene	**<25.8**	ug/kg	79.7	25.8	1	01/12/22 09:00	01/12/22 17:03	563-58-6	
cis-1,3-Dichloropropene	**<52.6**	ug/kg	399	52.6	1	01/12/22 09:00	01/12/22 17:03	10061-01-5	
trans-1,3-Dichloropropene	**<228**	ug/kg	399	228	1	01/12/22 09:00	01/12/22 17:03	10061-02-6	
Diisopropyl ether	**<19.8**	ug/kg	79.7	19.8	1	01/12/22 09:00	01/12/22 17:03	108-20-3	
Ethylbenzene	**<19.0**	ug/kg	79.7	19.0	1	01/12/22 09:00	01/12/22 17:03	100-41-4	
Hexachloro-1,3-butadiene	**<159**	ug/kg	399	159	1	01/12/22 09:00	01/12/22 17:03	87-68-3	
Isopropylbenzene (Cumene)	**<21.5**	ug/kg	79.7	21.5	1	01/12/22 09:00	01/12/22 17:03	98-82-8	
p-Isopropyltoluene	**<24.2**	ug/kg	79.7	24.2	1	01/12/22 09:00	01/12/22 17:03	99-87-6	
Methylene Chloride	**<22.2**	ug/kg	79.7	22.2	1	01/12/22 09:00	01/12/22 17:03	75-09-2	
Methyl-tert-butyl ether	**<23.4**	ug/kg	79.7	23.4	1	01/12/22 09:00	01/12/22 17:03	1634-04-4	
Naphthalene	**<24.9**	ug/kg	399	24.9	1	01/12/22 09:00	01/12/22 17:03	91-20-3	
n-Propylbenzene	**<19.1**	ug/kg	79.7	19.1	1	01/12/22 09:00	01/12/22 17:03	103-65-1	
Styrene	**<20.4**	ug/kg	79.7	20.4	1	01/12/22 09:00	01/12/22 17:03	100-42-5	
1,1,1,2-Tetrachloroethane	**<19.1**	ug/kg	79.7	19.1	1	01/12/22 09:00	01/12/22 17:03	630-20-6	
1,1,2,2-Tetrachloroethane	**<28.9**	ug/kg	79.7	28.9	1	01/12/22 09:00	01/12/22 17:03	79-34-5	
Tetrachloroethene	**<30.9**	ug/kg	79.7	30.9	1	01/12/22 09:00	01/12/22 17:03	127-18-4	
Toluene	**<20.1**	ug/kg	79.7	20.1	1	01/12/22 09:00	01/12/22 17:03	108-88-3	
1,2,3-Trichlorobenzene	**<88.8**	ug/kg	399	88.8	1	01/12/22 09:00	01/12/22 17:03	87-61-6	
1,2,4-Trichlorobenzene	**<65.7**	ug/kg	399	65.7	1	01/12/22 09:00	01/12/22 17:03	120-82-1	
1,1,1-Trichloroethane	**<20.4**	ug/kg	79.7	20.4	1	01/12/22 09:00	01/12/22 17:03	71-55-6	
1,1,2-Trichloroethane	**<29.0**	ug/kg	79.7	29.0	1	01/12/22 09:00	01/12/22 17:03	79-00-5	
Trichloroethene	**<29.8**	ug/kg	79.7	29.8	1	01/12/22 09:00	01/12/22 17:03	79-01-6	
Trichlorofluoromethane	**<23.1**	ug/kg	79.7	23.1	1	01/12/22 09:00	01/12/22 17:03	75-69-4	
1,2,3-Trichloropropane	**<38.7**	ug/kg	79.7	38.7	1	01/12/22 09:00	01/12/22 17:03	96-18-4	
1,2,4-Trimethylbenzene	**<23.8**	ug/kg	79.7	23.8	1	01/12/22 09:00	01/12/22 17:03	95-63-6	
1,3,5-Trimethylbenzene	**<25.7**	ug/kg	79.7	25.7	1	01/12/22 09:00	01/12/22 17:03	108-67-8	
Vinyl chloride	**<16.1**	ug/kg	79.7	16.1	1	01/12/22 09:00	01/12/22 17:03	75-01-4	
m&p-Xylene	**<33.6**	ug/kg	159	33.6	1	01/12/22 09:00	01/12/22 17:03	179601-23-1	
o-Xylene	**<23.9**	ug/kg	79.7	23.9	1	01/12/22 09:00	01/12/22 17:03	95-47-6	
Surrogates									
Toluene-d8 (S)	131	%	67-159		1	01/12/22 09:00	01/12/22 17:03	2037-26-5	
4-Bromofluorobenzene (S)	125	%	66-153		1	01/12/22 09:00	01/12/22 17:03	460-00-4	
1,2-Dichlorobenzene-d4 (S)	135	%	82-158		1	01/12/22 09:00	01/12/22 17:03	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**22.9**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-22 (6-8') **Lab ID: 40239263006** Collected: 01/09/22 12:35 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**2.8J**	mg/kg	3.0	1.7	1	01/12/22 06:19	01/12/22 19:06	7440-38-2	
Barium	**103**	mg/kg	0.60	0.18	1	01/12/22 06:19	01/12/22 19:06	7440-39-3	
Cadmium	**0.26J**	mg/kg	0.60	0.16	1	01/12/22 06:19	01/12/22 19:06	7440-43-9	
Chromium	**34.3**	mg/kg	1.2	0.33	1	01/12/22 06:19	01/12/22 19:06	7440-47-3	
Lead	**8.3**	mg/kg	2.4	0.71	1	01/12/22 06:19	01/12/22 19:06	7439-92-1	
Selenium	**<1.6**	mg/kg	4.8	1.6	1	01/12/22 06:19	01/12/22 19:06	7782-49-2	
Silver	**0.45J**	mg/kg	1.2	0.37	1	01/12/22 06:19	01/12/22 19:06	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.038J**	mg/kg	0.042	0.012	1	01/13/22 09:28	01/13/22 13:09	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<18.1**	ug/kg	30.3	18.1	1	01/12/22 09:00	01/12/22 17:23	71-43-2	
Bromobenzene	**<29.6**	ug/kg	75.9	29.6	1	01/12/22 09:00	01/12/22 17:23	108-86-1	
Bromochloromethane	**<20.8**	ug/kg	75.9	20.8	1	01/12/22 09:00	01/12/22 17:23	74-97-5	
Bromodichloromethane	**<18.1**	ug/kg	75.9	18.1	1	01/12/22 09:00	01/12/22 17:23	75-27-4	
Bromoform	**<334**	ug/kg	379	334	1	01/12/22 09:00	01/12/22 17:23	75-25-2	
Bromomethane	**<106**	ug/kg	379	106	1	01/12/22 09:00	01/12/22 17:23	74-83-9	
n-Butylbenzene	**<34.7**	ug/kg	75.9	34.7	1	01/12/22 09:00	01/12/22 17:23	104-51-8	
sec-Butylbenzene	**<18.5**	ug/kg	75.9	18.5	1	01/12/22 09:00	01/12/22 17:23	135-98-8	
tert-Butylbenzene	**<23.8**	ug/kg	75.9	23.8	1	01/12/22 09:00	01/12/22 17:23	98-06-6	
Carbon tetrachloride	**<16.7**	ug/kg	75.9	16.7	1	01/12/22 09:00	01/12/22 17:23	56-23-5	
Chlorobenzene	**<9.1**	ug/kg	75.9	9.1	1	01/12/22 09:00	01/12/22 17:23	108-90-7	
Chloroethane	**<32.0**	ug/kg	379	32.0	1	01/12/22 09:00	01/12/22 17:23	75-00-3	
Chloroform	**<54.3**	ug/kg	379	54.3	1	01/12/22 09:00	01/12/22 17:23	67-66-3	
Chloromethane	**<28.8**	ug/kg	75.9	28.8	1	01/12/22 09:00	01/12/22 17:23	74-87-3	
2-Chlorotoluene	**<24.6**	ug/kg	75.9	24.6	1	01/12/22 09:00	01/12/22 17:23	95-49-8	
4-Chlorotoluene	**<28.8**	ug/kg	75.9	28.8	1	01/12/22 09:00	01/12/22 17:23	106-43-4	
1,2-Dibromo-3-chloropropane	**<58.9**	ug/kg	379	58.9	1	01/12/22 09:00	01/12/22 17:23	96-12-8	L1
Dibromochloromethane	**<259**	ug/kg	379	259	1	01/12/22 09:00	01/12/22 17:23	124-48-1	
1,2-Dibromoethane (EDB)	**<20.8**	ug/kg	75.9	20.8	1	01/12/22 09:00	01/12/22 17:23	106-93-4	
Dibromomethane	**<22.5**	ug/kg	75.9	22.5	1	01/12/22 09:00	01/12/22 17:23	74-95-3	
1,2-Dichlorobenzene	**<23.5**	ug/kg	75.9	23.5	1	01/12/22 09:00	01/12/22 17:23	95-50-1	
1,3-Dichlorobenzene	**<20.8**	ug/kg	75.9	20.8	1	01/12/22 09:00	01/12/22 17:23	541-73-1	
1,4-Dichlorobenzene	**<20.8**	ug/kg	75.9	20.8	1	01/12/22 09:00	01/12/22 17:23	106-46-7	
Dichlorodifluoromethane	**<32.6**	ug/kg	75.9	32.6	1	01/12/22 09:00	01/12/22 17:23	75-71-8	
1,1-Dichloroethane	**<19.4**	ug/kg	75.9	19.4	1	01/12/22 09:00	01/12/22 17:23	75-34-3	
1,2-Dichloroethane	**<17.4**	ug/kg	75.9	17.4	1	01/12/22 09:00	01/12/22 17:23	107-06-2	
1,1-Dichloroethene	**<25.2**	ug/kg	75.9	25.2	1	01/12/22 09:00	01/12/22 17:23	75-35-4	
cis-1,2-Dichloroethene	**247**	ug/kg	75.9	16.2	1	01/12/22 09:00	01/12/22 17:23	156-59-2	
trans-1,2-Dichloroethene	**48.9J**	ug/kg	75.9	16.4	1	01/12/22 09:00	01/12/22 17:23	156-60-5	
1,2-Dichloropropane	**<18.1**	ug/kg	75.9	18.1	1	01/12/22 09:00	01/12/22 17:23	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-22 (6-8') **Lab ID: 40239263006** Collected: 01/09/22 12:35 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<16.5**	ug/kg	75.9	16.5	1	01/12/22 09:00	01/12/22 17:23	142-28-9	
2,2-Dichloropropane	**<20.5**	ug/kg	75.9	20.5	1	01/12/22 09:00	01/12/22 17:23	594-20-7	
1,1-Dichloropropene	**<24.6**	ug/kg	75.9	24.6	1	01/12/22 09:00	01/12/22 17:23	563-58-6	
cis-1,3-Dichloropropene	**<50.1**	ug/kg	379	50.1	1	01/12/22 09:00	01/12/22 17:23	10061-01-5	
trans-1,3-Dichloropropene	**<217**	ug/kg	379	217	1	01/12/22 09:00	01/12/22 17:23	10061-02-6	
Diisopropyl ether	**<18.8**	ug/kg	75.9	18.8	1	01/12/22 09:00	01/12/22 17:23	108-20-3	
Ethylbenzene	**<18.1**	ug/kg	75.9	18.1	1	01/12/22 09:00	01/12/22 17:23	100-41-4	
Hexachloro-1,3-butadiene	**<151**	ug/kg	379	151	1	01/12/22 09:00	01/12/22 17:23	87-68-3	
Isopropylbenzene (Cumene)	**<20.5**	ug/kg	75.9	20.5	1	01/12/22 09:00	01/12/22 17:23	98-82-8	
p-Isopropyltoluene	**<23.1**	ug/kg	75.9	23.1	1	01/12/22 09:00	01/12/22 17:23	99-87-6	
Methylene Chloride	**<21.1**	ug/kg	75.9	21.1	1	01/12/22 09:00	01/12/22 17:23	75-09-2	
Methyl-tert-butyl ether	**<22.3**	ug/kg	75.9	22.3	1	01/12/22 09:00	01/12/22 17:23	1634-04-4	
Naphthalene	**<23.7**	ug/kg	379	23.7	1	01/12/22 09:00	01/12/22 17:23	91-20-3	
n-Propylbenzene	**<18.2**	ug/kg	75.9	18.2	1	01/12/22 09:00	01/12/22 17:23	103-65-1	
Styrene	**<19.4**	ug/kg	75.9	19.4	1	01/12/22 09:00	01/12/22 17:23	100-42-5	
1,1,1,2-Tetrachloroethane	**<18.2**	ug/kg	75.9	18.2	1	01/12/22 09:00	01/12/22 17:23	630-20-6	
1,1,2,2-Tetrachloroethane	**<27.5**	ug/kg	75.9	27.5	1	01/12/22 09:00	01/12/22 17:23	79-34-5	
Tetrachloroethene	**<29.4**	ug/kg	75.9	29.4	1	01/12/22 09:00	01/12/22 17:23	127-18-4	
Toluene	**<19.1**	ug/kg	75.9	19.1	1	01/12/22 09:00	01/12/22 17:23	108-88-3	
1,2,3-Trichlorobenzene	**<84.5**	ug/kg	379	84.5	1	01/12/22 09:00	01/12/22 17:23	87-61-6	
1,2,4-Trichlorobenzene	**<62.5**	ug/kg	379	62.5	1	01/12/22 09:00	01/12/22 17:23	120-82-1	
1,1,1-Trichloroethane	**<19.4**	ug/kg	75.9	19.4	1	01/12/22 09:00	01/12/22 17:23	71-55-6	
1,1,2-Trichloroethane	**<27.6**	ug/kg	75.9	27.6	1	01/12/22 09:00	01/12/22 17:23	79-00-5	
Trichloroethene	**253**	ug/kg	75.9	28.4	1	01/12/22 09:00	01/12/22 17:23	79-01-6	
Trichlorofluoromethane	**<22.0**	ug/kg	75.9	22.0	1	01/12/22 09:00	01/12/22 17:23	75-69-4	
1,2,3-Trichloropropane	**<36.9**	ug/kg	75.9	36.9	1	01/12/22 09:00	01/12/22 17:23	96-18-4	
1,2,4-Trimethylbenzene	**<22.6**	ug/kg	75.9	22.6	1	01/12/22 09:00	01/12/22 17:23	95-63-6	
1,3,5-Trimethylbenzene	**<24.4**	ug/kg	75.9	24.4	1	01/12/22 09:00	01/12/22 17:23	108-67-8	
Vinyl chloride	**274**	ug/kg	75.9	15.3	1	01/12/22 09:00	01/12/22 17:23	75-01-4	
m&p-Xylene	**<32.0**	ug/kg	152	32.0	1	01/12/22 09:00	01/12/22 17:23	179601-23-1	
o-Xylene	**<22.8**	ug/kg	75.9	22.8	1	01/12/22 09:00	01/12/22 17:23	95-47-6	
Surrogates									
Toluene-d8 (S)	130	%	67-159		1	01/12/22 09:00	01/12/22 17:23	2037-26-5	
4-Bromofluorobenzene (S)	119	%	66-153		1	01/12/22 09:00	01/12/22 17:23	460-00-4	
1,2-Dichlorobenzene-d4 (S)	128	%	82-158		1	01/12/22 09:00	01/12/22 17:23	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**20.6**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-23 (0-4') **Lab ID: 40239263007** Collected: 01/09/22 13:40 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**<1.7**	mg/kg	2.9	1.7	1	01/12/22 06:19	01/12/22 19:08	7440-38-2	
Barium	**13.6**	mg/kg	0.59	0.18	1	01/12/22 06:19	01/12/22 19:08	7440-39-3	
Cadmium	**0.58J**	mg/kg	0.59	0.16	1	01/12/22 06:19	01/12/22 19:08	7440-43-9	
Chromium	**24.4**	mg/kg	1.2	0.33	1	01/12/22 06:19	01/12/22 19:08	7440-47-3	
Lead	**4.8**	mg/kg	2.3	0.70	1	01/12/22 06:19	01/12/22 19:08	7439-92-1	
Selenium	**<1.5**	mg/kg	4.7	1.5	1	01/12/22 06:19	01/12/22 19:08	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	01/12/22 06:19	01/12/22 19:08	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.030J**	mg/kg	0.039	0.011	1	01/13/22 09:28	01/13/22 13:11	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<17.7**	ug/kg	29.7	17.7	1	01/12/22 09:00	01/12/22 17:43	71-43-2	
Bromobenzene	**<29.0**	ug/kg	74.3	29.0	1	01/12/22 09:00	01/12/22 17:43	108-86-1	
Bromochloromethane	**<20.4**	ug/kg	74.3	20.4	1	01/12/22 09:00	01/12/22 17:43	74-97-5	
Bromodichloromethane	**<17.7**	ug/kg	74.3	17.7	1	01/12/22 09:00	01/12/22 17:43	75-27-4	
Bromoform	**<327**	ug/kg	372	327	1	01/12/22 09:00	01/12/22 17:43	75-25-2	
Bromomethane	**<104**	ug/kg	372	104	1	01/12/22 09:00	01/12/22 17:43	74-83-9	
n-Butylbenzene	**<34.0**	ug/kg	74.3	34.0	1	01/12/22 09:00	01/12/22 17:43	104-51-8	
sec-Butylbenzene	**<18.1**	ug/kg	74.3	18.1	1	01/12/22 09:00	01/12/22 17:43	135-98-8	
tert-Butylbenzene	**<23.3**	ug/kg	74.3	23.3	1	01/12/22 09:00	01/12/22 17:43	98-06-6	
Carbon tetrachloride	**<16.4**	ug/kg	74.3	16.4	1	01/12/22 09:00	01/12/22 17:43	56-23-5	
Chlorobenzene	**<8.9**	ug/kg	74.3	8.9	1	01/12/22 09:00	01/12/22 17:43	108-90-7	
Chloroethane	**<31.4**	ug/kg	372	31.4	1	01/12/22 09:00	01/12/22 17:43	75-00-3	
Chloroform	**<53.2**	ug/kg	372	53.2	1	01/12/22 09:00	01/12/22 17:43	67-66-3	
Chloromethane	**<28.2**	ug/kg	74.3	28.2	1	01/12/22 09:00	01/12/22 17:43	74-87-3	
2-Chlorotoluene	**<24.1**	ug/kg	74.3	24.1	1	01/12/22 09:00	01/12/22 17:43	95-49-8	
4-Chlorotoluene	**<28.2**	ug/kg	74.3	28.2	1	01/12/22 09:00	01/12/22 17:43	106-43-4	
1,2-Dibromo-3-chloropropane	**<57.7**	ug/kg	372	57.7	1	01/12/22 09:00	01/12/22 17:43	96-12-8	L1
Dibromochloromethane	**<254**	ug/kg	372	254	1	01/12/22 09:00	01/12/22 17:43	124-48-1	
1,2-Dibromoethane (EDB)	**<20.4**	ug/kg	74.3	20.4	1	01/12/22 09:00	01/12/22 17:43	106-93-4	
Dibromomethane	**<22.0**	ug/kg	74.3	22.0	1	01/12/22 09:00	01/12/22 17:43	74-95-3	
1,2-Dichlorobenzene	**<23.0**	ug/kg	74.3	23.0	1	01/12/22 09:00	01/12/22 17:43	95-50-1	
1,3-Dichlorobenzene	**<20.4**	ug/kg	74.3	20.4	1	01/12/22 09:00	01/12/22 17:43	541-73-1	
1,4-Dichlorobenzene	**<20.4**	ug/kg	74.3	20.4	1	01/12/22 09:00	01/12/22 17:43	106-46-7	
Dichlorodifluoromethane	**<32.0**	ug/kg	74.3	32.0	1	01/12/22 09:00	01/12/22 17:43	75-71-8	
1,1-Dichloroethane	**<19.0**	ug/kg	74.3	19.0	1	01/12/22 09:00	01/12/22 17:43	75-34-3	
1,2-Dichloroethane	**<17.1**	ug/kg	74.3	17.1	1	01/12/22 09:00	01/12/22 17:43	107-06-2	
1,1-Dichloroethene	**<24.7**	ug/kg	74.3	24.7	1	01/12/22 09:00	01/12/22 17:43	75-35-4	
cis-1,2-Dichloroethene	**18.8J**	ug/kg	74.3	15.9	1	01/12/22 09:00	01/12/22 17:43	156-59-2	
trans-1,2-Dichloroethene	**<16.1**	ug/kg	74.3	16.1	1	01/12/22 09:00	01/12/22 17:43	156-60-5	
1,2-Dichloropropane	**<17.7**	ug/kg	74.3	17.7	1	01/12/22 09:00	01/12/22 17:43	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-23 (0-4') **Lab ID: 40239263007** Collected: 01/09/22 13:40 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<16.2**	ug/kg	74.3	16.2	1	01/12/22 09:00	01/12/22 17:43	142-28-9	
2,2-Dichloropropane	**<20.1**	ug/kg	74.3	20.1	1	01/12/22 09:00	01/12/22 17:43	594-20-7	
1,1-Dichloropropene	**<24.1**	ug/kg	74.3	24.1	1	01/12/22 09:00	01/12/22 17:43	563-58-6	
cis-1,3-Dichloropropene	**<49.1**	ug/kg	372	49.1	1	01/12/22 09:00	01/12/22 17:43	10061-01-5	
trans-1,3-Dichloropropene	**<213**	ug/kg	372	213	1	01/12/22 09:00	01/12/22 17:43	10061-02-6	
Diisopropyl ether	**<18.4**	ug/kg	74.3	18.4	1	01/12/22 09:00	01/12/22 17:43	108-20-3	
Ethylbenzene	**<17.7**	ug/kg	74.3	17.7	1	01/12/22 09:00	01/12/22 17:43	100-41-4	
Hexachloro-1,3-butadiene	**<148**	ug/kg	372	148	1	01/12/22 09:00	01/12/22 17:43	87-68-3	
Isopropylbenzene (Cumene)	**<20.1**	ug/kg	74.3	20.1	1	01/12/22 09:00	01/12/22 17:43	98-82-8	
p-Isopropyltoluene	**<22.6**	ug/kg	74.3	22.6	1	01/12/22 09:00	01/12/22 17:43	99-87-6	
Methylene Chloride	**<20.7**	ug/kg	74.3	20.7	1	01/12/22 09:00	01/12/22 17:43	75-09-2	
Methyl-tert-butyl ether	**<21.9**	ug/kg	74.3	21.9	1	01/12/22 09:00	01/12/22 17:43	1634-04-4	
Naphthalene	**<23.2**	ug/kg	372	23.2	1	01/12/22 09:00	01/12/22 17:43	91-20-3	
n-Propylbenzene	**<17.8**	ug/kg	74.3	17.8	1	01/12/22 09:00	01/12/22 17:43	103-65-1	
Styrene	**<19.0**	ug/kg	74.3	19.0	1	01/12/22 09:00	01/12/22 17:43	100-42-5	
1,1,1,2-Tetrachloroethane	**<17.8**	ug/kg	74.3	17.8	1	01/12/22 09:00	01/12/22 17:43	630-20-6	
1,1,2,2-Tetrachloroethane	**<26.9**	ug/kg	74.3	26.9	1	01/12/22 09:00	01/12/22 17:43	79-34-5	
Tetrachloroethene	**<28.8**	ug/kg	74.3	28.8	1	01/12/22 09:00	01/12/22 17:43	127-18-4	
Toluene	**<18.7**	ug/kg	74.3	18.7	1	01/12/22 09:00	01/12/22 17:43	108-88-3	
1,2,3-Trichlorobenzene	**<82.8**	ug/kg	372	82.8	1	01/12/22 09:00	01/12/22 17:43	87-61-6	
1,2,4-Trichlorobenzene	**<61.3**	ug/kg	372	61.3	1	01/12/22 09:00	01/12/22 17:43	120-82-1	
1,1,1-Trichloroethane	**<19.0**	ug/kg	74.3	19.0	1	01/12/22 09:00	01/12/22 17:43	71-55-6	
1,1,2-Trichloroethane	**<27.1**	ug/kg	74.3	27.1	1	01/12/22 09:00	01/12/22 17:43	79-00-5	
Trichloroethene	**35.3J**	ug/kg	74.3	27.8	1	01/12/22 09:00	01/12/22 17:43	79-01-6	
Trichlorofluoromethane	**<21.6**	ug/kg	74.3	21.6	1	01/12/22 09:00	01/12/22 17:43	75-69-4	
1,2,3-Trichloropropane	**<36.1**	ug/kg	74.3	36.1	1	01/12/22 09:00	01/12/22 17:43	96-18-4	
1,2,4-Trimethylbenzene	**<22.2**	ug/kg	74.3	22.2	1	01/12/22 09:00	01/12/22 17:43	95-63-6	
1,3,5-Trimethylbenzene	**<23.9**	ug/kg	74.3	23.9	1	01/12/22 09:00	01/12/22 17:43	108-67-8	
Vinyl chloride	**59.1J**	ug/kg	74.3	15.0	1	01/12/22 09:00	01/12/22 17:43	75-01-4	
m&p-Xylene	**<31.4**	ug/kg	149	31.4	1	01/12/22 09:00	01/12/22 17:43	179601-23-1	
o-Xylene	**<22.3**	ug/kg	74.3	22.3	1	01/12/22 09:00	01/12/22 17:43	95-47-6	
Surrogates									
Toluene-d8 (S)	133	%	67-159		1	01/12/22 09:00	01/12/22 17:43	2037-26-5	
4-Bromofluorobenzene (S)	122	%	66-153		1	01/12/22 09:00	01/12/22 17:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	131	%	82-158		1	01/12/22 09:00	01/12/22 17:43	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**19.6**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-23 (6-8') **Lab ID: 40239263008** Collected: 01/09/22 13:50 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**2.4J**	mg/kg	2.9	1.7	1	01/12/22 06:19	01/12/22 19:11	7440-38-2	
Barium	**61.0**	mg/kg	0.58	0.17	1	01/12/22 06:19	01/12/22 19:11	7440-39-3	
Cadmium	**0.78**	mg/kg	0.58	0.15	1	01/12/22 06:19	01/12/22 19:11	7440-43-9	
Chromium	**37.6**	mg/kg	1.2	0.32	1	01/12/22 06:19	01/12/22 19:11	7440-47-3	
Lead	**6.2**	mg/kg	2.3	0.70	1	01/12/22 06:19	01/12/22 19:11	7439-92-1	
Selenium	**<1.5**	mg/kg	4.7	1.5	1	01/12/22 06:19	01/12/22 19:11	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	01/12/22 06:19	01/12/22 19:11	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**<0.011**	mg/kg	0.039	0.011	1	01/13/22 09:28	01/13/22 13:13	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<15.9**	ug/kg	26.6	15.9	1	01/12/22 09:00	01/12/22 18:03	71-43-2	
Bromobenzene	**<26.0**	ug/kg	66.6	26.0	1	01/12/22 09:00	01/12/22 18:03	108-86-1	
Bromochloromethane	**<18.3**	ug/kg	66.6	18.3	1	01/12/22 09:00	01/12/22 18:03	74-97-5	
Bromodichloromethane	**<15.9**	ug/kg	66.6	15.9	1	01/12/22 09:00	01/12/22 18:03	75-27-4	
Bromoform	**<293**	ug/kg	333	293	1	01/12/22 09:00	01/12/22 18:03	75-25-2	
Bromomethane	**<93.4**	ug/kg	333	93.4	1	01/12/22 09:00	01/12/22 18:03	74-83-9	
n-Butylbenzene	**<30.5**	ug/kg	66.6	30.5	1	01/12/22 09:00	01/12/22 18:03	104-51-8	
sec-Butylbenzene	**<16.3**	ug/kg	66.6	16.3	1	01/12/22 09:00	01/12/22 18:03	135-98-8	
tert-Butylbenzene	**<20.9**	ug/kg	66.6	20.9	1	01/12/22 09:00	01/12/22 18:03	98-06-6	
Carbon tetrachloride	**<14.7**	ug/kg	66.6	14.7	1	01/12/22 09:00	01/12/22 18:03	56-23-5	
Chlorobenzene	**<8.0**	ug/kg	66.6	8.0	1	01/12/22 09:00	01/12/22 18:03	108-90-7	
Chloroethane	**<28.1**	ug/kg	333	28.1	1	01/12/22 09:00	01/12/22 18:03	75-00-3	
Chloroform	**<47.7**	ug/kg	333	47.7	1	01/12/22 09:00	01/12/22 18:03	67-66-3	
Chloromethane	**<25.3**	ug/kg	66.6	25.3	1	01/12/22 09:00	01/12/22 18:03	74-87-3	
2-Chlorotoluene	**<21.6**	ug/kg	66.6	21.6	1	01/12/22 09:00	01/12/22 18:03	95-49-8	
4-Chlorotoluene	**<25.3**	ug/kg	66.6	25.3	1	01/12/22 09:00	01/12/22 18:03	106-43-4	
1,2-Dibromo-3-chloropropane	**<51.7**	ug/kg	333	51.7	1	01/12/22 09:00	01/12/22 18:03	96-12-8	L1
Dibromochloromethane	**<228**	ug/kg	333	228	1	01/12/22 09:00	01/12/22 18:03	124-48-1	
1,2-Dibromoethane (EDB)	**<18.3**	ug/kg	66.6	18.3	1	01/12/22 09:00	01/12/22 18:03	106-93-4	
Dibromomethane	**<19.7**	ug/kg	66.6	19.7	1	01/12/22 09:00	01/12/22 18:03	74-95-3	
1,2-Dichlorobenzene	**<20.7**	ug/kg	66.6	20.7	1	01/12/22 09:00	01/12/22 18:03	95-50-1	
1,3-Dichlorobenzene	**<18.3**	ug/kg	66.6	18.3	1	01/12/22 09:00	01/12/22 18:03	541-73-1	
1,4-Dichlorobenzene	**<18.3**	ug/kg	66.6	18.3	1	01/12/22 09:00	01/12/22 18:03	106-46-7	
Dichlorodifluoromethane	**56.8J**	ug/kg	66.6	28.6	1	01/12/22 09:00	01/12/22 18:03	75-71-8	
1,1-Dichloroethane	**<17.1**	ug/kg	66.6	17.1	1	01/12/22 09:00	01/12/22 18:03	75-34-3	
1,2-Dichloroethane	**<15.3**	ug/kg	66.6	15.3	1	01/12/22 09:00	01/12/22 18:03	107-06-2	
1,1-Dichloroethene	**32.9J**	ug/kg	66.6	22.1	1	01/12/22 09:00	01/12/22 18:03	75-35-4	
cis-1,2-Dichloroethene	**444**	ug/kg	66.6	14.3	1	01/12/22 09:00	01/12/22 18:03	156-59-2	
trans-1,2-Dichloroethene	**31.9J**	ug/kg	66.6	14.4	1	01/12/22 09:00	01/12/22 18:03	156-60-5	
1,2-Dichloropropane	**<15.9**	ug/kg	66.6	15.9	1	01/12/22 09:00	01/12/22 18:03	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-23 (6-8') **Lab ID: 40239263008** Collected: 01/09/22 13:50 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<14.5**	ug/kg	66.6	14.5	1	01/12/22 09:00	01/12/22 18:03	142-28-9	
2,2-Dichloropropane	**<18.0**	ug/kg	66.6	18.0	1	01/12/22 09:00	01/12/22 18:03	594-20-7	
1,1-Dichloropropene	**<21.6**	ug/kg	66.6	21.6	1	01/12/22 09:00	01/12/22 18:03	563-58-6	
cis-1,3-Dichloropropene	**<44.0**	ug/kg	333	44.0	1	01/12/22 09:00	01/12/22 18:03	10061-01-5	
trans-1,3-Dichloropropene	**<191**	ug/kg	333	191	1	01/12/22 09:00	01/12/22 18:03	10061-02-6	
Diisopropyl ether	**<16.5**	ug/kg	66.6	16.5	1	01/12/22 09:00	01/12/22 18:03	108-20-3	
Ethylbenzene	**<15.9**	ug/kg	66.6	15.9	1	01/12/22 09:00	01/12/22 18:03	100-41-4	
Hexachloro-1,3-butadiene	**<132**	ug/kg	333	132	1	01/12/22 09:00	01/12/22 18:03	87-68-3	
Isopropylbenzene (Cumene)	**<18.0**	ug/kg	66.6	18.0	1	01/12/22 09:00	01/12/22 18:03	98-82-8	
p-Isopropyltoluene	**<20.3**	ug/kg	66.6	20.3	1	01/12/22 09:00	01/12/22 18:03	99-87-6	
Methylene Chloride	**<18.5**	ug/kg	66.6	18.5	1	01/12/22 09:00	01/12/22 18:03	75-09-2	
Methyl-tert-butyl ether	**<19.6**	ug/kg	66.6	19.6	1	01/12/22 09:00	01/12/22 18:03	1634-04-4	
Naphthalene	**<20.8**	ug/kg	333	20.8	1	01/12/22 09:00	01/12/22 18:03	91-20-3	
n-Propylbenzene	**<16.0**	ug/kg	66.6	16.0	1	01/12/22 09:00	01/12/22 18:03	103-65-1	
Styrene	**<17.1**	ug/kg	66.6	17.1	1	01/12/22 09:00	01/12/22 18:03	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.0**	ug/kg	66.6	16.0	1	01/12/22 09:00	01/12/22 18:03	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.1**	ug/kg	66.6	24.1	1	01/12/22 09:00	01/12/22 18:03	79-34-5	
Tetrachloroethene	**<25.9**	ug/kg	66.6	25.9	1	01/12/22 09:00	01/12/22 18:03	127-18-4	
Toluene	**<16.8**	ug/kg	66.6	16.8	1	01/12/22 09:00	01/12/22 18:03	108-88-3	
1,2,3-Trichlorobenzene	**<74.2**	ug/kg	333	74.2	1	01/12/22 09:00	01/12/22 18:03	87-61-6	
1,2,4-Trichlorobenzene	**<54.9**	ug/kg	333	54.9	1	01/12/22 09:00	01/12/22 18:03	120-82-1	
1,1,1-Trichloroethane	**<17.1**	ug/kg	66.6	17.1	1	01/12/22 09:00	01/12/22 18:03	71-55-6	
1,1,2-Trichloroethane	**<24.3**	ug/kg	66.6	24.3	1	01/12/22 09:00	01/12/22 18:03	79-00-5	
Trichloroethene	**4700**	ug/kg	66.6	24.9	1	01/12/22 09:00	01/12/22 18:03	79-01-6	
Trichlorofluoromethane	**<19.3**	ug/kg	66.6	19.3	1	01/12/22 09:00	01/12/22 18:03	75-69-4	
1,2,3-Trichloropropane	**<32.4**	ug/kg	66.6	32.4	1	01/12/22 09:00	01/12/22 18:03	96-18-4	
1,2,4-Trimethylbenzene	**<19.9**	ug/kg	66.6	19.9	1	01/12/22 09:00	01/12/22 18:03	95-63-6	
1,3,5-Trimethylbenzene	**<21.5**	ug/kg	66.6	21.5	1	01/12/22 09:00	01/12/22 18:03	108-67-8	
Vinyl chloride	**77.3**	ug/kg	66.6	13.5	1	01/12/22 09:00	01/12/22 18:03	75-01-4	
m&p-Xylene	**<28.1**	ug/kg	133	28.1	1	01/12/22 09:00	01/12/22 18:03	179601-23-1	
o-Xylene	**<20.0**	ug/kg	66.6	20.0	1	01/12/22 09:00	01/12/22 18:03	95-47-6	
Surrogates									
Toluene-d8 (S)	111	%	67-159		1	01/12/22 09:00	01/12/22 18:03	2037-26-5	
4-Bromofluorobenzene (S)	100	%	66-153		1	01/12/22 09:00	01/12/22 18:03	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	82-158		1	01/12/22 09:00	01/12/22 18:03	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**14.3**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-24 (0-4') **Lab ID: 40239263009** Collected: 01/09/22 14:55 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**2.9J**	mg/kg	3.0	1.7	1	01/12/22 06:19	01/12/22 19:13	7440-38-2	
Barium	**9.9**	mg/kg	0.59	0.18	1	01/12/22 06:19	01/12/22 19:13	7440-39-3	
Cadmium	**<0.16**	mg/kg	0.59	0.16	1	01/12/22 06:19	01/12/22 19:13	7440-43-9	
Chromium	**8.4**	mg/kg	1.2	0.33	1	01/12/22 06:19	01/12/22 19:13	7440-47-3	
Lead	**2.1J**	mg/kg	2.4	0.71	1	01/12/22 06:19	01/12/22 19:13	7439-92-1	
Selenium	**<1.6**	mg/kg	4.7	1.6	1	01/12/22 06:19	01/12/22 19:13	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	01/12/22 06:19	01/12/22 19:13	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**<0.011**	mg/kg	0.038	0.011	1	01/13/22 09:28	01/13/22 13:20	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<16.4**	ug/kg	27.6	16.4	1	01/12/22 09:00	01/12/22 18:24	71-43-2	
Bromobenzene	**<26.9**	ug/kg	68.9	26.9	1	01/12/22 09:00	01/12/22 18:24	108-86-1	
Bromochloromethane	**<18.9**	ug/kg	68.9	18.9	1	01/12/22 09:00	01/12/22 18:24	74-97-5	
Bromodichloromethane	**<16.4**	ug/kg	68.9	16.4	1	01/12/22 09:00	01/12/22 18:24	75-27-4	
Bromoform	**<303**	ug/kg	344	303	1	01/12/22 09:00	01/12/22 18:24	75-25-2	
Bromomethane	**<96.6**	ug/kg	344	96.6	1	01/12/22 09:00	01/12/22 18:24	74-83-9	
n-Butylbenzene	**<31.6**	ug/kg	68.9	31.6	1	01/12/22 09:00	01/12/22 18:24	104-51-8	
sec-Butylbenzene	**<16.8**	ug/kg	68.9	16.8	1	01/12/22 09:00	01/12/22 18:24	135-98-8	
tert-Butylbenzene	**<21.6**	ug/kg	68.9	21.6	1	01/12/22 09:00	01/12/22 18:24	98-06-6	
Carbon tetrachloride	**<15.2**	ug/kg	68.9	15.2	1	01/12/22 09:00	01/12/22 18:24	56-23-5	
Chlorobenzene	**<8.3**	ug/kg	68.9	8.3	1	01/12/22 09:00	01/12/22 18:24	108-90-7	
Chloroethane	**<29.1**	ug/kg	344	29.1	1	01/12/22 09:00	01/12/22 18:24	75-00-3	
Chloroform	**<49.3**	ug/kg	344	49.3	1	01/12/22 09:00	01/12/22 18:24	67-66-3	
Chloromethane	**<26.2**	ug/kg	68.9	26.2	1	01/12/22 09:00	01/12/22 18:24	74-87-3	
2-Chlorotoluene	**<22.3**	ug/kg	68.9	22.3	1	01/12/22 09:00	01/12/22 18:24	95-49-8	
4-Chlorotoluene	**<26.2**	ug/kg	68.9	26.2	1	01/12/22 09:00	01/12/22 18:24	106-43-4	
1,2-Dibromo-3-chloropropane	**<53.5**	ug/kg	344	53.5	1	01/12/22 09:00	01/12/22 18:24	96-12-8	L1
Dibromochloromethane	**<235**	ug/kg	344	235	1	01/12/22 09:00	01/12/22 18:24	124-48-1	
1,2-Dibromoethane (EDB)	**<18.9**	ug/kg	68.9	18.9	1	01/12/22 09:00	01/12/22 18:24	106-93-4	
Dibromomethane	**<20.4**	ug/kg	68.9	20.4	1	01/12/22 09:00	01/12/22 18:24	74-95-3	
1,2-Dichlorobenzene	**<21.4**	ug/kg	68.9	21.4	1	01/12/22 09:00	01/12/22 18:24	95-50-1	
1,3-Dichlorobenzene	**<18.9**	ug/kg	68.9	18.9	1	01/12/22 09:00	01/12/22 18:24	541-73-1	
1,4-Dichlorobenzene	**<18.9**	ug/kg	68.9	18.9	1	01/12/22 09:00	01/12/22 18:24	106-46-7	
Dichlorodifluoromethane	**<29.6**	ug/kg	68.9	29.6	1	01/12/22 09:00	01/12/22 18:24	75-71-8	
1,1-Dichloroethane	**<17.6**	ug/kg	68.9	17.6	1	01/12/22 09:00	01/12/22 18:24	75-34-3	
1,2-Dichloroethane	**<15.8**	ug/kg	68.9	15.8	1	01/12/22 09:00	01/12/22 18:24	107-06-2	
1,1-Dichloroethene	**<22.9**	ug/kg	68.9	22.9	1	01/12/22 09:00	01/12/22 18:24	75-35-4	
cis-1,2-Dichloroethene	**<14.7**	ug/kg	68.9	14.7	1	01/12/22 09:00	01/12/22 18:24	156-59-2	
trans-1,2-Dichloroethene	**<14.9**	ug/kg	68.9	14.9	1	01/12/22 09:00	01/12/22 18:24	156-60-5	
1,2-Dichloropropane	**<16.4**	ug/kg	68.9	16.4	1	01/12/22 09:00	01/12/22 18:24	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-24 (0-4') **Lab ID: 40239263009** Collected: 01/09/22 14:55 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<15.0**	ug/kg	68.9	15.0	1	01/12/22 09:00	01/12/22 18:24	142-28-9	
2,2-Dichloropropane	**<18.6**	ug/kg	68.9	18.6	1	01/12/22 09:00	01/12/22 18:24	594-20-7	
1,1-Dichloropropene	**<22.3**	ug/kg	68.9	22.3	1	01/12/22 09:00	01/12/22 18:24	563-58-6	
cis-1,3-Dichloropropene	**<45.5**	ug/kg	344	45.5	1	01/12/22 09:00	01/12/22 18:24	10061-01-5	
trans-1,3-Dichloropropene	**<197**	ug/kg	344	197	1	01/12/22 09:00	01/12/22 18:24	10061-02-6	
Diisopropyl ether	**<17.1**	ug/kg	68.9	17.1	1	01/12/22 09:00	01/12/22 18:24	108-20-3	
Ethylbenzene	**<16.4**	ug/kg	68.9	16.4	1	01/12/22 09:00	01/12/22 18:24	100-41-4	
Hexachloro-1,3-butadiene	**<137**	ug/kg	344	137	1	01/12/22 09:00	01/12/22 18:24	87-68-3	
Isopropylbenzene (Cumene)	**<18.6**	ug/kg	68.9	18.6	1	01/12/22 09:00	01/12/22 18:24	98-82-8	
p-Isopropyltoluene	**<20.9**	ug/kg	68.9	20.9	1	01/12/22 09:00	01/12/22 18:24	99-87-6	
Methylene Chloride	**<19.2**	ug/kg	68.9	19.2	1	01/12/22 09:00	01/12/22 18:24	75-09-2	
Methyl-tert-butyl ether	**<20.3**	ug/kg	68.9	20.3	1	01/12/22 09:00	01/12/22 18:24	1634-04-4	
Naphthalene	**<21.5**	ug/kg	344	21.5	1	01/12/22 09:00	01/12/22 18:24	91-20-3	
n-Propylbenzene	**<16.5**	ug/kg	68.9	16.5	1	01/12/22 09:00	01/12/22 18:24	103-65-1	
Styrene	**<17.6**	ug/kg	68.9	17.6	1	01/12/22 09:00	01/12/22 18:24	100-42-5	
1,1,1,2-Tetrachloroethane	**<16.5**	ug/kg	68.9	16.5	1	01/12/22 09:00	01/12/22 18:24	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.9**	ug/kg	68.9	24.9	1	01/12/22 09:00	01/12/22 18:24	79-34-5	
Tetrachloroethene	**<26.7**	ug/kg	68.9	26.7	1	01/12/22 09:00	01/12/22 18:24	127-18-4	
Toluene	**<17.4**	ug/kg	68.9	17.4	1	01/12/22 09:00	01/12/22 18:24	108-88-3	
1,2,3-Trichlorobenzene	**<76.7**	ug/kg	344	76.7	1	01/12/22 09:00	01/12/22 18:24	87-61-6	
1,2,4-Trichlorobenzene	**<56.8**	ug/kg	344	56.8	1	01/12/22 09:00	01/12/22 18:24	120-82-1	
1,1,1-Trichloroethane	**<17.6**	ug/kg	68.9	17.6	1	01/12/22 09:00	01/12/22 18:24	71-55-6	
1,1,2-Trichloroethane	**<25.1**	ug/kg	68.9	25.1	1	01/12/22 09:00	01/12/22 18:24	79-00-5	
Trichloroethene	**<25.8**	ug/kg	68.9	25.8	1	01/12/22 09:00	01/13/22 10:15	79-01-6	
Trichlorofluoromethane	**<20.0**	ug/kg	68.9	20.0	1	01/12/22 09:00	01/12/22 18:24	75-69-4	
1,2,3-Trichloropropane	**<33.5**	ug/kg	68.9	33.5	1	01/12/22 09:00	01/12/22 18:24	96-18-4	
1,2,4-Trimethylbenzene	**<20.5**	ug/kg	68.9	20.5	1	01/12/22 09:00	01/12/22 18:24	95-63-6	
1,3,5-Trimethylbenzene	**<22.2**	ug/kg	68.9	22.2	1	01/12/22 09:00	01/12/22 18:24	108-67-8	
Vinyl chloride	**<13.9**	ug/kg	68.9	13.9	1	01/12/22 09:00	01/12/22 18:24	75-01-4	
m&p-Xylene	**<29.1**	ug/kg	138	29.1	1	01/12/22 09:00	01/12/22 18:24	179601-23-1	
o-Xylene	**<20.7**	ug/kg	68.9	20.7	1	01/12/22 09:00	01/12/22 18:24	95-47-6	
Surrogates									
Toluene-d8 (S)	124	%	67-159		1	01/12/22 09:00	01/12/22 18:24	2037-26-5	
4-Bromofluorobenzene (S)	108	%	66-153		1	01/12/22 09:00	01/12/22 18:24	460-00-4	
1,2-Dichlorobenzene-d4 (S)	125	%	82-158		1	01/12/22 09:00	01/12/22 18:24	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**15.9**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-24 (6-8') **Lab ID: 40239263010** Collected: 01/09/22 15:05 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**4.8**	mg/kg	3.2	1.9	1	01/12/22 06:19	01/12/22 19:16	7440-38-2	
Barium	**75.5**	mg/kg	0.64	0.19	1	01/12/22 06:19	01/12/22 19:16	7440-39-3	
Cadmium	**0.32J**	mg/kg	0.64	0.17	1	01/12/22 06:19	01/12/22 19:16	7440-43-9	
Chromium	**31.4**	mg/kg	1.3	0.36	1	01/12/22 06:19	01/12/22 19:16	7440-47-3	
Lead	**8.4**	mg/kg	2.6	0.77	1	01/12/22 06:19	01/12/22 19:16	7439-92-1	
Selenium	**<1.7**	mg/kg	5.1	1.7	1	01/12/22 06:19	01/12/22 19:16	7782-49-2	
Silver	**<0.39**	mg/kg	1.3	0.39	1	01/12/22 06:19	01/12/22 19:16	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**<0.013**	mg/kg	0.045	0.013	1	01/13/22 09:28	01/13/22 13:23	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<377**	ug/kg	634	377	20	01/12/22 09:00	01/12/22 20:04	71-43-2	
Bromobenzene	**<618**	ug/kg	1590	618	20	01/12/22 09:00	01/12/22 20:04	108-86-1	
Bromochloromethane	**<434**	ug/kg	1590	434	20	01/12/22 09:00	01/12/22 20:04	74-97-5	
Bromodichloromethane	**<377**	ug/kg	1590	377	20	01/12/22 09:00	01/12/22 20:04	75-27-4	
Bromoform	**<6980**	ug/kg	7930	6980	20	01/12/22 09:00	01/12/22 20:04	75-25-2	
Bromomethane	**<2220**	ug/kg	7930	2220	20	01/12/22 09:00	01/12/22 20:04	74-83-9	
n-Butylbenzene	**<726**	ug/kg	1590	726	20	01/12/22 09:00	01/12/22 20:04	104-51-8	
sec-Butylbenzene	**<387**	ug/kg	1590	387	20	01/12/22 09:00	01/12/22 20:04	135-98-8	
tert-Butylbenzene	**<498**	ug/kg	1590	498	20	01/12/22 09:00	01/12/22 20:04	98-06-6	
Carbon tetrachloride	**<349**	ug/kg	1590	349	20	01/12/22 09:00	01/12/22 20:04	56-23-5	
Chlorobenzene	**<190**	ug/kg	1590	190	20	01/12/22 09:00	01/12/22 20:04	108-90-7	
Chloroethane	**<669**	ug/kg	7930	669	20	01/12/22 09:00	01/12/22 20:04	75-00-3	
Chloroform	**<1140**	ug/kg	7930	1140	20	01/12/22 09:00	01/12/22 20:04	67-66-3	
Chloromethane	**<602**	ug/kg	1590	602	20	01/12/22 09:00	01/12/22 20:04	74-87-3	
2-Chlorotoluene	**<514**	ug/kg	1590	514	20	01/12/22 09:00	01/12/22 20:04	95-49-8	
4-Chlorotoluene	**<602**	ug/kg	1590	602	20	01/12/22 09:00	01/12/22 20:04	106-43-4	
1,2-Dibromo-3-chloropropane	**<1230**	ug/kg	7930	1230	20	01/12/22 09:00	01/12/22 20:04	96-12-8	L1
Dibromochloromethane	**<5420**	ug/kg	7930	5420	20	01/12/22 09:00	01/12/22 20:04	124-48-1	
1,2-Dibromoethane (EDB)	**<434**	ug/kg	1590	434	20	01/12/22 09:00	01/12/22 20:04	106-93-4	
Dibromomethane	**<469**	ug/kg	1590	469	20	01/12/22 09:00	01/12/22 20:04	74-95-3	
1,2-Dichlorobenzene	**<491**	ug/kg	1590	491	20	01/12/22 09:00	01/12/22 20:04	95-50-1	
1,3-Dichlorobenzene	**<434**	ug/kg	1590	434	20	01/12/22 09:00	01/12/22 20:04	541-73-1	
1,4-Dichlorobenzene	**<434**	ug/kg	1590	434	20	01/12/22 09:00	01/12/22 20:04	106-46-7	
Dichlorodifluoromethane	**<682**	ug/kg	1590	682	20	01/12/22 09:00	01/12/22 20:04	75-71-8	
1,1-Dichloroethane	**<406**	ug/kg	1590	406	20	01/12/22 09:00	01/12/22 20:04	75-34-3	
1,2-Dichloroethane	**<365**	ug/kg	1590	365	20	01/12/22 09:00	01/12/22 20:04	107-06-2	
1,1-Dichloroethene	**<526**	ug/kg	1590	526	20	01/12/22 09:00	01/12/22 20:04	75-35-4	
cis-1,2-Dichloroethene	**7120**	ug/kg	1590	339	20	01/12/22 09:00	01/12/22 20:04	156-59-2	
trans-1,2-Dichloroethene	**1390J**	ug/kg	1590	342	20	01/12/22 09:00	01/12/22 20:04	156-60-5	
1,2-Dichloropropane	**<377**	ug/kg	1590	377	20	01/12/22 09:00	01/12/22 20:04	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-24 (6-8') **Lab ID: 40239263010** Collected: 01/09/22 15:05 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<346**	ug/kg	1590	346	20	01/12/22 09:00	01/12/22 20:04	142-28-9	
2,2-Dichloropropane	**<428**	ug/kg	1590	428	20	01/12/22 09:00	01/12/22 20:04	594-20-7	
1,1-Dichloropropene	**<514**	ug/kg	1590	514	20	01/12/22 09:00	01/12/22 20:04	563-58-6	
cis-1,3-Dichloropropene	**<1050**	ug/kg	7930	1050	20	01/12/22 09:00	01/12/22 20:04	10061-01-5	
trans-1,3-Dichloropropene	**<4530**	ug/kg	7930	4530	20	01/12/22 09:00	01/12/22 20:04	10061-02-6	
Diisopropyl ether	**<393**	ug/kg	1590	393	20	01/12/22 09:00	01/12/22 20:04	108-20-3	
Ethylbenzene	**<377**	ug/kg	1590	377	20	01/12/22 09:00	01/12/22 20:04	100-41-4	
Hexachloro-1,3-butadiene	**<3150**	ug/kg	7930	3150	20	01/12/22 09:00	01/12/22 20:04	87-68-3	
Isopropylbenzene (Cumene)	**<428**	ug/kg	1590	428	20	01/12/22 09:00	01/12/22 20:04	98-82-8	
p-Isopropyltoluene	**<482**	ug/kg	1590	482	20	01/12/22 09:00	01/12/22 20:04	99-87-6	
Methylene Chloride	**<441**	ug/kg	1590	441	20	01/12/22 09:00	01/12/22 20:04	75-09-2	
Methyl-tert-butyl ether	**<466**	ug/kg	1590	466	20	01/12/22 09:00	01/12/22 20:04	1634-04-4	
Naphthalene	**<495**	ug/kg	7930	495	20	01/12/22 09:00	01/12/22 20:04	91-20-3	
n-Propylbenzene	**<381**	ug/kg	1590	381	20	01/12/22 09:00	01/12/22 20:04	103-65-1	
Styrene	**<406**	ug/kg	1590	406	20	01/12/22 09:00	01/12/22 20:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<381**	ug/kg	1590	381	20	01/12/22 09:00	01/12/22 20:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<574**	ug/kg	1590	574	20	01/12/22 09:00	01/12/22 20:04	79-34-5	
Tetrachloroethene	**<615**	ug/kg	1590	615	20	01/12/22 09:00	01/12/22 20:04	127-18-4	
Toluene	**<400**	ug/kg	1590	400	20	01/12/22 09:00	01/12/22 20:04	108-88-3	
1,2,3-Trichlorobenzene	**<1770**	ug/kg	7930	1770	20	01/12/22 09:00	01/12/22 20:04	87-61-6	
1,2,4-Trichlorobenzene	**<1310**	ug/kg	7930	1310	20	01/12/22 09:00	01/12/22 20:04	120-82-1	
1,1,1-Trichloroethane	**<406**	ug/kg	1590	406	20	01/12/22 09:00	01/12/22 20:04	71-55-6	
1,1,2-Trichloroethane	**<577**	ug/kg	1590	577	20	01/12/22 09:00	01/12/22 20:04	79-00-5	
Trichloroethene	**199000**	ug/kg	1590	593	20	01/12/22 09:00	01/12/22 20:04	79-01-6	
Trichlorofluoromethane	**<460**	ug/kg	1590	460	20	01/12/22 09:00	01/12/22 20:04	75-69-4	
1,2,3-Trichloropropane	**<771**	ug/kg	1590	771	20	01/12/22 09:00	01/12/22 20:04	96-18-4	
1,2,4-Trimethylbenzene	**<472**	ug/kg	1590	472	20	01/12/22 09:00	01/12/22 20:04	95-63-6	
1,3,5-Trimethylbenzene	**<511**	ug/kg	1590	511	20	01/12/22 09:00	01/12/22 20:04	108-67-8	
Vinyl chloride	**762J**	ug/kg	1590	320	20	01/12/22 09:00	01/12/22 20:04	75-01-4	
m&p-Xylene	**<669**	ug/kg	3170	669	20	01/12/22 09:00	01/12/22 20:04	179601-23-1	
o-Xylene	**<476**	ug/kg	1590	476	20	01/12/22 09:00	01/12/22 20:04	95-47-6	
Surrogates									
Toluene-d8 (S)	126	%	67-159		20	01/12/22 09:00	01/12/22 20:04	2037-26-5	S4
4-Bromofluorobenzene (S)	113	%	66-153		20	01/12/22 09:00	01/12/22 20:04	460-00-4	S4
1,2-Dichlorobenzene-d4 (S)	158	%	82-158		20	01/12/22 09:00	01/12/22 20:04	2199-69-1	S4
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**22.6**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-25 (0-4') **Lab ID: 40239263011** Collected: 01/09/22 16:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**<7.9**	mg/kg	13.5	7.9	5	01/12/22 06:19	01/13/22 17:48	7440-38-2	D3
Barium	**49.5**	mg/kg	2.7	0.81	5	01/12/22 06:19	01/13/22 17:48	7440-39-3	
Cadmium	**<0.72**	mg/kg	2.7	0.72	5	01/12/22 06:19	01/13/22 17:48	7440-43-9	D3
Chromium	**20.1**	mg/kg	5.4	1.5	5	01/12/22 06:19	01/13/22 17:48	7440-47-3	
Lead	**6.3J**	mg/kg	10.8	3.2	5	01/12/22 06:19	01/13/22 17:48	7439-92-1	D3
Selenium	**<7.1**	mg/kg	21.5	7.1	5	01/12/22 06:19	01/13/22 17:48	7782-49-2	D3
Silver	**<1.7**	mg/kg	5.4	1.7	5	01/12/22 06:19	01/13/22 17:48	7440-22-4	D3
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**<0.011**	mg/kg	0.038	0.011	1	01/13/22 09:28	01/13/22 13:25	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<15.8**	ug/kg	26.5	15.8	1	01/12/22 09:00	01/12/22 18:44	71-43-2	
Bromobenzene	**<25.8**	ug/kg	66.2	25.8	1	01/12/22 09:00	01/12/22 18:44	108-86-1	
Bromochloromethane	**<18.1**	ug/kg	66.2	18.1	1	01/12/22 09:00	01/12/22 18:44	74-97-5	
Bromodichloromethane	**<15.8**	ug/kg	66.2	15.8	1	01/12/22 09:00	01/12/22 18:44	75-27-4	
Bromoform	**<291**	ug/kg	331	291	1	01/12/22 09:00	01/12/22 18:44	75-25-2	
Bromomethane	**<92.8**	ug/kg	331	92.8	1	01/12/22 09:00	01/12/22 18:44	74-83-9	
n-Butylbenzene	**<30.3**	ug/kg	66.2	30.3	1	01/12/22 09:00	01/12/22 18:44	104-51-8	
sec-Butylbenzene	**<16.2**	ug/kg	66.2	16.2	1	01/12/22 09:00	01/12/22 18:44	135-98-8	
tert-Butylbenzene	**<20.8**	ug/kg	66.2	20.8	1	01/12/22 09:00	01/12/22 18:44	98-06-6	
Carbon tetrachloride	**<14.6**	ug/kg	66.2	14.6	1	01/12/22 09:00	01/12/22 18:44	56-23-5	
Chlorobenzene	**<7.9**	ug/kg	66.2	7.9	1	01/12/22 09:00	01/12/22 18:44	108-90-7	
Chloroethane	**<27.9**	ug/kg	331	27.9	1	01/12/22 09:00	01/12/22 18:44	75-00-3	
Chloroform	**<47.4**	ug/kg	331	47.4	1	01/12/22 09:00	01/12/22 18:44	67-66-3	
Chloromethane	**<25.2**	ug/kg	66.2	25.2	1	01/12/22 09:00	01/12/22 18:44	74-87-3	
2-Chlorotoluene	**<21.5**	ug/kg	66.2	21.5	1	01/12/22 09:00	01/12/22 18:44	95-49-8	
4-Chlorotoluene	**<25.2**	ug/kg	66.2	25.2	1	01/12/22 09:00	01/12/22 18:44	106-43-4	
1,2-Dibromo-3-chloropropane	**<51.4**	ug/kg	331	51.4	1	01/12/22 09:00	01/12/22 18:44	96-12-8	L1
Dibromochloromethane	**<226**	ug/kg	331	226	1	01/12/22 09:00	01/12/22 18:44	124-48-1	
1,2-Dibromoethane (EDB)	**<18.1**	ug/kg	66.2	18.1	1	01/12/22 09:00	01/12/22 18:44	106-93-4	
Dibromomethane	**<19.6**	ug/kg	66.2	19.6	1	01/12/22 09:00	01/12/22 18:44	74-95-3	
1,2-Dichlorobenzene	**<20.5**	ug/kg	66.2	20.5	1	01/12/22 09:00	01/12/22 18:44	95-50-1	
1,3-Dichlorobenzene	**<18.1**	ug/kg	66.2	18.1	1	01/12/22 09:00	01/12/22 18:44	541-73-1	
1,4-Dichlorobenzene	**<18.1**	ug/kg	66.2	18.1	1	01/12/22 09:00	01/12/22 18:44	106-46-7	
Dichlorodifluoromethane	**<28.5**	ug/kg	66.2	28.5	1	01/12/22 09:00	01/12/22 18:44	75-71-8	
1,1-Dichloroethane	**<17.0**	ug/kg	66.2	17.0	1	01/12/22 09:00	01/12/22 18:44	75-34-3	
1,2-Dichloroethane	**<15.2**	ug/kg	66.2	15.2	1	01/12/22 09:00	01/12/22 18:44	107-06-2	
1,1-Dichloroethene	**<22.0**	ug/kg	66.2	22.0	1	01/12/22 09:00	01/12/22 18:44	75-35-4	
cis-1,2-Dichloroethene	**<14.2**	ug/kg	66.2	14.2	1	01/12/22 09:00	01/12/22 18:44	156-59-2	
trans-1,2-Dichloroethene	**<14.3**	ug/kg	66.2	14.3	1	01/12/22 09:00	01/12/22 18:44	156-60-5	
1,2-Dichloropropane	**<15.8**	ug/kg	66.2	15.8	1	01/12/22 09:00	01/12/22 18:44	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-25 (0-4') **Lab ID: 40239263011** Collected: 01/09/22 16:30 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<14.4**	ug/kg	66.2	14.4	1	01/12/22 09:00	01/12/22 18:44	142-28-9	
2,2-Dichloropropane	**<17.9**	ug/kg	66.2	17.9	1	01/12/22 09:00	01/12/22 18:44	594-20-7	
1,1-Dichloropropene	**<21.5**	ug/kg	66.2	21.5	1	01/12/22 09:00	01/12/22 18:44	563-58-6	
cis-1,3-Dichloropropene	**<43.7**	ug/kg	331	43.7	1	01/12/22 09:00	01/12/22 18:44	10061-01-5	
trans-1,3-Dichloropropene	**<189**	ug/kg	331	189	1	01/12/22 09:00	01/12/22 18:44	10061-02-6	
Diisopropyl ether	**<16.4**	ug/kg	66.2	16.4	1	01/12/22 09:00	01/12/22 18:44	108-20-3	
Ethylbenzene	**<15.8**	ug/kg	66.2	15.8	1	01/12/22 09:00	01/12/22 18:44	100-41-4	
Hexachloro-1,3-butadiene	**<132**	ug/kg	331	132	1	01/12/22 09:00	01/12/22 18:44	87-68-3	
Isopropylbenzene (Cumene)	**<17.9**	ug/kg	66.2	17.9	1	01/12/22 09:00	01/12/22 18:44	98-82-8	
p-Isopropyltoluene	**<20.1**	ug/kg	66.2	20.1	1	01/12/22 09:00	01/12/22 18:44	99-87-6	
Methylene Chloride	**<18.4**	ug/kg	66.2	18.4	1	01/12/22 09:00	01/12/22 18:44	75-09-2	
Methyl-tert-butyl ether	**<19.5**	ug/kg	66.2	19.5	1	01/12/22 09:00	01/12/22 18:44	1634-04-4	
Naphthalene	**<20.7**	ug/kg	331	20.7	1	01/12/22 09:00	01/12/22 18:44	91-20-3	
n-Propylbenzene	**<15.9**	ug/kg	66.2	15.9	1	01/12/22 09:00	01/12/22 18:44	103-65-1	
Styrene	**<17.0**	ug/kg	66.2	17.0	1	01/12/22 09:00	01/12/22 18:44	100-42-5	
1,1,1,2-Tetrachloroethane	**<15.9**	ug/kg	66.2	15.9	1	01/12/22 09:00	01/12/22 18:44	630-20-6	
1,1,2,2-Tetrachloroethane	**<24.0**	ug/kg	66.2	24.0	1	01/12/22 09:00	01/12/22 18:44	79-34-5	
Tetrachloroethene	**<25.7**	ug/kg	66.2	25.7	1	01/12/22 09:00	01/12/22 18:44	127-18-4	
Toluene	**<16.7**	ug/kg	66.2	16.7	1	01/12/22 09:00	01/12/22 18:44	108-88-3	
1,2,3-Trichlorobenzene	**<73.8**	ug/kg	331	73.8	1	01/12/22 09:00	01/12/22 18:44	87-61-6	
1,2,4-Trichlorobenzene	**<54.6**	ug/kg	331	54.6	1	01/12/22 09:00	01/12/22 18:44	120-82-1	
1,1,1-Trichloroethane	**<17.0**	ug/kg	66.2	17.0	1	01/12/22 09:00	01/12/22 18:44	71-55-6	
1,1,2-Trichloroethane	**<24.1**	ug/kg	66.2	24.1	1	01/12/22 09:00	01/12/22 18:44	79-00-5	
Trichloroethene	**164**	ug/kg	66.2	24.8	1	01/12/22 09:00	01/12/22 18:44	79-01-6	
Trichlorofluoromethane	**<19.2**	ug/kg	66.2	19.2	1	01/12/22 09:00	01/12/22 18:44	75-69-4	
1,2,3-Trichloropropane	**<32.2**	ug/kg	66.2	32.2	1	01/12/22 09:00	01/12/22 18:44	96-18-4	
1,2,4-Trimethylbenzene	**<19.7**	ug/kg	66.2	19.7	1	01/12/22 09:00	01/12/22 18:44	95-63-6	
1,3,5-Trimethylbenzene	**<21.3**	ug/kg	66.2	21.3	1	01/12/22 09:00	01/12/22 18:44	108-67-8	
Vinyl chloride	**<13.4**	ug/kg	66.2	13.4	1	01/12/22 09:00	01/12/22 18:44	75-01-4	
m&p-Xylene	**<27.9**	ug/kg	132	27.9	1	01/12/22 09:00	01/12/22 18:44	179601-23-1	
o-Xylene	**<19.9**	ug/kg	66.2	19.9	1	01/12/22 09:00	01/12/22 18:44	95-47-6	
Surrogates									
Toluene-d8 (S)	119	%	67-159		1	01/12/22 09:00	01/12/22 18:44	2037-26-5	
4-Bromofluorobenzene (S)	104	%	66-153		1	01/12/22 09:00	01/12/22 18:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	125	%	82-158		1	01/12/22 09:00	01/12/22 18:44	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**14.0**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-25 (6-8') **Lab ID: 40239263012** Collected: 01/09/22 16:40 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Green Bay								
Arsenic	**4.0**	mg/kg	2.9	1.7	1	01/12/22 06:19	01/12/22 19:26	7440-38-2	
Barium	**99.7**	mg/kg	0.58	0.17	1	01/12/22 06:19	01/12/22 19:26	7440-39-3	
Cadmium	**0.37J**	mg/kg	0.58	0.16	1	01/12/22 06:19	01/12/22 19:26	7440-43-9	
Chromium	**40.9**	mg/kg	1.2	0.32	1	01/12/22 06:19	01/12/22 19:26	7440-47-3	
Lead	**8.9**	mg/kg	2.3	0.70	1	01/12/22 06:19	01/12/22 19:26	7439-92-1	
Selenium	**<1.5**	mg/kg	4.7	1.5	1	01/12/22 06:19	01/12/22 19:26	7782-49-2	
Silver	**<0.36**	mg/kg	1.2	0.36	1	01/12/22 06:19	01/12/22 19:26	7440-22-4	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury	**0.016J**	mg/kg	0.041	0.012	1	01/13/22 09:28	01/13/22 13:27	7439-97-6	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
Benzene	**<17.7**	ug/kg	29.7	17.7	1	01/12/22 09:00	01/12/22 19:04	71-43-2	
Bromobenzene	**<29.0**	ug/kg	74.4	29.0	1	01/12/22 09:00	01/12/22 19:04	108-86-1	
Bromochloromethane	**<20.4**	ug/kg	74.4	20.4	1	01/12/22 09:00	01/12/22 19:04	74-97-5	
Bromodichloromethane	**<17.7**	ug/kg	74.4	17.7	1	01/12/22 09:00	01/12/22 19:04	75-27-4	
Bromoform	**<327**	ug/kg	372	327	1	01/12/22 09:00	01/12/22 19:04	75-25-2	
Bromomethane	**<104**	ug/kg	372	104	1	01/12/22 09:00	01/12/22 19:04	74-83-9	
n-Butylbenzene	**<34.1**	ug/kg	74.4	34.1	1	01/12/22 09:00	01/12/22 19:04	104-51-8	
sec-Butylbenzene	**<18.1**	ug/kg	74.4	18.1	1	01/12/22 09:00	01/12/22 19:04	135-98-8	
tert-Butylbenzene	**<23.3**	ug/kg	74.4	23.3	1	01/12/22 09:00	01/12/22 19:04	98-06-6	
Carbon tetrachloride	**<16.4**	ug/kg	74.4	16.4	1	01/12/22 09:00	01/12/22 19:04	56-23-5	
Chlorobenzene	**<8.9**	ug/kg	74.4	8.9	1	01/12/22 09:00	01/12/22 19:04	108-90-7	
Chloroethane	**<31.4**	ug/kg	372	31.4	1	01/12/22 09:00	01/12/22 19:04	75-00-3	
Chloroform	**<53.2**	ug/kg	372	53.2	1	01/12/22 09:00	01/12/22 19:04	67-66-3	
Chloromethane	**<28.3**	ug/kg	74.4	28.3	1	01/12/22 09:00	01/12/22 19:04	74-87-3	
2-Chlorotoluene	**<24.1**	ug/kg	74.4	24.1	1	01/12/22 09:00	01/12/22 19:04	95-49-8	
4-Chlorotoluene	**<28.3**	ug/kg	74.4	28.3	1	01/12/22 09:00	01/12/22 19:04	106-43-4	
1,2-Dibromo-3-chloropropane	**<57.7**	ug/kg	372	57.7	1	01/12/22 09:00	01/12/22 19:04	96-12-8	L1
Dibromochloromethane	**<254**	ug/kg	372	254	1	01/12/22 09:00	01/12/22 19:04	124-48-1	
1,2-Dibromoethane (EDB)	**<20.4**	ug/kg	74.4	20.4	1	01/12/22 09:00	01/12/22 19:04	106-93-4	
Dibromomethane	**<22.0**	ug/kg	74.4	22.0	1	01/12/22 09:00	01/12/22 19:04	74-95-3	
1,2-Dichlorobenzene	**<23.1**	ug/kg	74.4	23.1	1	01/12/22 09:00	01/12/22 19:04	95-50-1	
1,3-Dichlorobenzene	**<20.4**	ug/kg	74.4	20.4	1	01/12/22 09:00	01/12/22 19:04	541-73-1	
1,4-Dichlorobenzene	**<20.4**	ug/kg	74.4	20.4	1	01/12/22 09:00	01/12/22 19:04	106-46-7	
Dichlorodifluoromethane	**<32.0**	ug/kg	74.4	32.0	1	01/12/22 09:00	01/12/22 19:04	75-71-8	
1,1-Dichloroethane	**<19.0**	ug/kg	74.4	19.0	1	01/12/22 09:00	01/12/22 19:04	75-34-3	
1,2-Dichloroethane	**<17.1**	ug/kg	74.4	17.1	1	01/12/22 09:00	01/12/22 19:04	107-06-2	
1,1-Dichloroethene	**<24.7**	ug/kg	74.4	24.7	1	01/12/22 09:00	01/12/22 19:04	75-35-4	
cis-1,2-Dichloroethene	**<15.9**	ug/kg	74.4	15.9	1	01/12/22 09:00	01/12/22 19:04	156-59-2	
trans-1,2-Dichloroethene	**<16.1**	ug/kg	74.4	16.1	1	01/12/22 09:00	01/12/22 19:04	156-60-5	
1,2-Dichloropropane	**<17.7**	ug/kg	74.4	17.7	1	01/12/22 09:00	01/12/22 19:04	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40239263

Sample: B-25 (6-8') **Lab ID: 40239263012** Collected: 01/09/22 16:40 Received: 01/10/22 12:25 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B Pace Analytical Services - Green Bay								
1,3-Dichloropropane	**<16.2**	ug/kg	74.4	16.2	1	01/12/22 09:00	01/12/22 19:04	142-28-9	
2,2-Dichloropropane	**<20.1**	ug/kg	74.4	20.1	1	01/12/22 09:00	01/12/22 19:04	594-20-7	
1,1-Dichloropropene	**<24.1**	ug/kg	74.4	24.1	1	01/12/22 09:00	01/12/22 19:04	563-58-6	
cis-1,3-Dichloropropene	**<49.1**	ug/kg	372	49.1	1	01/12/22 09:00	01/12/22 19:04	10061-01-5	
trans-1,3-Dichloropropene	**<213**	ug/kg	372	213	1	01/12/22 09:00	01/12/22 19:04	10061-02-6	
Diisopropyl ether	**<18.4**	ug/kg	74.4	18.4	1	01/12/22 09:00	01/12/22 19:04	108-20-3	
Ethylbenzene	**<17.7**	ug/kg	74.4	17.7	1	01/12/22 09:00	01/12/22 19:04	100-41-4	
Hexachloro-1,3-butadiene	**<148**	ug/kg	372	148	1	01/12/22 09:00	01/12/22 19:04	87-68-3	
Isopropylbenzene (Cumene)	**<20.1**	ug/kg	74.4	20.1	1	01/12/22 09:00	01/12/22 19:04	98-82-8	
p-Isopropyltoluene	**<22.6**	ug/kg	74.4	22.6	1	01/12/22 09:00	01/12/22 19:04	99-87-6	
Methylene Chloride	**<20.7**	ug/kg	74.4	20.7	1	01/12/22 09:00	01/12/22 19:04	75-09-2	
Methyl-tert-butyl ether	**<21.9**	ug/kg	74.4	21.9	1	01/12/22 09:00	01/12/22 19:04	1634-04-4	
Naphthalene	**<23.2**	ug/kg	372	23.2	1	01/12/22 09:00	01/12/22 19:04	91-20-3	
n-Propylbenzene	**<17.8**	ug/kg	74.4	17.8	1	01/12/22 09:00	01/12/22 19:04	103-65-1	
Styrene	**<19.0**	ug/kg	74.4	19.0	1	01/12/22 09:00	01/12/22 19:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<17.8**	ug/kg	74.4	17.8	1	01/12/22 09:00	01/12/22 19:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<26.9**	ug/kg	74.4	26.9	1	01/12/22 09:00	01/12/22 19:04	79-34-5	
Tetrachloroethene	**<28.9**	ug/kg	74.4	28.9	1	01/12/22 09:00	01/12/22 19:04	127-18-4	
Toluene	**<18.7**	ug/kg	74.4	18.7	1	01/12/22 09:00	01/12/22 19:04	108-88-3	
1,2,3-Trichlorobenzene	**<82.8**	ug/kg	372	82.8	1	01/12/22 09:00	01/12/22 19:04	87-61-6	
1,2,4-Trichlorobenzene	**<61.3**	ug/kg	372	61.3	1	01/12/22 09:00	01/12/22 19:04	120-82-1	
1,1,1-Trichloroethane	**<19.0**	ug/kg	74.4	19.0	1	01/12/22 09:00	01/12/22 19:04	71-55-6	
1,1,2-Trichloroethane	**<27.1**	ug/kg	74.4	27.1	1	01/12/22 09:00	01/12/22 19:04	79-00-5	
Trichloroethene	**<27.8**	ug/kg	74.4	27.8	1	01/12/22 09:00	01/12/22 19:04	79-01-6	
Trichlorofluoromethane	**<21.6**	ug/kg	74.4	21.6	1	01/12/22 09:00	01/12/22 19:04	75-69-4	
1,2,3-Trichloropropane	**<36.1**	ug/kg	74.4	36.1	1	01/12/22 09:00	01/12/22 19:04	96-18-4	
1,2,4-Trimethylbenzene	**<22.2**	ug/kg	74.4	22.2	1	01/12/22 09:00	01/12/22 19:04	95-63-6	
1,3,5-Trimethylbenzene	**<23.9**	ug/kg	74.4	23.9	1	01/12/22 09:00	01/12/22 19:04	108-67-8	
Vinyl chloride	**<15.0**	ug/kg	74.4	15.0	1	01/12/22 09:00	01/12/22 19:04	75-01-4	
m&p-Xylene	**<31.4**	ug/kg	149	31.4	1	01/12/22 09:00	01/12/22 19:04	179601-23-1	
o-Xylene	**<22.3**	ug/kg	74.4	22.3	1	01/12/22 09:00	01/12/22 19:04	95-47-6	
Surrogates									
Toluene-d8 (S)	123	%	67-159		1	01/12/22 09:00	01/12/22 19:04	2037-26-5	
4-Bromofluorobenzene (S)	112	%	66-153		1	01/12/22 09:00	01/12/22 19:04	460-00-4	
1,2-Dichlorobenzene-d4 (S)	123	%	82-158		1	01/12/22 09:00	01/12/22 19:04	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**19.6**	%	0.10	0.10	1		01/11/22 16:07		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

QC Batch: 406107 — Analysis Method: EPA 7471
QC Batch Method: EPA 7471 — Analysis Description: 7471 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

METHOD BLANK: 2342716 — Matrix: Solid
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	01/13/22 12:25	

LABORATORY CONTROL SAMPLE: 2342717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.82	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2342718 2342719

Parameter	Units	40239256001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.21	0.96	0.96	1.1	1.2	96	99	85-115	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

QC Batch: 405987
QC Batch Method: EPA 3050B
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

METHOD BLANK: 2342186 Matrix: Solid
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	2.5	01/13/22 17:14	
Barium	mg/kg	<0.15	0.50	01/13/22 17:14	
Cadmium	mg/kg	<0.13	0.50	01/13/22 17:14	
Chromium	mg/kg	<0.28	1.0	01/13/22 17:14	
Lead	mg/kg	<0.60	2.0	01/13/22 17:14	
Selenium	mg/kg	<1.3	4.0	01/13/22 17:14	
Silver	mg/kg	<0.31	1.0	01/13/22 17:14	

LABORATORY CONTROL SAMPLE: 2342187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	25	23.6	94	80-120	
Barium	mg/kg	25	24.6	98	80-120	
Cadmium	mg/kg	25	24.5	98	80-120	
Chromium	mg/kg	25	25.6	103	80-120	
Lead	mg/kg	25	25.0	100	80-120	
Selenium	mg/kg	25	24.6	98	80-120	
Silver	mg/kg	12.5	12.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2342188 2342189

Parameter	Units	40239263001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	<3.6	31.2	31.2	28.9	29.3	93	94	75-125	1	20	
Barium	mg/kg	110	31.2	31.2	156	157	148	150	75-125	1	20	M0
Cadmium	mg/kg	<0.33	31.2	31.2	31.6	37.0	101	119	75-125	16	20	
Chromium	mg/kg	40.7	31.2	31.2	101	84.6	193	141	75-125	17	20	M0
Lead	mg/kg	9.6	31.2	31.2	41.4	39.8	102	97	75-125	4	20	
Selenium	mg/kg	<3.2	31.2	31.2	29.1	30.1	92	95	75-125	3	20	
Silver	mg/kg	<0.76	15.6	15.6	16.2	15.9	100	98	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

QC Batch: 406039
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Med Level Normal List
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

METHOD BLANK: 2342396
Matrix: Solid
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<12.0	50.0	01/12/22 10:37	
1,1,1-Trichloroethane	ug/kg	<12.8	50.0	01/12/22 10:37	
1,1,2,2-Tetrachloroethane	ug/kg	<18.1	50.0	01/12/22 10:37	
1,1,2-Trichloroethane	ug/kg	<18.2	50.0	01/12/22 10:37	
1,1-Dichloroethane	ug/kg	<12.8	50.0	01/12/22 10:37	
1,1-Dichloroethene	ug/kg	<16.6	50.0	01/12/22 10:37	
1,1-Dichloropropene	ug/kg	<16.2	50.0	01/12/22 10:37	
1,2,3-Trichlorobenzene	ug/kg	<55.7	250	01/12/22 10:37	
1,2,3-Trichloropropane	ug/kg	<24.3	50.0	01/12/22 10:37	
1,2,4-Trichlorobenzene	ug/kg	<41.2	250	01/12/22 10:37	
1,2,4-Trimethylbenzene	ug/kg	<14.9	50.0	01/12/22 10:37	
1,2-Dibromo-3-chloropropane	ug/kg	<38.8	250	01/12/22 10:37	
1,2-Dibromoethane (EDB)	ug/kg	<13.7	50.0	01/12/22 10:37	
1,2-Dichlorobenzene	ug/kg	<15.5	50.0	01/12/22 10:37	
1,2-Dichloroethane	ug/kg	<11.5	50.0	01/12/22 10:37	
1,2-Dichloropropane	ug/kg	<11.9	50.0	01/12/22 10:37	
1,3,5-Trimethylbenzene	ug/kg	<16.1	50.0	01/12/22 10:37	
1,3-Dichlorobenzene	ug/kg	<13.7	50.0	01/12/22 10:37	
1,3-Dichloropropane	ug/kg	<10.9	50.0	01/12/22 10:37	
1,4-Dichlorobenzene	ug/kg	<13.7	50.0	01/12/22 10:37	
2,2-Dichloropropane	ug/kg	<13.5	50.0	01/12/22 10:37	
2-Chlorotoluene	ug/kg	<16.2	50.0	01/12/22 10:37	
4-Chlorotoluene	ug/kg	<19.0	50.0	01/12/22 10:37	
Benzene	ug/kg	<11.9	20.0	01/12/22 10:37	
Bromobenzene	ug/kg	<19.5	50.0	01/12/22 10:37	
Bromochloromethane	ug/kg	<13.7	50.0	01/12/22 10:37	
Bromodichloromethane	ug/kg	<11.9	50.0	01/12/22 10:37	
Bromoform	ug/kg	<220	250	01/12/22 10:37	
Bromomethane	ug/kg	<70.1	250	01/12/22 10:37	
Carbon tetrachloride	ug/kg	<11.0	50.0	01/12/22 10:37	
Chlorobenzene	ug/kg	<6.0	50.0	01/12/22 10:37	
Chloroethane	ug/kg	<21.1	250	01/12/22 10:37	
Chloroform	ug/kg	<35.8	250	01/12/22 10:37	
Chloromethane	ug/kg	<19.0	50.0	01/12/22 10:37	
cis-1,2-Dichloroethene	ug/kg	<10.7	50.0	01/12/22 10:37	
cis-1,3-Dichloropropene	ug/kg	<33.0	250	01/12/22 10:37	
Dibromochloromethane	ug/kg	<171	250	01/12/22 10:37	
Dibromomethane	ug/kg	<14.8	50.0	01/12/22 10:37	
Dichlorodifluoromethane	ug/kg	<21.5	50.0	01/12/22 10:37	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

METHOD BLANK: 2342396 Matrix: Solid

Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/kg	<12.4	50.0	01/12/22 10:37	
Ethylbenzene	ug/kg	<11.9	50.0	01/12/22 10:37	
Hexachloro-1,3-butadiene	ug/kg	<99.4	250	01/12/22 10:37	
Isopropylbenzene (Cumene)	ug/kg	<13.5	50.0	01/12/22 10:37	
m&p-Xylene	ug/kg	<21.1	100	01/12/22 10:37	
Methyl-tert-butyl ether	ug/kg	<14.7	50.0	01/12/22 10:37	
Methylene Chloride	ug/kg	<13.9	50.0	01/12/22 10:37	
n-Butylbenzene	ug/kg	<22.9	50.0	01/12/22 10:37	
n-Propylbenzene	ug/kg	<12.0	50.0	01/12/22 10:37	
Naphthalene	ug/kg	<15.6	250	01/12/22 10:37	
o-Xylene	ug/kg	<15.0	50.0	01/12/22 10:37	
p-Isopropyltoluene	ug/kg	<15.2	50.0	01/12/22 10:37	
sec-Butylbenzene	ug/kg	<12.2	50.0	01/12/22 10:37	
Styrene	ug/kg	<12.8	50.0	01/12/22 10:37	
tert-Butylbenzene	ug/kg	<15.7	50.0	01/12/22 10:37	
Tetrachloroethene	ug/kg	<19.4	50.0	01/12/22 10:37	
Toluene	ug/kg	<12.6	50.0	01/12/22 10:37	
trans-1,2-Dichloroethene	ug/kg	<10.8	50.0	01/12/22 10:37	
trans-1,3-Dichloropropene	ug/kg	<143	250	01/12/22 10:37	
Trichloroethene	ug/kg	<18.7	50.0	01/12/22 10:37	
Trichlorofluoromethane	ug/kg	<14.5	50.0	01/12/22 10:37	
Vinyl chloride	ug/kg	<10.1	50.0	01/12/22 10:37	
1,2-Dichlorobenzene-d4 (S)	%	107	82-158	01/12/22 10:37	
4-Bromofluorobenzene (S)	%	115	66-153	01/12/22 10:37	
Toluene-d8 (S)	%	112	67-159	01/12/22 10:37	

LABORATORY CONTROL SAMPLE: 2342397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2580	103	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2950	118	65-129	
1,1,2-Trichloroethane	ug/kg	2500	2760	110	70-130	
1,1-Dichloroethane	ug/kg	2500	2880	115	70-130	
1,1-Dichloroethene	ug/kg	2500	2600	104	67-120	
1,2,4-Trichlorobenzene	ug/kg	2500	2620	105	64-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	3050	122	57-119	L1
1,2-Dibromoethane (EDB)	ug/kg	2500	2640	105	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2670	107	70-130	
1,2-Dichloroethane	ug/kg	2500	2790	112	70-130	
1,2-Dichloropropane	ug/kg	2500	2780	111	72-118	
1,3-Dichlorobenzene	ug/kg	2500	2620	105	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2690	108	70-130	
Benzene	ug/kg	2500	2750	110	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

LABORATORY CONTROL SAMPLE: 2342397

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/kg	2500	2560	103	70-130	
Bromoform	ug/kg	2500	2710	109	66-130	
Bromomethane	ug/kg	2500	2920	117	13-153	
Carbon tetrachloride	ug/kg	2500	2670	107	73-134	
Chlorobenzene	ug/kg	2500	2680	107	70-130	
Chloroethane	ug/kg	2500	3040	122	19-170	
Chloroform	ug/kg	2500	2830	113	79-120	
Chloromethane	ug/kg	2500	2420	97	45-117	
cis-1,2-Dichloroethene	ug/kg	2500	2640	106	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2650	106	68-130	
Dibromochloromethane	ug/kg	2500	2560	102	70-130	
Dichlorodifluoromethane	ug/kg	2500	1630	65	15-135	
Ethylbenzene	ug/kg	2500	2660	106	78-120	
Isopropylbenzene (Cumene)	ug/kg	2500	2590	103	70-130	
m&p-Xylene	ug/kg	5000	5200	104	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2740	110	65-130	
Methylene Chloride	ug/kg	2500	2720	109	70-130	
o-Xylene	ug/kg	2500	2580	103	70-130	
Styrene	ug/kg	2500	2700	108	70-130	
Tetrachloroethene	ug/kg	2500	2880	115	70-130	
Toluene	ug/kg	2500	2830	113	76-120	
trans-1,2-Dichloroethene	ug/kg	2500	2680	107	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2510	101	70-130	
Trichloroethene	ug/kg	2500	2720	109	70-130	
Trichlorofluoromethane	ug/kg	2500	2760	110	49-153	
Vinyl chloride	ug/kg	2500	2980	119	58-121	
1,2-Dichlorobenzene-d4 (S)	%			107	82-158	
4-Bromofluorobenzene (S)	%			107	66-153	
Toluene-d8 (S)	%			109	67-159	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2342398 2342399

Parameter	Units	40239263004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/kg	<19.0	1480	1480	1440	1290	97	87	70-130	11	20	
1,1,2,2-Tetrachloroethane	ug/kg	<26.8	1480	1480	1850	1770	125	120	65-129	4	20	
1,1,2-Trichloroethane	ug/kg	<27.0	1480	1480	1640	1710	111	116	70-130	4	20	
1,1-Dichloroethane	ug/kg	<19.0	1480	1480	1730	1560	117	105	70-130	11	20	
1,1-Dichloroethene	ug/kg	98.4	1480	1480	1290	1350	80	84	64-120	5	20	
1,2,4-Trichlorobenzene	ug/kg	<61.0	1480	1480	1690	1620	114	109	64-130	4	20	
1,2-Dibromo-3-chloropropane	ug/kg	<57.5	1480	1480	1900	2050	128	138	57-130	7	21	M0
1,2-Dibromoethane (EDB)	ug/kg	<20.3	1480	1480	1450	1500	98	101	70-130	3	20	
1,2-Dichlorobenzene	ug/kg	<23.0	1480	1480	1580	1620	106	109	70-130	2	20	
1,2-Dichloroethane	ug/kg	<17.0	1480	1480	1950	1810	132	122	70-130	8	20	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2342398 2342399

Parameter	Units	40239263004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloropropane	ug/kg	<17.6	1480	1480	1690	1760	114	119	72-122	4	20	
1,3-Dichlorobenzene	ug/kg	<20.3	1480	1480	1530	1520	103	103	70-130	0	20	
1,4-Dichlorobenzene	ug/kg	<20.3	1480	1480	1600	1580	108	106	70-130	1	20	
Benzene	ug/kg	<17.6	1480	1480	1510	1440	102	97	70-130	5	20	
Bromodichloromethane	ug/kg	<17.6	1480	1480	1670	1680	113	113	70-130	0	20	
Bromoform	ug/kg	<326	1480	1480	1450	1570	98	106	66-130	7	20	
Bromomethane	ug/kg	<104	1480	1480	1680	1700	114	114	13-153	1	20	
Carbon tetrachloride	ug/kg	<16.3	1480	1480	1330	1260	90	85	67-134	5	20	
Chlorobenzene	ug/kg	<8.9	1480	1480	1540	1560	104	105	70-130	1	20	
Chloroethane	ug/kg	<31.3	1480	1480	1600	1640	108	110	11-195	2	20	
Chloroform	ug/kg	<53.0	1480	1480	1730	1580	117	107	79-120	9	20	
Chloromethane	ug/kg	<28.2	1480	1480	1410	1420	95	96	30-136	1	20	
cis-1,2-Dichloroethene	ug/kg	8950	1480	1480	10000	9990	73	70	70-130	0	20	
cis-1,3-Dichloropropene	ug/kg	<48.9	1480	1480	1550	1590	104	107	68-130	3	20	
Dibromochloromethane	ug/kg	<253	1480	1480	1440	1480	97	100	70-130	2	20	
Dichlorodifluoromethane	ug/kg	<31.9	1480	1480	884	904	60	61	10-158	2	25	
Ethylbenzene	ug/kg	<17.6	1480	1480	1500	1540	101	104	78-120	2	20	
Isopropylbenzene (Cumene)	ug/kg	<20.0	1480	1480	1370	1420	93	96	70-130	3	20	
m&p-Xylene	ug/kg	<31.3	2970	2970	2820	2830	95	96	70-130	0	20	
Methyl-tert-butyl ether	ug/kg	<21.8	1480	1480	1480	1520	100	102	65-130	3	20	
Methylene Chloride	ug/kg	<20.6	1480	1480	1500	1530	101	103	70-130	2	20	
o-Xylene	ug/kg	<22.2	1480	1480	1430	1420	96	96	70-130	1	20	
Styrene	ug/kg	<19.0	1480	1480	1510	1540	102	104	70-130	3	20	
Tetrachloroethene	ug/kg	<28.7	1480	1480	1320	1350	89	91	70-130	2	20	
Toluene	ug/kg	<18.7	1480	1480	1640	1630	111	110	76-120	1	20	
trans-1,2-Dichloroethene	ug/kg	2740	1480	1480	4040	4160	88	96	70-130	3	20	
trans-1,3-Dichloropropene	ug/kg	<212	1480	1480	1630	1700	110	115	70-130	4	20	
Trichloroethene	ug/kg	19200	1480	1480	22700	23200	238	272	70-130	2	20	E,M1
Trichlorofluoromethane	ug/kg	<21.5	1480	1480	1240	1250	83	84	42-159	1	21	
Vinyl chloride	ug/kg	550	1480	1480	2060	2050	102	102	43-137	0	20	
1,2-Dichlorobenzene-d4 (S)	%						123	125	82-158			
4-Bromofluorobenzene (S)	%						136	135	66-153			
Toluene-d8 (S)	%						130	132	67-159			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40239263

QC Batch: 405968
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40239263001, 40239263002, 40239263003, 40239263004, 40239263005, 40239263006, 40239263007, 40239263008, 40239263009, 40239263010, 40239263011, 40239263012

SAMPLE DUPLICATE: 2342134

Parameter	Units	40239263009 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.9	15.0	6	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 1162-013
Pace Project No.: 40239263

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1162-013
Pace Project No.: 40239263

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40239263001	**B-20 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263002	**B-20 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263003	**B-21 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263004	**B-21 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263005	**B-22 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263006	**B-22 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263007	**B-23 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263008	**B-23 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263009	**B-24 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263010	**B-24 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263011	**B-25 (0-4')**	EPA 3050B	405987	EPA 6010D	406070
40239263012	**B-25 (6-8')**	EPA 3050B	405987	EPA 6010D	406070
40239263001	**B-20 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263002	**B-20 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263003	**B-21 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263004	**B-21 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263005	**B-22 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263006	**B-22 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263007	**B-23 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263008	**B-23 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263009	**B-24 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263010	**B-24 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263011	**B-25 (0-4')**	EPA 7471	406107	EPA 7471	406149
40239263012	**B-25 (6-8')**	EPA 7471	406107	EPA 7471	406149
40239263001	**B-20 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263002	**B-20 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263003	**B-21 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263004	**B-21 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263005	**B-22 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263006	**B-22 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263007	**B-23 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263008	**B-23 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263009	**B-24 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263010	**B-24 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263011	**B-25 (0-4')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263012	**B-25 (6-8')**	EPA 5035/5030B	406039	EPA 8260	406040
40239263001	**B-20 (0-4')**	ASTM D2974-87	405968		
40239263002	**B-20 (6-8')**	ASTM D2974-87	405968		
40239263003	**B-21 (0-4')**	ASTM D2974-87	405968		
40239263004	**B-21 (6-8')**	ASTM D2974-87	405968		
40239263005	**B-22 (0-4')**	ASTM D2974-87	405968		
40239263006	**B-22 (6-8')**	ASTM D2974-87	405968		
40239263007	**B-23 (0-4')**	ASTM D2974-87	405968		
40239263008	**B-23 (6-8')**	ASTM D2974-87	405968		
40239263009	**B-24 (0-4')**	ASTM D2974-87	405968		
40239263010	**B-24 (6-8')**	ASTM D2974-87	405968		
40239263011	**B-25 (0-4')**	ASTM D2974-87	405968		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1162-013
Pace Project No.: 40239263

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40239263012	**B-25 (6-8')**	ASTM D2974-87	405968		

402392 63

Robert E. Lee & Associates, Inc.
Engineering | Surveying | Environmental | Ecological
1250 Centennial Centre Blvd. • Hobart, WI 54155 • 920-662-9641 • FAX 920-662-9141

To ensure the proper handling of samples, please see the back for instructions.

CHAIN OF CUSTODY RECORD

COC # **203112**

Client: 1162-013
Project Name:
Project Number: 1162-013 | BID #:

Environmental Program:
☐ LUST ☐ SDWA ☐ WPDES ☐ RCRA ☐ OTHER _____

Requested Turnaround Time
☒ Normal (10-15 DAYS) ☐ Rush
Date Needed: _____
Rushes accepted only w/prior notification

*Preservation Code
N = Nitric Acid (red) O = Sodium Hydroxide
H = Hydrochloric Acid U = Unpreserved (white)
M = Methanol S = Sulfuric Acid (green)

Sampler: Cody Applekamp

Sample Type (Matrix)
DW = Drinking Water
GW = Groundwater
WW = Wastewater
Soil, Oil, Sludge, Air, Other:

Analyses Required:
(Note special detection limits or methods)

Sample Name	Date	Time		Comp	Grab	Sample Type	No. Of Containers	Filtered? (Y/N)	Preservation *(Code)	VOCs	RCRA Metals	PFAS CJI 33 1.5.1	Laboratory Sample I.D.	Remarks:
B-20 (0-4')	1-9-22	1010	A/P			Soil	3	—	M	X	X	X	001	
B-20 (6-8')		1030	A/P						U				002	
B-21 (0-4')		1120	A/P						U				003	
B-21 (6-8')		1130	A/P										004	
B-22 (0-4')		1220	A/P										005	
B-22 (6-8')		1235	A/P										006	
B-23 (0-4')		1340	A/P										007	
B-23 (6-8')		1350	A/P										008	
B-24 (0-4')		1455	A/P										009	
B-24 (6-8')		1505	A/P										010	
B-25 (0-4')		1630	A/P										011	
B-25 (6-8')	↓	1640	A/P			↓	↓			↓	↓	↓	012	

Report to: Nicole LaPlant
Company: **Robert E. Lee & Associates**
Address: **1250 Centennial Centre Blvd.**
Hobart, WI 54155
Telephone: **920-662-9641**

Invoice to: Nicole LaPlant
Company: **Robert E. Lee & Associates**
Address: **1250 Centennial Centre Blvd.**
Hobart, WI 54155
Telephone: **920-662-9641**

Relinquished By	Date	Time		Received By	Date	Time	
1) REL	1-10-22	1225	A/P	Susan Kilgore Lee	1-10-22	1225	A/P
2)			A/P				A/P
3)			A/P				A/P

Received by Lab _____ A = AM P = PM

Laboratory Receiving Notes
Temperature of Contents 3 °C
Custody Seal Intact _____
Sample Condition _____
Sample pH _____

Sample Preservation Receipt Form

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: REL

Project # 40239263

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/ Time:

	Glass								Plastic					Vials						Jars				General								
Pace Lab #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																																	2.5 / 5 / 10
002																																	2.5 / 5 / 10
003																																	2.5 / 5 / 10
004																																	2.5 / 5 / 10
005																																	2.5 / 5 / 10
006																																	2.5 / 5 / 10
007																																	2.5 / 5 / 10
008																																	2.5 / 5 / 10
009																																	2.5 / 5 / 10
010																																	2.5 / 5 / 10
011																																	2.5 / 5 / 10
012																																	2.5 / 5 / 10
013																																	2.5 / 5 / 10
014																																	2.5 / 5 / 10
015																																	2.5 / 5 / 10
016																																	2.5 / 5 / 10
017																																	2.5 / 5 / 10
018																																	2.5 / 5 / 10
019																																	2.5 / 5 / 10
020																		1/10/22 NK															2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : □Yes ☒No ~~□N/A~~ 1/10/22 NK *** If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: 26Mar2020
	Document No.: **ENV-FRM-GBAY-0014-Rev.00**	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: REL

WO# : 40239263

40239263

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☒ Client ☐ Pace Other:

Tracking #:

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 105 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 3 /Corr: N/A

Person examining contents:

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Date: 1/10/22 /Initials: NK

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Labeled By Initials: SKW

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☐Yes ☒No ☐N/A	2. proj. name 1/10/22 NK
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD:	☐Yes ☒No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
Trip Blank Present:	☐Yes ☐No ☒N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Page 2 of 2

Report of Analysis

Pace Analytical Services, LLC
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Brian Basten

Project Name: 1162-013

Project Number: 40239263

Lot Number:**XA12032**

Date Completed:01/19/2022

01/19/2022 3:59 PM
Approved and released by:
Project Manager II: **Edward Barnett**

Case Narrative
Pace Analytical Services, LLC
Lot Number: XA12032

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

Where applicable, all soil sample results (including LOQ and DL if requested) are corrected for dry weight unless flagged with a "W" qualifier.

If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

PFAS

The continuing calibration verification (CCV) associated with samples XA12032-001, XA12032-002, XA12032-003, XA12032-004, XA12032-005, XA12032-006, XA12032-007, XA12032-008 and XA12032-009 for analyte PFHxDA EIS recovered above the upper control limit. The associated target analyte passed; therefore, the data has been reported.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the Pace Quality Assurance Management Plan (QAMP), applicable standard operating procedures (SOPs), the 2003 NELAC standard, and Pace policies. Additionally, the DoD QSM version 5.3 has been followed for these samples, and specifically Table B-15 was followed for all PFAS samples. Any exceptions to the QAMP, SOPs, NELAC standards, the DoD QSM, or policies are qualified on the results page or discussed below.

Correction factors (CF) are used to calculate the original sample concentration. The CF is the inverse of the concentration factor (sample volume / extract final volume) times the dilution factor (DF). For undiluted analysis, the extract is prepared for injection by adding 182 uL of sample extract + 8 uL of reagent water + 10 uL of internal standard solution to a polypropylene autosampler vial. An extra correction factor of 0.91 (182 uL / 200 uL = 0.91) applies. The CF is calculated as follows:

CF = DF * FV / Ws/S/1000

FV is volume of extract (mL)
Ws is initial sample weight (gram)
S is %Solids
DF is dilution factor. For undiluted analysis, DF = 1/0.91.

Concentration (ug/kg) = Cs*CF,

$$C_s = \frac{\left(\frac{(A_s x C_{is})}{A_{is}}\right) - B}{M1}$$

Where

C_s is on column concentration of target analyte in the sample (ng/L)
C_{is} is concentration of internal standard in the sample (ng/L)
A_s is peak response of target analyte in the sample
A_{is} is peak response of internal standard in the sample
M1 is the average RF from ICAL or the slope from linear regression ICAL
B is the y-intercept from the ICAL

Sample Summary

Pace Analytical Services, LLC

Lot Number: XA12032

Project Name: 1162-013

Project Number: 40239263

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	B-20 (0-4')	Solid	01/09/2022 1010	01/12/2022
002	B-20 (6-8')	Solid	01/09/2022 1030	01/12/2022
003	B-21 (0-4')	Solid	01/09/2022 1120	01/12/2022
004	B-21 (6-8')	Solid	01/09/2022 1130	01/12/2022
005	B-22 (0-4')	Solid	01/09/2022 1220	01/12/2022
006	B-22 (6-8')	Solid	01/09/2022 1235	01/12/2022
007	B-23 (0-4')	Solid	01/09/2022 1340	01/12/2022
008	B-23 (6-8')	Solid	01/09/2022 1350	01/12/2022
009	B-24 (0-4')	Solid	01/09/2022 1455	01/12/2022
010	B-24 (6-8')	Solid	01/09/2022 1505	01/12/2022
011	B-25 (0-4')	Solid	01/09/2022 1630	01/12/2022
012	B-25 (6-8')	Solid	01/09/2022 1640	01/12/2022

(12 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: XA12032

Project Name: 1162-013

Project Number: 40239263

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	B-20 (0-4')	Solid	PFOS	PFAS by ID	1.0	J	ug/kg	5
003	B-21 (0-4')	Solid	PFOS	PFAS by ID	2.9		ug/kg	9
004	B-21 (6-8')	Solid	PFHxS	PFAS by ID	1.2		ug/kg	11
004	B-21 (6-8')	Solid	PFOA	PFAS by ID	0.24	J	ug/kg	11
004	B-21 (6-8')	Solid	PFOS	PFAS by ID	1.3		ug/kg	11
005	B-22 (0-4')	Solid	PFBS	PFAS by ID	0.15	J	ug/kg	13
005	B-22 (0-4')	Solid	PFHpS	PFAS by ID	0.63	J	ug/kg	13
005	B-22 (0-4')	Solid	PFHxS	PFAS by ID	1.1	J	ug/kg	13
005	B-22 (0-4')	Solid	PFOA	PFAS by ID	1.1	J	ug/kg	13
005	B-22 (0-4')	Solid	PFOS	PFAS by ID	42		ug/kg	13
006	B-22 (6-8')	Solid	PFHxS	PFAS by ID	0.19	J	ug/kg	15
006	B-22 (6-8')	Solid	PFOS	PFAS by ID	7.0		ug/kg	15
007	B-23 (0-4')	Solid	PFOS	PFAS by ID	40		ug/kg	17
008	B-23 (6-8')	Solid	6:2 FTS	PFAS by ID	0.67	J	ug/kg	19
008	B-23 (6-8')	Solid	PFOS	PFAS by ID	24		ug/kg	19
009	B-24 (0-4')	Solid	PFOS	PFAS by ID	5.3		ug/kg	21
010	B-24 (6-8')	Solid	PFBS	PFAS by ID	0.17	J	ug/kg	23
010	B-24 (6-8')	Solid	PFHpS	PFAS by ID	0.79	J	ug/kg	23
010	B-24 (6-8')	Solid	PFPeS	PFAS by ID	0.36	J	ug/kg	23
010	B-24 (6-8')	Solid	PFHxS	PFAS by ID	3.7		ug/kg	23
010	B-24 (6-8')	Solid	PFOA	PFAS by ID	0.54	J	ug/kg	23
010	B-24 (6-8')	Solid	PFOS	PFAS by ID	42		ug/kg	23
011	B-25 (0-4')	Solid	PFOS	PFAS by ID	3.4		ug/kg	25

(23 detections)

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-001
Description: B-20 (0-4') | Matrix: Solid
Date Sampled: 01/09/2022 1010 | Project Name: 1162-013 | % Solids: 77.0 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2051	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.3	0.18	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.3	0.19	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.3	0.31	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.3	0.35	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.3	0.25	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.6	0.66	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.3	0.17	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.3	0.41	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.3	0.33	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.3	0.26	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.3	0.40	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.3	0.45	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.3	0.38	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.25	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.25	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.29	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.47	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.22	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.0	J	1.1	0.41	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		76	25-150
13C2_6:2FTS		90	25-150
13C2_8:2FTS		88	25-150
13C2_PFDoA		77	25-150
13C2_PFTeDA		70	25-150
13C3_PFBS		82	25-150
13C3_PFHxS		80	25-150
13C3-HFPO-DA		90	25-150
13C4_PFBA		77	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-001
Description: B-20 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1010	Project Name: 1162-013	% Solids: 77.0 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		80	25-150
13C5_PFHxA		78	25-150
13C5_PFPeA		81	25-150
13C6_PFDA		80	25-150
13C7_PFUdA		83	25-150
13C8_PFOA		75	25-150
13C8_PFOS		79	25-150
13C8_PFOSA		83	10-150
13C9_PFNA		81	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		87	25-150
d9-EtFOSE		81	10-150
d-MeFOSA		88	10-150
d3-MeFOSAA		80	25-150
d7-MeFOSE		82	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-002
Description: B-20 (6-8') | Matrix: Solid
Date Sampled: 01/09/2022 1030 | Project Name: 1162-013 | % Solids: 81.5 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2122	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.2	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.2	0.19	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.2	0.30	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.2	0.33	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.2	0.24	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.3	0.63	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.2	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.2	0.39	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.2	0.31	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.2	0.25	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.2	0.38	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.2	0.43	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.2	0.36	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.28	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.45	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		1.1	0.39	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		55	25-150
13C2_6:2FTS		81	25-150
13C2_8:2FTS		69	25-150
13C2_PFDoA		70	25-150
13C2_PFTeDA		62	25-150
13C3_PFBS		70	25-150
13C3_PFHxS		72	25-150
13C3-HFPO-DA		73	25-150
13C4_PFBA		67	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-002
Description: B-20 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1030	Project Name: 1162-013	% Solids: 81.5 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		70	25-150
13C5_PFHxA		62	25-150
13C5_PFPeA		68	25-150
13C6_PFDA		68	25-150
13C7_PFUdA		71	25-150
13C8_PFOA		71	25-150
13C8_PFOS		69	25-150
13C8_PFOSA		73	10-150
13C9_PFNA		70	25-150
d-EtFOSA		28	10-150
d5-EtFOSAA		68	25-150
d9-EtFOSE		71	10-150
d-MeFOSA		68	10-150
d3-MeFOSAA		65	25-150
d7-MeFOSE		69	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-003
Description: B-21 (0-4') | Matrix: Solid
Date Sampled: 01/09/2022 1120 | Project Name: 1162-013 | % Solids: 89.3 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2133	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.1	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.1	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.1	0.29	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.1	0.32	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.1	0.23	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.2	0.61	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.1	0.38	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.1	0.31	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.1	0.24	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.1	0.37	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.1	0.42	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.1	0.35	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.27	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.44	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.1	0.22	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	2.9		1.1	0.38	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		96	25-150
13C2_6:2FTS		106	25-150
13C2_8:2FTS		106	25-150
13C2_PFDoA		96	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		100	25-150
13C3_PFHxS		102	25-150
13C3-HFPO-DA		110	25-150
13C4_PFBA		94	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-003
Description: B-21 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1120	Project Name: 1162-013	% Solids: 89.3 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		98	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		97	25-150
13C6_PFDA		94	25-150
13C7_PFUdA		100	25-150
13C8_PFOA		97	25-150
13C8_PFOS		100	25-150
13C8_PFOSA		101	10-150
13C9_PFNA		98	25-150
d-EtFOSA		111	10-150
d5-EtFOSAA		99	25-150
d9-EtFOSE		108	10-150
d-MeFOSA		104	10-150
d3-MeFOSAA		95	25-150
d7-MeFOSE		109	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC			Laboratory ID: XA12032-004
Description: B-21 (6-8')			Matrix: Solid
Date Sampled: 01/09/2022 1130	Project Name: 1162-013		% Solids: 82.6 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2144	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.3	0.18	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.3	0.19	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.3	0.31	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.3	0.35	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.3	0.25	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.5	0.66	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.3	0.17	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.3	0.40	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.3	0.33	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.3	0.26	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.3	0.39	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.3	0.45	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.3	0.38	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.25	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.25	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.29	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1.2		1.1	0.20	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.47	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	0.24	J	1.1	0.24	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.21	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	1.3		1.1	0.40	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		90	25-150
13C2_6:2FTS		112	25-150
13C2_8:2FTS		102	25-150
13C2_PFDoA		100	25-150
13C2_PFTeDA		93	25-150
13C3_PFBS		103	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		105	25-150
13C4_PFBA		95	25-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-004
Description: B-21 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1130	Project Name: 1162-013	% Solids: 82.6 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		100	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		99	25-150
13C7_PFUdA		102	25-150
13C8_PFOA		100	25-150
13C8_PFOS		102	25-150
13C8_PFOSA		104	10-150
13C9_PFNA		101	25-150
d-EtFOSA		106	10-150
d5-EtFOSAA		111	25-150
d9-EtFOSE		102	10-150
d-MeFOSA		116	10-150
d3-MeFOSAA		106	25-150
d7-MeFOSE		102	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-005
Description: B-22 (0-4') | Matrix: Solid
Date Sampled: 01/09/2022 1220 | Project Name: 1162-013 | % Solids: 75.9 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2154	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.4	0.19	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.4	0.20	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.4	0.32	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.4	0.36	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.4	0.26	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.7	0.68	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.4	0.18	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.4	0.42	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.4	0.34	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.4	0.27	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.4	0.41	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.4	0.47	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.4	0.39	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	0.15	J	1.2	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	0.63	J	1.2	0.21	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.2	0.30	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	1.1	J	1.2	0.21	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.2	0.49	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.2	0.19	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.2	0.17	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.2	0.18	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	1.1	J	1.2	0.25	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.2	0.19	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	42		1.2	0.42	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		72	25-150
13C2_6:2FTS		83	25-150
13C2_8:2FTS		76	25-150
13C2_PFDoA		74	25-150
13C2_PFTeDA		64	25-150
13C3_PFBS		77	25-150
13C3_PFHxS		78	25-150
13C3-HFPO-DA		82	25-150
13C4_PFBA		74	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-005
Description: B-22 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1220	Project Name: 1162-013	% Solids: 75.9 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		73	25-150
13C5_PFHxA		73	25-150
13C5_PFPeA		76	25-150
13C6_PFDA		71	25-150
13C7_PFUdA		76	25-150
13C8_PFOA		74	25-150
13C8_PFOS		77	25-150
13C8_PFOSA		79	10-150
13C9_PFNA		73	25-150
d-EtFOSA		74	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		81	10-150
d-MeFOSA		79	10-150
d3-MeFOSAA		83	25-150
d7-MeFOSE		71	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-006
Description: B-22 (6-8') | Matrix: Solid
Date Sampled: 01/09/2022 1235 | Project Name: 1162-013 | % Solids: 81.9 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2205	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.2	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.2	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.2	0.30	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.2	0.33	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.2	0.23	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.3	0.63	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.2	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.2	0.39	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.2	0.31	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.2	0.25	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.2	0.38	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.2	0.43	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.2	0.36	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.28	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	0.19	J	1.1	0.19	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.45	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7.0		1.1	0.39	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		92	25-150
13C2_6:2FTS		104	25-150
13C2_8:2FTS		92	25-150
13C2_PFDoA		99	25-150
13C2_PFTeDA		88	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		94	25-150
13C3-HFPO-DA		107	25-150
13C4_PFBA		92	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-006
Description: B-22 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1235	Project Name: 1162-013	% Solids: 81.9 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		94	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		92	25-150
13C6_PFDA		90	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		92	25-150
13C8_PFOS		99	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		96	25-150
d-EtFOSA		99	10-150
d5-EtFOSAA		104	25-150
d9-EtFOSE		98	10-150
d-MeFOSA		93	10-150
d3-MeFOSAA		94	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-007
Description: B-23 (0-4') | Matrix: Solid
Date Sampled: 01/09/2022 1340 | Project Name: 1162-013 | % Solids: 86.1 | 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2216	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.0	0.16	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.0	0.17	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.0	0.27	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.0	0.30	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.0	0.21	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		3.9	0.57	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.0	0.15	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.0	0.35	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.0	0.28	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.0	0.22	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.0	0.34	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.0	0.39	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.0	0.33	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		0.98	0.13	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		0.98	0.22	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		0.98	0.17	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		0.98	0.22	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		0.98	0.17	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		0.98	0.18	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		0.98	0.25	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		0.98	0.17	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		0.98	0.41	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		0.98	0.16	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		0.98	0.17	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		0.98	0.14	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		0.98	0.18	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		0.98	0.15	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		0.98	0.21	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		0.98	0.16	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		0.98	0.19	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		0.98	0.17	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		0.98	0.18	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	40		0.98	0.35	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		97	25-150
13C2_6:2FTS		120	25-150
13C2_8:2FTS		101	25-150
13C2_PFDoA		96	25-150
13C2_PFTeDA		86	25-150
13C3_PFBS		101	25-150
13C3_PFHxS		98	25-150
13C3-HFPO-DA		106	25-150
13C4_PFBA		97	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-007
Description: B-23 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1340	Project Name: 1162-013	% Solids: 86.1 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		100	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		97	25-150
13C7_PFUdA		100	25-150
13C8_PFOA		97	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		102	10-150
13C9_PFNA		93	25-150
d-EtFOSA		99	10-150
d5-EtFOSAA		123	25-150
d9-EtFOSE		105	10-150
d-MeFOSA		99	10-150
d3-MeFOSAA		116	25-150
d7-MeFOSE		94	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-008
Description: B-23 (6-8') | Matrix: Solid
Date Sampled: 01/09/2022 1350 | Project Name: 1162-013 | % Solids: 85.8 | 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2226	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.1	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.1	0.28	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	0.67	J	2.1	0.32	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.1	0.22	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.1	0.60	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.1	0.15	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.1	0.37	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.1	0.30	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.1	0.24	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.1	0.36	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.1	0.41	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.1	0.34	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.0	0.13	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.0	0.23	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.0	0.27	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.0	0.43	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.0	0.16	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.0	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.0	0.15	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.0	0.22	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.0	0.16	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.0	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.0	0.18	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.0	0.19	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	24		1.0	0.37	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		88	25-150
13C2_6:2FTS		108	25-150
13C2_8:2FTS		100	25-150
13C2_PFDoA		91	25-150
13C2_PFTeDA		88	25-150
13C3_PFBS		99	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBA		91	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-008
Description: B-23 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1350	Project Name: 1162-013	% Solids: 85.8 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		97	25-150
13C5_PFHxA		90	25-150
13C5_PFPeA		91	25-150
13C6_PFDA		94	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		96	25-150
13C8_PFOS		98	25-150
13C8_PFOSA		100	10-150
13C9_PFNA		98	25-150
d-EtFOSA		109	10-150
d5-EtFOSAA		112	25-150
d9-EtFOSE		101	10-150
d-MeFOSA		97	10-150
d3-MeFOSAA		107	25-150
d7-MeFOSE		98	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC			Laboratory ID: XA12032-009
Description: B-24 (0-4')			Matrix: Solid
Date Sampled: 01/09/2022 1455	Project Name: 1162-013		% Solids: 85.1 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263		

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/14/2022 2237	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.3	0.18	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.3	0.20	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.3	0.32	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.3	0.35	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.3	0.25	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.6	0.67	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.3	0.17	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.3	0.41	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.3	0.33	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.3	0.26	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.3	0.40	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.3	0.46	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.3	0.38	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.2	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.2	0.25	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.2	0.30	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.2	0.48	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.2	0.18	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.2	0.16	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.2	0.17	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.2	0.24	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.2	0.18	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	5.3		1.2	0.41	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		92	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		96	25-150
13C2_PFDoA		96	25-150
13C2_PFTeDA		86	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBA		93	25-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-009
Description: B-24 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1455	Project Name: 1162-013	% Solids: 85.1 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		98	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		86	25-150
13C7_PFUdA		96	25-150
13C8_PFOA		98	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		99	10-150
13C9_PFNA		99	25-150
d-EtFOSA		96	10-150
d5-EtFOSAA		109	25-150
d9-EtFOSE		102	10-150
d-MeFOSA		106	10-150
d3-MeFOSAA		109	25-150
d7-MeFOSE		98	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-010
Description: B-24 (6-8') | Matrix: Solid
Date Sampled: 01/09/2022 1505 | Project Name: 1162-013 | % Solids: 77.5 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/18/2022 1208	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.4	0.19	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.4	0.20	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.4	0.32	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.4	0.36	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.4	0.26	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.7	0.69	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.4	0.18	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.4	0.42	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.4	0.34	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.4	0.27	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.4	0.41	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.4	0.47	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.4	0.40	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	0.17	J	1.2	0.15	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	0.79	J	1.2	0.21	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.2	0.26	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	0.36	J	1.2	0.22	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.2	0.31	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	3.7		1.2	0.21	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.2	0.49	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.2	0.19	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.2	0.21	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.2	0.17	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.2	0.18	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	0.54	J	1.2	0.25	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.2	0.19	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.2	0.20	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.2	0.22	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	42		1.2	0.42	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		100	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		93	25-150
13C2_PFDoA		96	25-150
13C2_PFTeDA		97	25-150
13C3_PFBS		92	25-150
13C3_PFHxS		84	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBA		87	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-010
Description: B-24 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1505	Project Name: 1162-013	% Solids: 77.5 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		81	25-150
13C5_PFHxA		86	25-150
13C5_PFPeA		84	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		94	25-150
13C8_PFOA		88	25-150
13C8_PFOS		96	25-150
13C8_PFOSA		97	10-150
13C9_PFNA		85	25-150
d-EtFOSA		93	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		100	10-150
d-MeFOSA		89	10-150
d3-MeFOSAA		78	25-150
d7-MeFOSE		102	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-011
Description: B-25 (0-4') | Matrix: Solid
Date Sampled: 01/09/2022 1630 | Project Name: 1162-013 | % Solids: 91.2 | 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/18/2022 1219	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		1.8	0.15	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		1.8	0.16	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		1.8	0.25	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		1.8	0.28	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		1.8	0.20	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		3.7	0.53	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		1.8	0.14	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		1.8	0.33	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		1.8	0.27	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		1.8	0.21	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		1.8	0.32	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		1.8	0.36	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		1.8	0.31	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		0.92	0.12	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		0.92	0.21	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		0.92	0.16	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		0.92	0.20	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		0.92	0.16	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		0.92	0.17	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		0.92	0.24	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		0.92	0.16	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		0.92	0.38	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		0.92	0.15	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		0.92	0.16	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		0.92	0.13	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		0.92	0.17	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		0.92	0.14	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		0.92	0.20	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		0.92	0.15	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		0.92	0.17	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		0.92	0.16	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		0.92	0.17	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3.4		0.92	0.33	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		110	25-150
13C2_8:2FTS		103	25-150
13C2_PFDoA		105	25-150
13C2_PFTeDA		100	25-150
13C3_PFBS		101	25-150
13C3_PFHxS		96	25-150
13C3-HFPO-DA		105	25-150
13C4_PFBA		96	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-011
Description: B-25 (0-4')		Matrix: Solid
Date Sampled: 01/09/2022 1630	Project Name: 1162-013	% Solids: 91.2 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		89	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		92	25-150
13C6_PFDA		93	25-150
13C7_PFUdA		99	25-150
13C8_PFOA		99	25-150
13C8_PFOS		105	25-150
13C8_PFOSA		103	10-150
13C9_PFNA		98	25-150
d-EtFOSA		101	10-150
d5-EtFOSAA		101	25-150
d9-EtFOSE		107	10-150
d-MeFOSA		96	10-150
d3-MeFOSAA		100	25-150
d7-MeFOSE		108	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC | Laboratory ID: XA12032-012
Description: B-25 (6-8') | Matrix: Solid
Date Sampled: 01/09/2022 1640 | Project Name: 1162-013 | % Solids: 81.9 | 01/13/2022 0152
Date Received: 01/12/2022 | Project Number: 40239263

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/18/2022 1230	MMM	01/13/2022 1837	28359

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		2.1	0.17	ug/kg	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		2.1	0.18	ug/kg	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		2.1	0.29	ug/kg	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		2.1	0.33	ug/kg	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		2.1	0.23	ug/kg	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		4.2	0.62	ug/kg	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		2.1	0.16	ug/kg	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		2.1	0.38	ug/kg	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		2.1	0.31	ug/kg	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		2.1	0.24	ug/kg	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		2.1	0.37	ug/kg	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		2.1	0.42	ug/kg	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		2.1	0.35	ug/kg	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		1.1	0.14	ug/kg	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		1.1	0.24	ug/kg	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		1.1	0.27	ug/kg	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		1.1	0.44	ug/kg	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		1.1	0.19	ug/kg	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		1.1	0.15	ug/kg	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		1.1	0.16	ug/kg	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		1.1	0.23	ug/kg	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		1.1	0.17	ug/kg	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		1.1	0.18	ug/kg	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		1.1	0.20	ug/kg	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		1.1	0.38	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		101	25-150
13C2_6:2FTS		105	25-150
13C2_8:2FTS		106	25-150
13C2_PFDoA		95	25-150
13C2_PFTeDA		99	25-150
13C3_PFBS		97	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBA		88	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XA12032-012
Description: B-25 (6-8')		Matrix: Solid
Date Sampled: 01/09/2022 1640	Project Name: 1162-013	% Solids: 81.9 01/13/2022 0152
Date Received: 01/12/2022	Project Number: 40239263	

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		87	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		89	25-150
13C6_PFDA		91	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		91	25-150
13C8_PFOS		95	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		92	25-150
d-EtFOSA		106	10-150
d5-EtFOSAA		105	25-150
d9-EtFOSE		98	10-150
d-MeFOSA		90	10-150
d3-MeFOSAA		90	25-150
d7-MeFOSE		102	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: XQ28359-001
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	2.0	0.16	ug/kg	01/14/2022 1926
11Cl-PF3OUdS	ND		1	2.0	0.17	ug/kg	01/14/2022 1926
8:2 FTS	ND		1	2.0	0.27	ug/kg	01/14/2022 1926
6:2 FTS	ND		1	2.0	0.31	ug/kg	01/14/2022 1926
4:2 FTS	ND		1	2.0	0.22	ug/kg	01/14/2022 1926
GenX	ND		1	4.0	0.58	ug/kg	01/14/2022 1926
ADONA	ND		1	2.0	0.15	ug/kg	01/14/2022 1926
EtFOSA	ND		1	2.0	0.36	ug/kg	01/14/2022 1926
EtFOSAA	ND		1	2.0	0.29	ug/kg	01/14/2022 1926
EtFOSE	ND		1	2.0	0.23	ug/kg	01/14/2022 1926
MeFOSA	ND		1	2.0	0.35	ug/kg	01/14/2022 1926
MeFOSAA	ND		1	2.0	0.40	ug/kg	01/14/2022 1926
MeFOSE	ND		1	2.0	0.33	ug/kg	01/14/2022 1926
PFBS	ND		1	1.0	0.13	ug/kg	01/14/2022 1926
PFDS	ND		1	1.0	0.22	ug/kg	01/14/2022 1926
PFHpS	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFNS	ND		1	1.0	0.22	ug/kg	01/14/2022 1926
PFOSA	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFPeS	ND		1	1.0	0.19	ug/kg	01/14/2022 1926
PFDOS	ND		1	1.0	0.26	ug/kg	01/14/2022 1926
PFHxS	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFBA	ND		1	1.0	0.42	ug/kg	01/14/2022 1926
PFDA	ND		1	1.0	0.16	ug/kg	01/14/2022 1926
PFDoA	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFHpA	ND		1	1.0	0.14	ug/kg	01/14/2022 1926
PFHxA	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFNA	ND		1	1.0	0.15	ug/kg	01/14/2022 1926
PFOA	ND		1	1.0	0.21	ug/kg	01/14/2022 1926
PFPeA	ND		1	1.0	0.16	ug/kg	01/14/2022 1926
PFTeDA	ND		1	1.0	0.19	ug/kg	01/14/2022 1926
PFTrDA	ND		1	1.0	0.17	ug/kg	01/14/2022 1926
PFUdA	ND		1	1.0	0.18	ug/kg	01/14/2022 1926
PFOS	ND		1	1.0	0.36	ug/kg	01/14/2022 1926

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		90	25-150
13C2_6:2FTS		111	25-150
13C2_8:2FTS		102	25-150
13C2_PFDoA		96	25-150
13C2_PFTeDA		96	25-150
13C3_PFBS		99	25-150
13C3_PFHxS		99	25-150
13C3-HFPO-DA		111	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: XQ28359-001
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		96	25-150
13C4_PFHpA		95	25-150
13C5_PFHxA		91	25-150
13C5_PFPeA		98	25-150
13C6_PFDA		97	25-150
13C7_PFUdA		103	25-150
13C8_PFOA		99	25-150
13C8_PFOS		100	25-150
13C8_PFOSA		100	10-150
13C9_PFNA		96	25-150
d-EtFOSA		104	10-150
d5-EtFOSAA		118	25-150
d9-EtFOSE		100	10-150
d-MeFOSA		98	10-150
d3-MeFOSAA		117	25-150
d7-MeFOSE		103	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ28359-002
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	1.9	1.8		1	97	50-150	01/14/2022 1936
11Cl-PF3OUdS	1.9	2.0		1	107	50-150	01/14/2022 1936
8:2 FTS	1.9	1.7		1	91	50-150	01/14/2022 1936
6:2 FTS	1.9	1.6		1	86	50-150	01/14/2022 1936
4:2 FTS	1.9	1.6		1	86	50-150	01/14/2022 1936
GenX	4.0	4.0		1	100	50-150	01/14/2022 1936
ADONA	1.9	2.1		1	110	50-150	01/14/2022 1936
EtFOSA	2.0	2.2		1	112	50-150	01/14/2022 1936
EtFOSAA	2.0	1.9		1	94	50-150	01/14/2022 1936
EtFOSE	2.0	2.0		1	98	50-150	01/14/2022 1936
MeFOSA	2.0	1.6		1	79	50-150	01/14/2022 1936
MeFOSAA	2.0	1.4		1	70	50-150	01/14/2022 1936
MeFOSE	2.0	1.8		1	90	50-150	01/14/2022 1936
PFBS	1.8	1.7		1	97	50-150	01/14/2022 1936
PFDS	1.9	1.5		1	81	50-150	01/14/2022 1936
PFHpS	1.9	1.8		1	96	50-150	01/14/2022 1936
PFNS	1.9	1.9		1	97	50-150	01/14/2022 1936
PFOSA	2.0	1.9		1	95	50-150	01/14/2022 1936
PFPeS	1.9	1.9		1	99	50-150	01/14/2022 1936
PFDOS	1.9	2.2		1	116	50-150	01/14/2022 1936
PFHxS	1.8	2.1		1	114	50-150	01/14/2022 1936
PFBA	2.0	1.8		1	92	50-150	01/14/2022 1936
PFDA	2.0	2.0		1	102	50-150	01/14/2022 1936
PFDoA	2.0	2.0		1	99	50-150	01/14/2022 1936
PFHpA	2.0	2.0		1	98	50-150	01/14/2022 1936
PFHxA	2.0	2.0		1	98	50-150	01/14/2022 1936
PFNA	2.0	1.9		1	97	50-150	01/14/2022 1936
PFOA	2.0	1.9		1	96	50-150	01/14/2022 1936
PFPeA	2.0	1.9		1	97	50-150	01/14/2022 1936
PFTeDA	2.0	2.0		1	102	50-150	01/14/2022 1936
PFTrDA	2.0	1.8		1	92	50-150	01/14/2022 1936
PFUdA	2.0	1.9		1	94	50-150	01/14/2022 1936
PFOS	1.9	1.8		1	95	50-150	01/14/2022 1936

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		94	25-150
13C2_6:2FTS		114	25-150
13C2_8:2FTS		114	25-150
13C2_PFDoA		99	25-150
13C2_PFTeDA		97	25-150
13C3_PFBS		102	25-150
13C3_PFHxS		96	25-150
13C3-HFPO-DA		102	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ28359-002
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		97	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		96	25-150
13C5_PFPeA		96	25-150
13C6_PFDA		97	25-150
13C7_PFUdA		103	25-150
13C8_PFOA		97	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		103	10-150
13C9_PFNA		99	25-150
d-EtFOSA		110	10-150
d5-EtFOSAA		118	25-150
d9-EtFOSE		99	10-150
d-MeFOSA		110	10-150
d3-MeFOSAA		116	25-150
d7-MeFOSE		102	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Sample ID: XA12032-001MS
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	ND	2.4	2.4		1	103	50-150	01/14/2022 2101
11Cl-PF3OUdS	ND	2.4	2.5		1	105	50-150	01/14/2022 2101
8:2 FTS	ND	2.4	2.2		1	90	50-150	01/14/2022 2101
6:2 FTS	ND	2.4	2.3		1	97	50-150	01/14/2022 2101
4:2 FTS	ND	2.4	2.6		1	111	50-150	01/14/2022 2101
GenX	ND	5.1	4.6		1	91	50-150	01/14/2022 2101
ADONA	ND	2.4	2.8		1	117	50-150	01/14/2022 2101
EtFOSA	ND	2.5	2.6		1	103	50-150	01/14/2022 2101
EtFOSAA	ND	2.5	2.1		1	82	50-150	01/14/2022 2101
EtFOSE	ND	2.5	1.8		1	72	50-150	01/14/2022 2101
MeFOSA	ND	2.5	2.7		1	107	50-150	01/14/2022 2101
MeFOSAA	ND	2.5	2.5		1	100	50-150	01/14/2022 2101
MeFOSE	ND	2.5	2.2		1	86	50-150	01/14/2022 2101
PFBS	ND	2.2	2.2		1	98	50-150	01/14/2022 2101
PFDS	ND	2.5	2.4		1	96	50-150	01/14/2022 2101
PFHpS	ND	2.4	2.6		1	106	50-150	01/14/2022 2101
PFNS	ND	2.4	2.6		1	106	50-150	01/14/2022 2101
PFOSA	ND	2.5	2.3		1	92	50-150	01/14/2022 2101
PFPeS	ND	2.4	2.4		1	100	50-150	01/14/2022 2101
PFDOS	ND	2.5	2.9		1	119	50-150	01/14/2022 2101
PFHxS	ND	2.3	2.4		1	102	50-150	01/14/2022 2101
PFBA	ND	2.5	2.4		1	94	50-150	01/14/2022 2101
PFDA	ND	2.5	2.6		1	101	50-150	01/14/2022 2101
PFDoA	ND	2.5	2.6		1	101	50-150	01/14/2022 2101
PFHpA	ND	2.5	2.6		1	101	50-150	01/14/2022 2101
PFHxA	ND	2.5	2.5		1	98	50-150	01/14/2022 2101
PFNA	ND	2.5	2.5		1	98	50-150	01/14/2022 2101
PFOA	ND	2.5	2.5		1	98	50-150	01/14/2022 2101
PFPeA	ND	2.5	2.6		1	103	50-150	01/14/2022 2101
PFTeDA	ND	2.5	2.5		1	98	50-150	01/14/2022 2101
PFTrDA	ND	2.5	2.7		1	106	50-150	01/14/2022 2101
PFUdA	ND	2.5	2.4		1	95	50-150	01/14/2022 2101
PFOS	1.0	2.3	3.0		1	85	50-150	01/14/2022 2101

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		89	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		97	25-150
13C2_PFDoA		91	25-150
13C2_PFTeDA		85	25-150
13C3_PFBS		94	25-150
13C3_PFHxS		89	25-150
13C3-HFPO-DA		104	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Sample ID: XA12032-001MS
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		93	25-150
13C4_PFHpA		96	25-150
13C5_PFHxA		88	25-150
13C5_PFPeA		94	25-150
13C6_PFDA		93	25-150
13C7_PFUdA		94	25-150
13C8_PFOA		93	25-150
13C8_PFOS		94	25-150
13C8_PFOSA		96	10-150
13C9_PFNA		95	25-150
d-EtFOSA		107	10-150
d5-EtFOSAA		105	25-150
d9-EtFOSE		108	10-150
d-MeFOSA		87	10-150
d3-MeFOSAA		108	25-150
d7-MeFOSE		112	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Sample ID: XA12032-001MD
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	%Rec Limit	% RPD Limit	Analysis Date
9Cl-PF3ONS	ND	2.1	2.0		1	98	18	50-150	30	01/14/2022 2112
11Cl-PF3OUdS	ND	2.1	2.3		1	109	9.2	50-150	30	01/14/2022 2112
8:2 FTS	ND	2.1	2.4		1	111	8.7	50-150	30	01/14/2022 2112
6:2 FTS	ND	2.1	1.7		1	81	30	50-150	30	01/14/2022 2112
4:2 FTS	ND	2.1	2.4		1	113	11	50-150	30	01/14/2022 2112
GenX	ND	4.5	4.3		1	95	8.1	50-150	30	01/14/2022 2112
ADONA	ND	2.1	2.4		1	113	17	50-150	30	01/14/2022 2112
EtFOSA	ND	2.2	2.4		1	110	7.1	50-150	30	01/14/2022 2112
EtFOSAA	ND	2.2	1.9		1	85	9.5	50-150	30	01/14/2022 2112
EtFOSE	ND	2.2	1.8		1	81	1.6	50-150	30	01/14/2022 2112
MeFOSA	ND	2.2	2.7		1	122	0.18	50-150	30	01/14/2022 2112
MeFOSAA	ND	2.2	2.4		1	107	6.9	50-150	30	01/14/2022 2112
MeFOSE	ND	2.2	2.6		1	114	16	50-150	30	01/14/2022 2112
PFBS	ND	2.0	1.9		1	99	12	50-150	30	01/14/2022 2112
PFDS	ND	2.2	2.1		1	97	12	50-150	30	01/14/2022 2112
PFHpS	ND	2.1	2.1		1	100	18	50-150	30	01/14/2022 2112
PFNS	ND	2.1	2.2		1	105	15	50-150	30	01/14/2022 2112
PFOSA	ND	2.2	2.0		1	89	16	50-150	30	01/14/2022 2112
PFPeS	ND	2.1	2.2		1	105	8.2	50-150	30	01/14/2022 2112
PFDOS	ND	2.2	2.5		1	118	14	50-150	30	01/14/2022 2112
PFHxS	ND	2.0	2.1		1	103	12	50-150	30	01/14/2022 2112
PFBA	ND	2.2	2.3		1	101	5.9	50-150	30	01/14/2022 2112
PFDA	ND	2.2	2.4		1	109	5.1	50-150	30	01/14/2022 2112
PFDoA	ND	2.2	2.5		1	111	3.7	50-150	30	01/14/2022 2112
PFHpA	ND	2.2	2.3		1	104	10	50-150	30	01/14/2022 2112
PFHxA	ND	2.2	2.2		1	101	10	50-150	30	01/14/2022 2112
PFNA	ND	2.2	2.1		1	96	15	50-150	30	01/14/2022 2112
PFOA	ND	2.2	2.3		1	104	7.3	50-150	30	01/14/2022 2112
PFPeA	ND	2.2	2.3		1	104	11	50-150	30	01/14/2022 2112
PFTeDA	ND	2.2	2.5		1	112	0.41	50-150	30	01/14/2022 2112
PFTrDA	ND	2.2	2.5		1	112	7.3	50-150	30	01/14/2022 2112
PFUdA	ND	2.2	2.4		1	108	0.61	50-150	30	01/14/2022 2112
PFOS	1.0	2.1	2.9		1	92	3.4	50-150	30	01/14/2022 2112

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		80	25-150
13C2_6:2FTS		101	25-150
13C2_8:2FTS		86	25-150
13C2_PFDoA		81	25-150
13C2_PFTeDA		77	25-150
13C3_PFBS		91	25-150
13C3_PFHxS		85	25-150
13C3-HFPO-DA		100	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Sample ID: XA12032-001MD
Batch: 28359
Analytical Method: PFAS by ID SOP

Matrix: Solid
Prep Method: SOP SPE
Prep Date: 01/13/2022 1837

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		83	25-150
13C4_PFHpA		90	25-150
13C5_PFHxA		84	25-150
13C5_PFPeA		83	25-150
13C6_PFDA		83	25-150
13C7_PFUdA		85	25-150
13C8_PFOA		85	25-150
13C8_PFOS		90	25-150
13C8_PFOSA		94	10-150
13C9_PFNA		88	25-150
d-EtFOSA		100	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		97	10-150
d-MeFOSA		86	10-150
d3-MeFOSAA		80	25-150
d7-MeFOSE		91	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody

and

Miscellaneous Documents

Internal Transfer Chain of Custody

Pace Analytical

www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: WI

Cert. Needed: [X] Yes ☐ No

Owner Received Date: 1/10/2022 Results Requested By: 1/24/2022

Workorder: 40239263 **Workorder Name:** 1162-013

Report To	Subcontract To	Requested Analysis
Brian Basten Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	Pace Analytical West Columbia 106 Vantage Point Drive West Columbia, SC 29172 Phone (803)791-9700	PFAS WI 33

XA12032

5192

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved	Preserved Containers						LAB USE ONLY
1	B-20 (0-4')	PS	1/9/2022 10:10	40239263001	Solid	1						X	
2	B-20 (3-5')	PS	1/9/2022 10:30	40239263002	Solid	1						X	
3	B-21 (0-4')	PS	1/9/2022 11:20	40239263003	Solid	1						X	
4	B-21 (5-6)	PS	1/9/2022 11:30	40239263004	Solid	1						X	
5	B-22 (0-4')	PS	1/9/2022 12:20	40239263005	Solid	1						X	
6	B-22 (5-8')	PS	1/9/2022 12:35	40239263006	Solid	1						X	
7	B-23 (0-4')	PS	1/9/2022 13:40	40239263007	Solid	1						X	
8	B-23 (5-8')	PS	1/9/2022 13:50	40239263008	Solid	1						X	
9	B-24 (0-4')	PS	1/9/2022 14:55	40239263009	Solid	1						X	
10	B-24 (3-8')	PS	1/9/2022 15:05	40239263010	Solid	1						X	
11	B-25 (0-4')	PS	1/9/2022 16:30	40239263011	Solid	1						X	
12	B-25 (5-8')	PS	1/9/2022 16:40	40239263012	Solid	1						X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	1/11/22 1600		
2				
3	JPS	1/12/22 1248	[signature]	1/12/22 1248

Comments

Cooler Temperature on Receipt 2.2 °C | Custody Seal Y or N | Received on Ice Y or N | Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: PACE

Cooler Inspected by/date: CBP / 1/12/2022 Lot #: XA12032

Means of receipt: ☐ Pace ☐ Client ☑ UPS ☐ FedEx ☐ Other:

☑ Yes	☐ No		1.	Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2.	If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 21-7661

2.2 / 2.2 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3.	If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4.	Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5.	Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6.	Were sample IDs listed on the COC?
☑ Yes	☐ No		7.	Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8.	Was collection date & time listed on the COC?
☑ Yes	☐ No		9.	Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10.	Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11.	Were tests to be performed listed on the COC?
☑ Yes	☐ No		12.	Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13.	Was adequate sample volume available?
☐ Yes	☑ No		14.	Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15.	Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16.	For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17.	Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18.	Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19.	Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20.	Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21.	Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID:, NA.

SR barcode labels applied by: CBP Date: 1/12/2022

Comments:

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

March 02, 2022

Nicole Laplant
ROBERT E. LEE & ASSOCIATES, IN
1250 Centennial Centre Blvd
Oneida, WI 54155

RE: Project: 1162-013
Pace Project No.: 40240181

Dear Nicole Laplant:

Enclosed are the analytical results for sample(s) received by the laboratory on February 02, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:
- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Basten
brian.basten@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Cody Applekamp, Robert E Lee & Associates, Inc.
Alan Gustafson, Robert E. Lee & Associates
Bruce Meissner, Robert E. Lee & Associates, Inc
Lori Rogers, Robert E Lee

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 1162-013
Pace Project No.: 40240181

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 1162-013
Pace Project No.: 40240181

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40240181001	**TW-20**	Water	02/02/22 14:59	02/02/22 16:50
40240181002	**TW-21**	Water	02/02/22 13:20	02/02/22 16:50
40240181003	**TW-22**	Water	02/02/22 11:15	02/02/22 16:50
40240181004	**TW-23**	Water	02/02/22 10:45	02/02/22 16:50
40240181005	**TW-24**	Water	02/02/22 14:20	02/02/22 16:50
40240181006	**TW-25**	Water	02/02/22 12:06	02/02/22 16:50
40240181007	**FIELD REAGENT BLANK**	Water	02/02/22 15:14	02/02/22 16:50
40240181008	**TRIP BLANK**	Water	02/02/22 15:20	02/02/22 16:50

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 1162-013
Pace Project No.: 40240181

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40240181001	**TW-20**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181002	**TW-21**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181003	**TW-22**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181004	**TW-23**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181005	**TW-24**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181006	**TW-25**	EPA 6010D	TXW	7
		EPA 7470	AJT	1
		EPA 8260	LAP	64
40240181008	**TRIP BLANK**	EPA 8260	JAV	64

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 1162-013
Pace Project No.: 40240181

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40240181001	**TW-20**					
EPA 6010D	Barium	1960	ug/L	25.0	02/10/22 10:33	
EPA 6010D	Cadmium	181	ug/L	25.0	02/10/22 10:33	
EPA 8260	1,1-Dichloroethane	542J	ug/L	625	02/08/22 18:18	
EPA 8260	1,1-Dichloroethene	867	ug/L	625	02/08/22 18:18	
EPA 8260	Trichloroethene	78300	ug/L	625	02/08/22 18:18	
EPA 8260	Vinyl chloride	47800	ug/L	625	02/08/22 18:18	
EPA 8260	cis-1,2-Dichloroethene	183000	ug/L	625	02/08/22 18:18	
EPA 8260	trans-1,2-Dichloroethene	2660	ug/L	625	02/08/22 18:18	
40240181002	**TW-21**					
EPA 6010D	Barium	98.5	ug/L	5.0	02/10/22 08:58	
EPA 6010D	Chromium	3.7J	ug/L	10.0	02/10/22 08:58	
EPA 8260	1,1-Dichloroethene	14.8	ug/L	10.0	02/08/22 18:36	
EPA 8260	Trichloroethene	345	ug/L	10.0	02/08/22 18:36	
EPA 8260	Vinyl chloride	166	ug/L	10.0	02/08/22 18:36	
EPA 8260	cis-1,2-Dichloroethene	842	ug/L	10.0	02/08/22 18:36	
EPA 8260	trans-1,2-Dichloroethene	129	ug/L	10.0	02/08/22 18:36	
40240181003	**TW-22**					
EPA 6010D	Barium	260	ug/L	5.0	02/08/22 20:59	
EPA 8260	1,1-Dichloroethane	0.94J	ug/L	2.0	02/08/22 18:55	
EPA 8260	Trichloroethene	8.1	ug/L	2.0	02/08/22 18:55	
EPA 8260	Vinyl chloride	166	ug/L	2.0	02/08/22 18:55	
EPA 8260	cis-1,2-Dichloroethene	126	ug/L	2.0	02/08/22 18:55	
EPA 8260	trans-1,2-Dichloroethene	9.9	ug/L	2.0	02/08/22 18:55	
40240181004	**TW-23**					
EPA 6010D	Barium	173	ug/L	5.0	02/08/22 21:01	
EPA 6010D	Cadmium	1.7J	ug/L	5.0	02/08/22 21:01	
EPA 6010D	Chromium	3.1J	ug/L	10.0	02/08/22 21:01	
EPA 8260	1,1-Dichloroethene	10.9	ug/L	2.0	02/08/22 19:14	
EPA 8260	Dichlorodifluoromethane	19.6	ug/L	10.0	02/08/22 19:14	
EPA 8260	Trichloroethene	109	ug/L	2.0	02/08/22 19:14	
EPA 8260	Vinyl chloride	19.9	ug/L	2.0	02/08/22 19:14	
EPA 8260	cis-1,2-Dichloroethene	163	ug/L	2.0	02/08/22 19:14	
EPA 8260	trans-1,2-Dichloroethene	1.3J	ug/L	2.0	02/08/22 19:14	
40240181005	**TW-24**					
EPA 6010D	Barium	127	ug/L	10.0	02/10/22 09:03	
EPA 6010D	Chromium	33.0	ug/L	20.0	02/10/22 09:03	
EPA 8260	1,1-Dichloroethene	34.3	ug/L	1.0	02/08/22 13:18	
EPA 8260	1,2,4-Trichlorobenzene	1.3J	ug/L	5.0	02/08/22 13:18	
EPA 8260	Dichlorodifluoromethane	135	ug/L	5.0	02/08/22 13:18	
EPA 8260	Trichloroethene	125	ug/L	1.0	02/08/22 13:18	
EPA 8260	Vinyl chloride	409	ug/L	5.0	02/09/22 10:40	
EPA 8260	cis-1,2-Dichloroethene	84.1	ug/L	1.0	02/08/22 13:18	
EPA 8260	trans-1,2-Dichloroethene	4.2	ug/L	1.0	02/08/22 13:18	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 1162-013
Pace Project No.: 40240181

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40240181006	**TW-25**					
EPA 6010D	Barium	67.8	ug/L	50.0	02/10/22 09:05	
EPA 8260	Dichlorodifluoromethane	22.6	ug/L	5.0	02/08/22 17:22	

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-20 **Lab ID: 40240181001** Collected: 02/02/22 14:59 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Silver	**<16.0**	ug/L	50.0	16.0	5	02/08/22 05:52	02/10/22 10:33	7440-22-4	D3
Arsenic	**<41.7**	ug/L	125	41.7	5	02/08/22 05:52	02/10/22 10:33	7440-38-2	D3
Barium	**1960**	ug/L	25.0	7.5	5	02/08/22 05:52	02/10/22 10:33	7440-39-3	
Cadmium	**181**	ug/L	25.0	6.6	5	02/08/22 05:52	02/10/22 10:33	7440-43-9	
Chromium	**<12.7**	ug/L	50.0	12.7	5	02/08/22 05:52	02/10/22 10:33	7440-47-3	D3
Lead	**<29.6**	ug/L	100	29.6	5	02/08/22 05:52	02/10/22 10:33	7439-92-1	D3
Selenium	**<61.2**	ug/L	200	61.2	5	02/08/22 05:52	02/10/22 10:33	7782-49-2	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 10:56	7439-97-6	M0
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<222**	ug/L	625	222	625		02/08/22 18:18	630-20-6	
1,1,1-Trichloroethane	**<189**	ug/L	625	189	625		02/08/22 18:18	71-55-6	
1,1,2,2-Tetrachloroethane	**<236**	ug/L	625	236	625		02/08/22 18:18	79-34-5	
1,1,2-Trichloroethane	**<215**	ug/L	3120	215	625		02/08/22 18:18	79-00-5	
1,1-Dichloroethane	**542J**	ug/L	625	185	625		02/08/22 18:18	75-34-3	
1,1-Dichloroethene	**867**	ug/L	625	364	625		02/08/22 18:18	75-35-4	
1,1-Dichloropropene	**<256**	ug/L	625	256	625		02/08/22 18:18	563-58-6	
1,2,3-Trichlorobenzene	**<636**	ug/L	3120	636	625		02/08/22 18:18	87-61-6	
1,2,3-Trichloropropane	**<347**	ug/L	3120	347	625		02/08/22 18:18	96-18-4	
1,2,4-Trichlorobenzene	**<594**	ug/L	3120	594	625		02/08/22 18:18	120-82-1	
1,2,4-Trimethylbenzene	**<280**	ug/L	625	280	625		02/08/22 18:18	95-63-6	
1,2-Dibromo-3-chloropropane	**<1480**	ug/L	3120	1480	625		02/08/22 18:18	96-12-8	
1,2-Dibromoethane (EDB)	**<193**	ug/L	625	193	625		02/08/22 18:18	106-93-4	
1,2-Dichlorobenzene	**<204**	ug/L	625	204	625		02/08/22 18:18	95-50-1	
1,2-Dichloroethane	**<182**	ug/L	625	182	625		02/08/22 18:18	107-06-2	
1,2-Dichloropropane	**<280**	ug/L	625	280	625		02/08/22 18:18	78-87-5	
1,3,5-Trimethylbenzene	**<223**	ug/L	625	223	625		02/08/22 18:18	108-67-8	
1,3-Dichlorobenzene	**<219**	ug/L	625	219	625		02/08/22 18:18	541-73-1	
1,3-Dichloropropane	**<190**	ug/L	625	190	625		02/08/22 18:18	142-28-9	
1,4-Dichlorobenzene	**<558**	ug/L	625	558	625		02/08/22 18:18	106-46-7	
2,2-Dichloropropane	**<2610**	ug/L	3120	2610	625		02/08/22 18:18	594-20-7	
2-Chlorotoluene	**<556**	ug/L	3120	556	625		02/08/22 18:18	95-49-8	
4-Chlorotoluene	**<559**	ug/L	3120	559	625		02/08/22 18:18	106-43-4	
Benzene	**<185**	ug/L	625	185	625		02/08/22 18:18	71-43-2	
Bromobenzene	**<226**	ug/L	625	226	625		02/08/22 18:18	108-86-1	
Bromochloromethane	**<224**	ug/L	3120	224	625		02/08/22 18:18	74-97-5	
Bromodichloromethane	**<260**	ug/L	625	260	625		02/08/22 18:18	75-27-4	
Bromoform	**<2370**	ug/L	3120	2370	625		02/08/22 18:18	75-25-2	
Bromomethane	**<745**	ug/L	3120	745	625		02/08/22 18:18	74-83-9	
Carbon tetrachloride	**<231**	ug/L	625	231	625		02/08/22 18:18	56-23-5	
Chlorobenzene	**<535**	ug/L	625	535	625		02/08/22 18:18	108-90-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-20 **Lab ID: 40240181001** Collected: 02/02/22 14:59 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Chloroethane	**<862**	ug/L	3120	862	625		02/08/22 18:18	75-00-3	
Chloroform	**<739**	ug/L	3120	739	625		02/08/22 18:18	67-66-3	
Chloromethane	**<1020**	ug/L	3120	1020	625		02/08/22 18:18	74-87-3	
Dibromochloromethane	**<1650**	ug/L	3120	1650	625		02/08/22 18:18	124-48-1	
Dibromomethane	**<619**	ug/L	3120	619	625		02/08/22 18:18	74-95-3	
Dichlorodifluoromethane	**<285**	ug/L	3120	285	625		02/08/22 18:18	75-71-8	
Diisopropyl ether	**<688**	ug/L	3120	688	625		02/08/22 18:18	108-20-3	
Ethylbenzene	**<203**	ug/L	625	203	625		02/08/22 18:18	100-41-4	
Hexachloro-1,3-butadiene	**<1710**	ug/L	3120	1710	625		02/08/22 18:18	87-68-3	
Isopropylbenzene (Cumene)	**<625**	ug/L	3120	625	625		02/08/22 18:18	98-82-8	
Methyl-tert-butyl ether	**<706**	ug/L	3120	706	625		02/08/22 18:18	1634-04-4	
Methylene Chloride	**<200**	ug/L	3120	200	625		02/08/22 18:18	75-09-2	
Naphthalene	**<706**	ug/L	3120	706	625		02/08/22 18:18	91-20-3	
Styrene	**<223**	ug/L	625	223	625		02/08/22 18:18	100-42-5	
Tetrachloroethene	**<255**	ug/L	625	255	625		02/08/22 18:18	127-18-4	
Toluene	**<180**	ug/L	625	180	625		02/08/22 18:18	108-88-3	
Trichloroethene	**78300**	ug/L	625	200	625		02/08/22 18:18	79-01-6	
Trichlorofluoromethane	**<262**	ug/L	625	262	625		02/08/22 18:18	75-69-4	
Vinyl chloride	**47800**	ug/L	625	109	625		02/08/22 18:18	75-01-4	
cis-1,2-Dichloroethene	**183000**	ug/L	625	295	625		02/08/22 18:18	156-59-2	
cis-1,3-Dichloropropene	**<224**	ug/L	625	224	625		02/08/22 18:18	10061-01-5	
m&p-Xylene	**<438**	ug/L	1250	438	625		02/08/22 18:18	179601-23-1	
n-Butylbenzene	**<536**	ug/L	625	536	625		02/08/22 18:18	104-51-8	
n-Propylbenzene	**<216**	ug/L	625	216	625		02/08/22 18:18	103-65-1	
o-Xylene	**<217**	ug/L	625	217	625		02/08/22 18:18	95-47-6	
p-Isopropyltoluene	**<652**	ug/L	3120	652	625		02/08/22 18:18	99-87-6	
sec-Butylbenzene	**<265**	ug/L	625	265	625		02/08/22 18:18	135-98-8	
tert-Butylbenzene	**<366**	ug/L	625	366	625		02/08/22 18:18	98-06-6	
trans-1,2-Dichloroethene	**2660**	ug/L	625	330	625		02/08/22 18:18	156-60-5	
trans-1,3-Dichloropropene	**<2160**	ug/L	3120	2160	625		02/08/22 18:18	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		625		02/08/22 18:18	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		625		02/08/22 18:18	2199-69-1	
Toluene-d8 (S)	102	%	70-130		625		02/08/22 18:18	2037-26-5	

Sample: TW-21 **Lab ID: 40240181002** Collected: 02/02/22 13:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	02/08/22 05:52	02/10/22 08:58	7440-38-2	
Barium	**98.5**	ug/L	5.0	1.5	1	02/08/22 05:52	02/10/22 08:58	7440-39-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-21 **Lab ID: 40240181002** Collected: 02/02/22 13:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Cadmium	**<1.3**	ug/L	5.0	1.3	1	02/08/22 05:52	02/10/22 08:58	7440-43-9	
Chromium	**3.7J**	ug/L	10.0	2.5	1	02/08/22 05:52	02/10/22 08:58	7440-47-3	
Lead	**<5.9**	ug/L	20.0	5.9	1	02/08/22 05:52	02/10/22 08:58	7439-92-1	
Selenium	**<12.2**	ug/L	40.0	12.2	1	02/08/22 05:52	02/10/22 08:58	7782-49-2	
Silver	**<3.2**	ug/L	10.0	3.2	1	02/08/22 05:52	02/10/22 08:58	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 11:03	7439-97-6	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<3.6**	ug/L	10.0	3.6	10		02/08/22 18:36	630-20-6	
1,1,1-Trichloroethane	**<3.0**	ug/L	10.0	3.0	10		02/08/22 18:36	71-55-6	
1,1,2,2-Tetrachloroethane	**<3.8**	ug/L	10.0	3.8	10		02/08/22 18:36	79-34-5	
1,1,2-Trichloroethane	**<3.4**	ug/L	50.0	3.4	10		02/08/22 18:36	79-00-5	
1,1-Dichloroethane	**<3.0**	ug/L	10.0	3.0	10		02/08/22 18:36	75-34-3	
1,1-Dichloroethene	**14.8**	ug/L	10.0	5.8	10		02/08/22 18:36	75-35-4	
1,1-Dichloropropene	**<4.1**	ug/L	10.0	4.1	10		02/08/22 18:36	563-58-6	
1,2,3-Trichlorobenzene	**<10.2**	ug/L	50.0	10.2	10		02/08/22 18:36	87-61-6	
1,2,3-Trichloropropane	**<5.6**	ug/L	50.0	5.6	10		02/08/22 18:36	96-18-4	
1,2,4-Trichlorobenzene	**<9.5**	ug/L	50.0	9.5	10		02/08/22 18:36	120-82-1	
1,2,4-Trimethylbenzene	**<4.5**	ug/L	10.0	4.5	10		02/08/22 18:36	95-63-6	
1,2-Dibromo-3-chloropropane	**<23.7**	ug/L	50.0	23.7	10		02/08/22 18:36	96-12-8	
1,2-Dibromoethane (EDB)	**<3.1**	ug/L	10.0	3.1	10		02/08/22 18:36	106-93-4	
1,2-Dichlorobenzene	**<3.3**	ug/L	10.0	3.3	10		02/08/22 18:36	95-50-1	
1,2-Dichloroethane	**<2.9**	ug/L	10.0	2.9	10		02/08/22 18:36	107-06-2	
1,2-Dichloropropane	**<4.5**	ug/L	10.0	4.5	10		02/08/22 18:36	78-87-5	
1,3,5-Trimethylbenzene	**<3.6**	ug/L	10.0	3.6	10		02/08/22 18:36	108-67-8	
1,3-Dichlorobenzene	**<3.5**	ug/L	10.0	3.5	10		02/08/22 18:36	541-73-1	
1,3-Dichloropropane	**<3.0**	ug/L	10.0	3.0	10		02/08/22 18:36	142-28-9	
1,4-Dichlorobenzene	**<8.9**	ug/L	10.0	8.9	10		02/08/22 18:36	106-46-7	
2,2-Dichloropropane	**<41.8**	ug/L	50.0	41.8	10		02/08/22 18:36	594-20-7	
2-Chlorotoluene	**<8.9**	ug/L	50.0	8.9	10		02/08/22 18:36	95-49-8	
4-Chlorotoluene	**<8.9**	ug/L	50.0	8.9	10		02/08/22 18:36	106-43-4	
Benzene	**<3.0**	ug/L	10.0	3.0	10		02/08/22 18:36	71-43-2	
Bromobenzene	**<3.6**	ug/L	10.0	3.6	10		02/08/22 18:36	108-86-1	
Bromochloromethane	**<3.6**	ug/L	50.0	3.6	10		02/08/22 18:36	74-97-5	
Bromodichloromethane	**<4.2**	ug/L	10.0	4.2	10		02/08/22 18:36	75-27-4	
Bromoform	**<38.0**	ug/L	50.0	38.0	10		02/08/22 18:36	75-25-2	
Bromomethane	**<11.9**	ug/L	50.0	11.9	10		02/08/22 18:36	74-83-9	
Carbon tetrachloride	**<3.7**	ug/L	10.0	3.7	10		02/08/22 18:36	56-23-5	
Chlorobenzene	**<8.6**	ug/L	10.0	8.6	10		02/08/22 18:36	108-90-7	
Chloroethane	**<13.8**	ug/L	50.0	13.8	10		02/08/22 18:36	75-00-3	
Chloroform	**<11.8**	ug/L	50.0	11.8	10		02/08/22 18:36	67-66-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-21 **Lab ID: 40240181002** Collected: 02/02/22 13:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Chloromethane	**<16.4**	ug/L	50.0	16.4	10		02/08/22 18:36	74-87-3	
Dibromochloromethane	**<26.4**	ug/L	50.0	26.4	10		02/08/22 18:36	124-48-1	
Dibromomethane	**<9.9**	ug/L	50.0	9.9	10		02/08/22 18:36	74-95-3	
Dichlorodifluoromethane	**<4.6**	ug/L	50.0	4.6	10		02/08/22 18:36	75-71-8	
Diisopropyl ether	**<11.0**	ug/L	50.0	11.0	10		02/08/22 18:36	108-20-3	
Ethylbenzene	**<3.3**	ug/L	10.0	3.3	10		02/08/22 18:36	100-41-4	
Hexachloro-1,3-butadiene	**<27.4**	ug/L	50.0	27.4	10		02/08/22 18:36	87-68-3	
Isopropylbenzene (Cumene)	**<10.0**	ug/L	50.0	10.0	10		02/08/22 18:36	98-82-8	
Methyl-tert-butyl ether	**<11.3**	ug/L	50.0	11.3	10		02/08/22 18:36	1634-04-4	
Methylene Chloride	**<3.2**	ug/L	50.0	3.2	10		02/08/22 18:36	75-09-2	
Naphthalene	**<11.3**	ug/L	50.0	11.3	10		02/08/22 18:36	91-20-3	
Styrene	**<3.6**	ug/L	10.0	3.6	10		02/08/22 18:36	100-42-5	
Tetrachloroethene	**<4.1**	ug/L	10.0	4.1	10		02/08/22 18:36	127-18-4	
Toluene	**<2.9**	ug/L	10.0	2.9	10		02/08/22 18:36	108-88-3	
Trichloroethene	**345**	ug/L	10.0	3.2	10		02/08/22 18:36	79-01-6	
Trichlorofluoromethane	**<4.2**	ug/L	10.0	4.2	10		02/08/22 18:36	75-69-4	
Vinyl chloride	**166**	ug/L	10.0	1.7	10		02/08/22 18:36	75-01-4	
cis-1,2-Dichloroethene	**842**	ug/L	10.0	4.7	10		02/08/22 18:36	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	10.0	3.6	10		02/08/22 18:36	10061-01-5	
m&p-Xylene	**<7.0**	ug/L	20.0	7.0	10		02/08/22 18:36	179601-23-1	
n-Butylbenzene	**<8.6**	ug/L	10.0	8.6	10		02/08/22 18:36	104-51-8	
n-Propylbenzene	**<3.5**	ug/L	10.0	3.5	10		02/08/22 18:36	103-65-1	
o-Xylene	**<3.5**	ug/L	10.0	3.5	10		02/08/22 18:36	95-47-6	
p-Isopropyltoluene	**<10.4**	ug/L	50.0	10.4	10		02/08/22 18:36	99-87-6	
sec-Butylbenzene	**<4.2**	ug/L	10.0	4.2	10		02/08/22 18:36	135-98-8	
tert-Butylbenzene	**<5.9**	ug/L	10.0	5.9	10		02/08/22 18:36	98-06-6	
trans-1,2-Dichloroethene	**129**	ug/L	10.0	5.3	10		02/08/22 18:36	156-60-5	
trans-1,3-Dichloropropene	**<34.6**	ug/L	50.0	34.6	10		02/08/22 18:36	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		10		02/08/22 18:36	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		10		02/08/22 18:36	2199-69-1	
Toluene-d8 (S)	100	%	70-130		10		02/08/22 18:36	2037-26-5	

Sample: TW-22 **Lab ID: 40240181003** Collected: 02/02/22 11:15 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	02/08/22 05:52	02/08/22 20:59	7440-38-2	
Barium	**260**	ug/L	5.0	1.5	1	02/08/22 05:52	02/08/22 20:59	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	02/08/22 05:52	02/08/22 20:59	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	02/08/22 05:52	02/08/22 20:59	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-22 **Lab ID: 40240181003** Collected: 02/02/22 11:15 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Lead	**<5.9**	ug/L	20.0	5.9	1	02/08/22 05:52	02/08/22 20:59	7439-92-1	
Selenium	**<12.2**	ug/L	40.0	12.2	1	02/08/22 05:52	02/08/22 20:59	7782-49-2	
Silver	**<3.2**	ug/L	10.0	3.2	1	02/08/22 05:52	02/08/22 20:59	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 11:06	7439-97-6	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.71**	ug/L	2.0	0.71	2		02/08/22 18:55	630-20-6	
1,1,1-Trichloroethane	**<0.61**	ug/L	2.0	0.61	2		02/08/22 18:55	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.76**	ug/L	2.0	0.76	2		02/08/22 18:55	79-34-5	
1,1,2-Trichloroethane	**<0.69**	ug/L	10.0	0.69	2		02/08/22 18:55	79-00-5	
1,1-Dichloroethane	**0.94J**	ug/L	2.0	0.59	2		02/08/22 18:55	75-34-3	
1,1-Dichloroethene	**<1.2**	ug/L	2.0	1.2	2		02/08/22 18:55	75-35-4	
1,1-Dichloropropene	**<0.82**	ug/L	2.0	0.82	2		02/08/22 18:55	563-58-6	
1,2,3-Trichlorobenzene	**<2.0**	ug/L	10.0	2.0	2		02/08/22 18:55	87-61-6	
1,2,3-Trichloropropane	**<1.1**	ug/L	10.0	1.1	2		02/08/22 18:55	96-18-4	
1,2,4-Trichlorobenzene	**<1.9**	ug/L	10.0	1.9	2		02/08/22 18:55	120-82-1	
1,2,4-Trimethylbenzene	**<0.90**	ug/L	2.0	0.90	2		02/08/22 18:55	95-63-6	
1,2-Dibromo-3-chloropropane	**<4.7**	ug/L	10.0	4.7	2		02/08/22 18:55	96-12-8	
1,2-Dibromoethane (EDB)	**<0.62**	ug/L	2.0	0.62	2		02/08/22 18:55	106-93-4	
1,2-Dichlorobenzene	**<0.65**	ug/L	2.0	0.65	2		02/08/22 18:55	95-50-1	
1,2-Dichloroethane	**<0.58**	ug/L	2.0	0.58	2		02/08/22 18:55	107-06-2	
1,2-Dichloropropane	**<0.90**	ug/L	2.0	0.90	2		02/08/22 18:55	78-87-5	
1,3,5-Trimethylbenzene	**<0.71**	ug/L	2.0	0.71	2		02/08/22 18:55	108-67-8	
1,3-Dichlorobenzene	**<0.70**	ug/L	2.0	0.70	2		02/08/22 18:55	541-73-1	
1,3-Dichloropropane	**<0.61**	ug/L	2.0	0.61	2		02/08/22 18:55	142-28-9	
1,4-Dichlorobenzene	**<1.8**	ug/L	2.0	1.8	2		02/08/22 18:55	106-46-7	
2,2-Dichloropropane	**<8.4**	ug/L	10.0	8.4	2		02/08/22 18:55	594-20-7	
2-Chlorotoluene	**<1.8**	ug/L	10.0	1.8	2		02/08/22 18:55	95-49-8	
4-Chlorotoluene	**<1.8**	ug/L	10.0	1.8	2		02/08/22 18:55	106-43-4	
Benzene	**<0.59**	ug/L	2.0	0.59	2		02/08/22 18:55	71-43-2	
Bromobenzene	**<0.72**	ug/L	2.0	0.72	2		02/08/22 18:55	108-86-1	
Bromochloromethane	**<0.72**	ug/L	10.0	0.72	2		02/08/22 18:55	74-97-5	
Bromodichloromethane	**<0.83**	ug/L	2.0	0.83	2		02/08/22 18:55	75-27-4	
Bromoform	**<7.6**	ug/L	10.0	7.6	2		02/08/22 18:55	75-25-2	
Bromomethane	**<2.4**	ug/L	10.0	2.4	2		02/08/22 18:55	74-83-9	
Carbon tetrachloride	**<0.74**	ug/L	2.0	0.74	2		02/08/22 18:55	56-23-5	
Chlorobenzene	**<1.7**	ug/L	2.0	1.7	2		02/08/22 18:55	108-90-7	
Chloroethane	**<2.8**	ug/L	10.0	2.8	2		02/08/22 18:55	75-00-3	
Chloroform	**<2.4**	ug/L	10.0	2.4	2		02/08/22 18:55	67-66-3	
Chloromethane	**<3.3**	ug/L	10.0	3.3	2		02/08/22 18:55	74-87-3	
Dibromochloromethane	**<5.3**	ug/L	10.0	5.3	2		02/08/22 18:55	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-22 **Lab ID: 40240181003** Collected: 02/02/22 11:15 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Dibromomethane	**<2.0**	ug/L	10.0	2.0	2		02/08/22 18:55	74-95-3	
Dichlorodifluoromethane	**<0.91**	ug/L	10.0	0.91	2		02/08/22 18:55	75-71-8	
Diisopropyl ether	**<2.2**	ug/L	10.0	2.2	2		02/08/22 18:55	108-20-3	
Ethylbenzene	**<0.65**	ug/L	2.0	0.65	2		02/08/22 18:55	100-41-4	
Hexachloro-1,3-butadiene	**<5.5**	ug/L	10.0	5.5	2		02/08/22 18:55	87-68-3	
Isopropylbenzene (Cumene)	**<2.0**	ug/L	10.0	2.0	2		02/08/22 18:55	98-82-8	
Methyl-tert-butyl ether	**<2.3**	ug/L	10.0	2.3	2		02/08/22 18:55	1634-04-4	
Methylene Chloride	**<0.64**	ug/L	10.0	0.64	2		02/08/22 18:55	75-09-2	
Naphthalene	**<2.3**	ug/L	10.0	2.3	2		02/08/22 18:55	91-20-3	
Styrene	**<0.71**	ug/L	2.0	0.71	2		02/08/22 18:55	100-42-5	
Tetrachloroethene	**<0.82**	ug/L	2.0	0.82	2		02/08/22 18:55	127-18-4	
Toluene	**<0.58**	ug/L	2.0	0.58	2		02/08/22 18:55	108-88-3	
Trichloroethene	**8.1**	ug/L	2.0	0.64	2		02/08/22 18:55	79-01-6	
Trichlorofluoromethane	**<0.84**	ug/L	2.0	0.84	2		02/08/22 18:55	75-69-4	
Vinyl chloride	**166**	ug/L	2.0	0.35	2		02/08/22 18:55	75-01-4	
cis-1,2-Dichloroethene	**126**	ug/L	2.0	0.94	2		02/08/22 18:55	156-59-2	
cis-1,3-Dichloropropene	**<0.72**	ug/L	2.0	0.72	2		02/08/22 18:55	10061-01-5	
m&p-Xylene	**<1.4**	ug/L	4.0	1.4	2		02/08/22 18:55	179601-23-1	
n-Butylbenzene	**<1.7**	ug/L	2.0	1.7	2		02/08/22 18:55	104-51-8	
n-Propylbenzene	**<0.69**	ug/L	2.0	0.69	2		02/08/22 18:55	103-65-1	
o-Xylene	**<0.70**	ug/L	2.0	0.70	2		02/08/22 18:55	95-47-6	
p-Isopropyltoluene	**<2.1**	ug/L	10.0	2.1	2		02/08/22 18:55	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	2.0	0.85	2		02/08/22 18:55	135-98-8	
tert-Butylbenzene	**<1.2**	ug/L	2.0	1.2	2		02/08/22 18:55	98-06-6	
trans-1,2-Dichloroethene	**9.9**	ug/L	2.0	1.1	2		02/08/22 18:55	156-60-5	
trans-1,3-Dichloropropene	**<6.9**	ug/L	10.0	6.9	2		02/08/22 18:55	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		2		02/08/22 18:55	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		2		02/08/22 18:55	2199-69-1	
Toluene-d8 (S)	100	%	70-130		2		02/08/22 18:55	2037-26-5	

Sample: TW-23 **Lab ID: 40240181004** Collected: 02/02/22 10:45 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
	Pace Analytical Services - Green Bay								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	02/08/22 05:52	02/08/22 21:01	7440-38-2	
Barium	**173**	ug/L	5.0	1.5	1	02/08/22 05:52	02/08/22 21:01	7440-39-3	
Cadmium	**1.7J**	ug/L	5.0	1.3	1	02/08/22 05:52	02/08/22 21:01	7440-43-9	
Chromium	**3.1J**	ug/L	10.0	2.5	1	02/08/22 05:52	02/08/22 21:01	7440-47-3	
Lead	**<5.9**	ug/L	20.0	5.9	1	02/08/22 05:52	02/08/22 21:01	7439-92-1	
Selenium	**<12.2**	ug/L	40.0	12.2	1	02/08/22 05:52	02/08/22 21:01	7782-49-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-23 **Lab ID: 40240181004** Collected: 02/02/22 10:45 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Silver	**<3.2**	ug/L	10.0	3.2	1	02/08/22 05:52	02/08/22 21:01	7440-22-4	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 11:08	7439-97-6	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.71**	ug/L	2.0	0.71	2		02/08/22 19:14	630-20-6	
1,1,1-Trichloroethane	**<0.61**	ug/L	2.0	0.61	2		02/08/22 19:14	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.76**	ug/L	2.0	0.76	2		02/08/22 19:14	79-34-5	
1,1,2-Trichloroethane	**<0.69**	ug/L	10.0	0.69	2		02/08/22 19:14	79-00-5	
1,1-Dichloroethane	**<0.59**	ug/L	2.0	0.59	2		02/08/22 19:14	75-34-3	
1,1-Dichloroethene	**10.9**	ug/L	2.0	1.2	2		02/08/22 19:14	75-35-4	
1,1-Dichloropropene	**<0.82**	ug/L	2.0	0.82	2		02/08/22 19:14	563-58-6	
1,2,3-Trichlorobenzene	**<2.0**	ug/L	10.0	2.0	2		02/08/22 19:14	87-61-6	
1,2,3-Trichloropropane	**<1.1**	ug/L	10.0	1.1	2		02/08/22 19:14	96-18-4	
1,2,4-Trichlorobenzene	**<1.9**	ug/L	10.0	1.9	2		02/08/22 19:14	120-82-1	
1,2,4-Trimethylbenzene	**<0.90**	ug/L	2.0	0.90	2		02/08/22 19:14	95-63-6	
1,2-Dibromo-3-chloropropane	**<4.7**	ug/L	10.0	4.7	2		02/08/22 19:14	96-12-8	
1,2-Dibromoethane (EDB)	**<0.62**	ug/L	2.0	0.62	2		02/08/22 19:14	106-93-4	
1,2-Dichlorobenzene	**<0.65**	ug/L	2.0	0.65	2		02/08/22 19:14	95-50-1	
1,2-Dichloroethane	**<0.58**	ug/L	2.0	0.58	2		02/08/22 19:14	107-06-2	
1,2-Dichloropropane	**<0.90**	ug/L	2.0	0.90	2		02/08/22 19:14	78-87-5	
1,3,5-Trimethylbenzene	**<0.71**	ug/L	2.0	0.71	2		02/08/22 19:14	108-67-8	
1,3-Dichlorobenzene	**<0.70**	ug/L	2.0	0.70	2		02/08/22 19:14	541-73-1	
1,3-Dichloropropane	**<0.61**	ug/L	2.0	0.61	2		02/08/22 19:14	142-28-9	
1,4-Dichlorobenzene	**<1.8**	ug/L	2.0	1.8	2		02/08/22 19:14	106-46-7	
2,2-Dichloropropane	**<8.4**	ug/L	10.0	8.4	2		02/08/22 19:14	594-20-7	
2-Chlorotoluene	**<1.8**	ug/L	10.0	1.8	2		02/08/22 19:14	95-49-8	
4-Chlorotoluene	**<1.8**	ug/L	10.0	1.8	2		02/08/22 19:14	106-43-4	
Benzene	**<0.59**	ug/L	2.0	0.59	2		02/08/22 19:14	71-43-2	
Bromobenzene	**<0.72**	ug/L	2.0	0.72	2		02/08/22 19:14	108-86-1	
Bromochloromethane	**<0.72**	ug/L	10.0	0.72	2		02/08/22 19:14	74-97-5	
Bromodichloromethane	**<0.83**	ug/L	2.0	0.83	2		02/08/22 19:14	75-27-4	
Bromoform	**<7.6**	ug/L	10.0	7.6	2		02/08/22 19:14	75-25-2	
Bromomethane	**<2.4**	ug/L	10.0	2.4	2		02/08/22 19:14	74-83-9	
Carbon tetrachloride	**<0.74**	ug/L	2.0	0.74	2		02/08/22 19:14	56-23-5	
Chlorobenzene	**<1.7**	ug/L	2.0	1.7	2		02/08/22 19:14	108-90-7	
Chloroethane	**<2.8**	ug/L	10.0	2.8	2		02/08/22 19:14	75-00-3	
Chloroform	**<2.4**	ug/L	10.0	2.4	2		02/08/22 19:14	67-66-3	
Chloromethane	**<3.3**	ug/L	10.0	3.3	2		02/08/22 19:14	74-87-3	
Dibromochloromethane	**<5.3**	ug/L	10.0	5.3	2		02/08/22 19:14	124-48-1	
Dibromomethane	**<2.0**	ug/L	10.0	2.0	2		02/08/22 19:14	74-95-3	
Dichlorodifluoromethane	**19.6**	ug/L	10.0	0.91	2		02/08/22 19:14	75-71-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-23 **Lab ID: 40240181004** Collected: 02/02/22 10:45 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Diisopropyl ether	**<2.2**	ug/L	10.0	2.2	2		02/08/22 19:14	108-20-3	
Ethylbenzene	**<0.65**	ug/L	2.0	0.65	2		02/08/22 19:14	100-41-4	
Hexachloro-1,3-butadiene	**<5.5**	ug/L	10.0	5.5	2		02/08/22 19:14	87-68-3	
Isopropylbenzene (Cumene)	**<2.0**	ug/L	10.0	2.0	2		02/08/22 19:14	98-82-8	
Methyl-tert-butyl ether	**<2.3**	ug/L	10.0	2.3	2		02/08/22 19:14	1634-04-4	
Methylene Chloride	**<0.64**	ug/L	10.0	0.64	2		02/08/22 19:14	75-09-2	
Naphthalene	**<2.3**	ug/L	10.0	2.3	2		02/08/22 19:14	91-20-3	
Styrene	**<0.71**	ug/L	2.0	0.71	2		02/08/22 19:14	100-42-5	
Tetrachloroethene	**<0.82**	ug/L	2.0	0.82	2		02/08/22 19:14	127-18-4	
Toluene	**<0.58**	ug/L	2.0	0.58	2		02/08/22 19:14	108-88-3	
Trichloroethene	**109**	ug/L	2.0	0.64	2		02/08/22 19:14	79-01-6	
Trichlorofluoromethane	**<0.84**	ug/L	2.0	0.84	2		02/08/22 19:14	75-69-4	
Vinyl chloride	**19.9**	ug/L	2.0	0.35	2		02/08/22 19:14	75-01-4	
cis-1,2-Dichloroethene	**163**	ug/L	2.0	0.94	2		02/08/22 19:14	156-59-2	
cis-1,3-Dichloropropene	**<0.72**	ug/L	2.0	0.72	2		02/08/22 19:14	10061-01-5	
m&p-Xylene	**<1.4**	ug/L	4.0	1.4	2		02/08/22 19:14	179601-23-1	
n-Butylbenzene	**<1.7**	ug/L	2.0	1.7	2		02/08/22 19:14	104-51-8	
n-Propylbenzene	**<0.69**	ug/L	2.0	0.69	2		02/08/22 19:14	103-65-1	
o-Xylene	**<0.70**	ug/L	2.0	0.70	2		02/08/22 19:14	95-47-6	
p-Isopropyltoluene	**<2.1**	ug/L	10.0	2.1	2		02/08/22 19:14	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	2.0	0.85	2		02/08/22 19:14	135-98-8	
tert-Butylbenzene	**<1.2**	ug/L	2.0	1.2	2		02/08/22 19:14	98-06-6	
trans-1,2-Dichloroethene	**1.3J**	ug/L	2.0	1.1	2		02/08/22 19:14	156-60-5	
trans-1,3-Dichloropropene	**<6.9**	ug/L	10.0	6.9	2		02/08/22 19:14	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		2		02/08/22 19:14	460-00-4	
1,2-Dichlorobenzene-d4 (S)	107	%	70-130		2		02/08/22 19:14	2199-69-1	
Toluene-d8 (S)	101	%	70-130		2		02/08/22 19:14	2037-26-5	

Sample: TW-24 **Lab ID: 40240181005** Collected: 02/02/22 14:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
	Pace Analytical Services - Green Bay								
Arsenic	**<16.7**	ug/L	50.0	16.7	2	02/08/22 05:52	02/10/22 09:03	7440-38-2	D3
Barium	**127**	ug/L	10.0	3.0	2	02/08/22 05:52	02/10/22 09:03	7440-39-3	
Cadmium	**<2.7**	ug/L	10.0	2.7	2	02/08/22 05:52	02/10/22 09:03	7440-43-9	D3
Chromium	**33.0**	ug/L	20.0	5.1	2	02/08/22 05:52	02/10/22 09:03	7440-47-3	
Lead	**<11.8**	ug/L	40.0	11.8	2	02/08/22 05:52	02/10/22 09:03	7439-92-1	D3
Selenium	**<24.5**	ug/L	80.0	24.5	2	02/08/22 05:52	02/10/22 09:03	7782-49-2	D3
Silver	**<6.4**	ug/L	20.0	6.4	2	02/08/22 05:52	02/10/22 09:03	7440-22-4	D3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-24 **Lab ID: 40240181005** Collected: 02/02/22 14:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 11:15	7439-97-6	
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.36**	ug/L	1.0	0.36	1		02/08/22 13:18	630-20-6	
1,1,1-Trichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 13:18	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.38**	ug/L	1.0	0.38	1		02/08/22 13:18	79-34-5	
1,1,2-Trichloroethane	**<0.34**	ug/L	5.0	0.34	1		02/08/22 13:18	79-00-5	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 13:18	75-34-3	
1,1-Dichloroethene	**34.3**	ug/L	1.0	0.58	1		02/08/22 13:18	75-35-4	
1,1-Dichloropropene	**<0.41**	ug/L	1.0	0.41	1		02/08/22 13:18	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	5.0	1.0	1		02/08/22 13:18	87-61-6	
1,2,3-Trichloropropane	**<0.56**	ug/L	5.0	0.56	1		02/08/22 13:18	96-18-4	
1,2,4-Trichlorobenzene	**1.3J**	ug/L	5.0	0.95	1		02/08/22 13:18	120-82-1	
1,2,4-Trimethylbenzene	**<0.45**	ug/L	1.0	0.45	1		02/08/22 13:18	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.4**	ug/L	5.0	2.4	1		02/08/22 13:18	96-12-8	
1,2-Dibromoethane (EDB)	**<0.31**	ug/L	1.0	0.31	1		02/08/22 13:18	106-93-4	
1,2-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		02/08/22 13:18	95-50-1	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		02/08/22 13:18	107-06-2	
1,2-Dichloropropane	**<0.45**	ug/L	1.0	0.45	1		02/08/22 13:18	78-87-5	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 13:18	108-67-8	
1,3-Dichlorobenzene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 13:18	541-73-1	
1,3-Dichloropropane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 13:18	142-28-9	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		02/08/22 13:18	106-46-7	
2,2-Dichloropropane	**<4.2**	ug/L	5.0	4.2	1		02/08/22 13:18	594-20-7	
2-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/08/22 13:18	95-49-8	
4-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/08/22 13:18	106-43-4	
Benzene	**<0.30**	ug/L	1.0	0.30	1		02/08/22 13:18	71-43-2	
Bromobenzene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 13:18	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		02/08/22 13:18	74-97-5	
Bromodichloromethane	**<0.42**	ug/L	1.0	0.42	1		02/08/22 13:18	75-27-4	
Bromoform	**<3.8**	ug/L	5.0	3.8	1		02/08/22 13:18	75-25-2	
Bromomethane	**<1.2**	ug/L	5.0	1.2	1		02/08/22 13:18	74-83-9	
Carbon tetrachloride	**<0.37**	ug/L	1.0	0.37	1		02/08/22 13:18	56-23-5	
Chlorobenzene	**<0.86**	ug/L	1.0	0.86	1		02/08/22 13:18	108-90-7	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		02/08/22 13:18	75-00-3	
Chloroform	**<1.2**	ug/L	5.0	1.2	1		02/08/22 13:18	67-66-3	
Chloromethane	**<1.6**	ug/L	5.0	1.6	1		02/08/22 13:18	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	5.0	2.6	1		02/08/22 13:18	124-48-1	
Dibromomethane	**<0.99**	ug/L	5.0	0.99	1		02/08/22 13:18	74-95-3	
Dichlorodifluoromethane	**135**	ug/L	5.0	0.46	1		02/08/22 13:18	75-71-8	
Diisopropyl ether	**<1.1**	ug/L	5.0	1.1	1		02/08/22 13:18	108-20-3	
Ethylbenzene	**<0.33**	ug/L	1.0	0.33	1		02/08/22 13:18	100-41-4	
Hexachloro-1,3-butadiene	**<2.7**	ug/L	5.0	2.7	1		02/08/22 13:18	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	5.0	1.0	1		02/08/22 13:18	98-82-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-24 **Lab ID: 40240181005** Collected: 02/02/22 14:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Methyl-tert-butyl ether	**<1.1**	ug/L	5.0	1.1	1		02/08/22 13:18	1634-04-4	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		02/08/22 13:18	75-09-2	
Naphthalene	**<1.1**	ug/L	5.0	1.1	1		02/08/22 13:18	91-20-3	
Styrene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 13:18	100-42-5	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		02/08/22 13:18	127-18-4	
Toluene	**<0.29**	ug/L	1.0	0.29	1		02/08/22 13:18	108-88-3	
Trichloroethene	**125**	ug/L	1.0	0.32	1		02/08/22 13:18	79-01-6	
Trichlorofluoromethane	**<0.42**	ug/L	1.0	0.42	1		02/08/22 13:18	75-69-4	
Vinyl chloride	**409**	ug/L	5.0	0.87	5		02/09/22 10:40	75-01-4	
cis-1,2-Dichloroethene	**84.1**	ug/L	1.0	0.47	1		02/08/22 13:18	156-59-2	
cis-1,3-Dichloropropene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 13:18	10061-01-5	
m&p-Xylene	**<0.70**	ug/L	2.0	0.70	1		02/08/22 13:18	179601-23-1	
n-Butylbenzene	**<0.86**	ug/L	1.0	0.86	1		02/08/22 13:18	104-51-8	
n-Propylbenzene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 13:18	103-65-1	
o-Xylene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 13:18	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	5.0	1.0	1		02/08/22 13:18	99-87-6	
sec-Butylbenzene	**<0.42**	ug/L	1.0	0.42	1		02/08/22 13:18	135-98-8	
tert-Butylbenzene	**<0.59**	ug/L	1.0	0.59	1		02/08/22 13:18	98-06-6	
trans-1,2-Dichloroethene	**4.2**	ug/L	1.0	0.53	1		02/08/22 13:18	156-60-5	
trans-1,3-Dichloropropene	**<3.5**	ug/L	5.0	3.5	1		02/08/22 13:18	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		02/08/22 13:18	460-00-4	
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		02/08/22 13:18	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		02/08/22 13:18	2037-26-5	

Sample: TW-25 **Lab ID: 40240181006** Collected: 02/02/22 12:06 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Green Bay								
Arsenic	**<83.4**	ug/L	250	83.4	10	02/08/22 05:52	02/10/22 09:05	7440-38-2	D3
Barium	**67.8**	ug/L	50.0	15.0	10	02/08/22 05:52	02/10/22 09:05	7440-39-3	
Cadmium	**<13.3**	ug/L	50.0	13.3	10	02/08/22 05:52	02/10/22 09:05	7440-43-9	D3
Chromium	**<25.5**	ug/L	100	25.5	10	02/08/22 05:52	02/10/22 09:05	7440-47-3	D3
Lead	**<59.1**	ug/L	200	59.1	10	02/08/22 05:52	02/10/22 09:05	7439-92-1	D3
Selenium	**<122**	ug/L	400	122	10	02/08/22 05:52	02/10/22 09:05	7782-49-2	D3
Silver	**<32.0**	ug/L	100	32.0	10	02/08/22 05:52	02/10/22 09:05	7440-22-4	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay								
Mercury	**<0.066**	ug/L	0.20	0.066	1	02/09/22 10:10	02/10/22 11:17	7439-97-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-25 **Lab ID: 40240181006** Collected: 02/02/22 12:06 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.36**	ug/L	1.0	0.36	1		02/08/22 17:22	630-20-6	
1,1,1-Trichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 17:22	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.38**	ug/L	1.0	0.38	1		02/08/22 17:22	79-34-5	
1,1,2-Trichloroethane	**<0.34**	ug/L	5.0	0.34	1		02/08/22 17:22	79-00-5	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 17:22	75-34-3	
1,1-Dichloroethene	**<0.58**	ug/L	1.0	0.58	1		02/08/22 17:22	75-35-4	
1,1-Dichloropropene	**<0.41**	ug/L	1.0	0.41	1		02/08/22 17:22	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	5.0	1.0	1		02/08/22 17:22	87-61-6	
1,2,3-Trichloropropane	**<0.56**	ug/L	5.0	0.56	1		02/08/22 17:22	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		02/08/22 17:22	120-82-1	
1,2,4-Trimethylbenzene	**<0.45**	ug/L	1.0	0.45	1		02/08/22 17:22	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.4**	ug/L	5.0	2.4	1		02/08/22 17:22	96-12-8	
1,2-Dibromoethane (EDB)	**<0.31**	ug/L	1.0	0.31	1		02/08/22 17:22	106-93-4	
1,2-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		02/08/22 17:22	95-50-1	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		02/08/22 17:22	107-06-2	
1,2-Dichloropropane	**<0.45**	ug/L	1.0	0.45	1		02/08/22 17:22	78-87-5	
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 17:22	108-67-8	
1,3-Dichlorobenzene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 17:22	541-73-1	
1,3-Dichloropropane	**<0.30**	ug/L	1.0	0.30	1		02/08/22 17:22	142-28-9	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		02/08/22 17:22	106-46-7	
2,2-Dichloropropane	**<4.2**	ug/L	5.0	4.2	1		02/08/22 17:22	594-20-7	
2-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/08/22 17:22	95-49-8	
4-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/08/22 17:22	106-43-4	
Benzene	**<0.30**	ug/L	1.0	0.30	1		02/08/22 17:22	71-43-2	
Bromobenzene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 17:22	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		02/08/22 17:22	74-97-5	
Bromodichloromethane	**<0.42**	ug/L	1.0	0.42	1		02/08/22 17:22	75-27-4	
Bromoform	**<3.8**	ug/L	5.0	3.8	1		02/08/22 17:22	75-25-2	
Bromomethane	**<1.2**	ug/L	5.0	1.2	1		02/08/22 17:22	74-83-9	
Carbon tetrachloride	**<0.37**	ug/L	1.0	0.37	1		02/08/22 17:22	56-23-5	
Chlorobenzene	**<0.86**	ug/L	1.0	0.86	1		02/08/22 17:22	108-90-7	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		02/08/22 17:22	75-00-3	
Chloroform	**<1.2**	ug/L	5.0	1.2	1		02/08/22 17:22	67-66-3	
Chloromethane	**<1.6**	ug/L	5.0	1.6	1		02/08/22 17:22	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	5.0	2.6	1		02/08/22 17:22	124-48-1	
Dibromomethane	**<0.99**	ug/L	5.0	0.99	1		02/08/22 17:22	74-95-3	
Dichlorodifluoromethane	**22.6**	ug/L	5.0	0.46	1		02/08/22 17:22	75-71-8	
Diisopropyl ether	**<1.1**	ug/L	5.0	1.1	1		02/08/22 17:22	108-20-3	
Ethylbenzene	**<0.33**	ug/L	1.0	0.33	1		02/08/22 17:22	100-41-4	
Hexachloro-1,3-butadiene	**<2.7**	ug/L	5.0	2.7	1		02/08/22 17:22	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	5.0	1.0	1		02/08/22 17:22	98-82-8	
Methyl-tert-butyl ether	**<1.1**	ug/L	5.0	1.1	1		02/08/22 17:22	1634-04-4	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		02/08/22 17:22	75-09-2	
Naphthalene	**<1.1**	ug/L	5.0	1.1	1		02/08/22 17:22	91-20-3	
Styrene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 17:22	100-42-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TW-25 **Lab ID: 40240181006** Collected: 02/02/22 12:06 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		02/08/22 17:22	127-18-4	
Toluene	**<0.29**	ug/L	1.0	0.29	1		02/08/22 17:22	108-88-3	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		02/08/22 17:22	79-01-6	
Trichlorofluoromethane	**<0.42**	ug/L	1.0	0.42	1		02/08/22 17:22	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		02/08/22 17:22	75-01-4	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		02/08/22 17:22	156-59-2	
cis-1,3-Dichloropropene	**<0.36**	ug/L	1.0	0.36	1		02/08/22 17:22	10061-01-5	
m&p-Xylene	**<0.70**	ug/L	2.0	0.70	1		02/08/22 17:22	179601-23-1	
n-Butylbenzene	**<0.86**	ug/L	1.0	0.86	1		02/08/22 17:22	104-51-8	
n-Propylbenzene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 17:22	103-65-1	
o-Xylene	**<0.35**	ug/L	1.0	0.35	1		02/08/22 17:22	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	5.0	1.0	1		02/08/22 17:22	99-87-6	
sec-Butylbenzene	**<0.42**	ug/L	1.0	0.42	1		02/08/22 17:22	135-98-8	
tert-Butylbenzene	**<0.59**	ug/L	1.0	0.59	1		02/08/22 17:22	98-06-6	
trans-1,2-Dichloroethene	**<0.53**	ug/L	1.0	0.53	1		02/08/22 17:22	156-60-5	
trans-1,3-Dichloropropene	**<3.5**	ug/L	5.0	3.5	1		02/08/22 17:22	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		02/08/22 17:22	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		02/08/22 17:22	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		02/08/22 17:22	2037-26-5	

Sample: TRIP BLANK **Lab ID: 40240181008** Collected: 02/02/22 15:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	**<0.36**	ug/L	1.0	0.36	1		02/11/22 11:44	630-20-6	
1,1,1-Trichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/11/22 11:44	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.38**	ug/L	1.0	0.38	1		02/11/22 11:44	79-34-5	
1,1,2-Trichloroethane	**<0.34**	ug/L	5.0	0.34	1		02/11/22 11:44	79-00-5	
1,1-Dichloroethane	**<0.30**	ug/L	1.0	0.30	1		02/11/22 11:44	75-34-3	
1,1-Dichloroethene	**<0.58**	ug/L	1.0	0.58	1		02/11/22 11:44	75-35-4	
1,1-Dichloropropene	**<0.41**	ug/L	1.0	0.41	1		02/11/22 11:44	563-58-6	
1,2,3-Trichlorobenzene	**<1.0**	ug/L	5.0	1.0	1		02/11/22 11:44	87-61-6	
1,2,3-Trichloropropane	**<0.56**	ug/L	5.0	0.56	1		02/11/22 11:44	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		02/11/22 11:44	120-82-1	
1,2,4-Trimethylbenzene	**<0.45**	ug/L	1.0	0.45	1		02/11/22 11:44	95-63-6	
1,2-Dibromo-3-chloropropane	**<2.4**	ug/L	5.0	2.4	1		02/11/22 11:44	96-12-8	
1,2-Dibromoethane (EDB)	**<0.31**	ug/L	1.0	0.31	1		02/11/22 11:44	106-93-4	
1,2-Dichlorobenzene	**<0.33**	ug/L	1.0	0.33	1		02/11/22 11:44	95-50-1	
1,2-Dichloroethane	**<0.29**	ug/L	1.0	0.29	1		02/11/22 11:44	107-06-2	
1,2-Dichloropropane	**<0.45**	ug/L	1.0	0.45	1		02/11/22 11:44	78-87-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TRIP BLANK **Lab ID: 40240181008** Collected: 02/02/22 15:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
1,3,5-Trimethylbenzene	**<0.36**	ug/L	1.0	0.36	1		02/11/22 11:44	108-67-8	
1,3-Dichlorobenzene	**<0.35**	ug/L	1.0	0.35	1		02/11/22 11:44	541-73-1	
1,3-Dichloropropane	**<0.30**	ug/L	1.0	0.30	1		02/11/22 11:44	142-28-9	
1,4-Dichlorobenzene	**<0.89**	ug/L	1.0	0.89	1		02/11/22 11:44	106-46-7	
2,2-Dichloropropane	**<4.2**	ug/L	5.0	4.2	1		02/11/22 11:44	594-20-7	
2-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/11/22 11:44	95-49-8	
4-Chlorotoluene	**<0.89**	ug/L	5.0	0.89	1		02/11/22 11:44	106-43-4	
Benzene	**<0.30**	ug/L	1.0	0.30	1		02/11/22 11:44	71-43-2	
Bromobenzene	**<0.36**	ug/L	1.0	0.36	1		02/11/22 11:44	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		02/11/22 11:44	74-97-5	
Bromodichloromethane	**<0.42**	ug/L	1.0	0.42	1		02/11/22 11:44	75-27-4	
Bromoform	**<3.8**	ug/L	5.0	3.8	1		02/11/22 11:44	75-25-2	
Bromomethane	**<1.2**	ug/L	5.0	1.2	1		02/11/22 11:44	74-83-9	L2
Carbon tetrachloride	**<0.37**	ug/L	1.0	0.37	1		02/11/22 11:44	56-23-5	
Chlorobenzene	**<0.86**	ug/L	1.0	0.86	1		02/11/22 11:44	108-90-7	
Chloroethane	**<1.4**	ug/L	5.0	1.4	1		02/11/22 11:44	75-00-3	
Chloroform	**<1.2**	ug/L	5.0	1.2	1		02/11/22 11:44	67-66-3	
Chloromethane	**<1.6**	ug/L	5.0	1.6	1		02/11/22 11:44	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	5.0	2.6	1		02/11/22 11:44	124-48-1	
Dibromomethane	**<0.99**	ug/L	5.0	0.99	1		02/11/22 11:44	74-95-3	
Dichlorodifluoromethane	**<0.46**	ug/L	5.0	0.46	1		02/11/22 11:44	75-71-8	
Diisopropyl ether	**<1.1**	ug/L	5.0	1.1	1		02/11/22 11:44	108-20-3	
Ethylbenzene	**<0.33**	ug/L	1.0	0.33	1		02/11/22 11:44	100-41-4	
Hexachloro-1,3-butadiene	**<2.7**	ug/L	5.0	2.7	1		02/11/22 11:44	87-68-3	
Isopropylbenzene (Cumene)	**<1.0**	ug/L	5.0	1.0	1		02/11/22 11:44	98-82-8	
Methyl-tert-butyl ether	**<1.1**	ug/L	5.0	1.1	1		02/11/22 11:44	1634-04-4	
Methylene Chloride	**<0.32**	ug/L	5.0	0.32	1		02/11/22 11:44	75-09-2	
Naphthalene	**<1.1**	ug/L	5.0	1.1	1		02/11/22 11:44	91-20-3	
Styrene	**<0.36**	ug/L	1.0	0.36	1		02/11/22 11:44	100-42-5	
Tetrachloroethene	**<0.41**	ug/L	1.0	0.41	1		02/11/22 11:44	127-18-4	
Toluene	**<0.29**	ug/L	1.0	0.29	1		02/11/22 11:44	108-88-3	
Trichloroethene	**<0.32**	ug/L	1.0	0.32	1		02/11/22 11:44	79-01-6	
Trichlorofluoromethane	**<0.42**	ug/L	1.0	0.42	1		02/11/22 11:44	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		02/11/22 11:44	75-01-4	
cis-1,2-Dichloroethene	**<0.47**	ug/L	1.0	0.47	1		02/11/22 11:44	156-59-2	
cis-1,3-Dichloropropene	**<0.36**	ug/L	1.0	0.36	1		02/11/22 11:44	10061-01-5	
m&p-Xylene	**<0.70**	ug/L	2.0	0.70	1		02/11/22 11:44	179601-23-1	
n-Butylbenzene	**<0.86**	ug/L	1.0	0.86	1		02/11/22 11:44	104-51-8	
n-Propylbenzene	**<0.35**	ug/L	1.0	0.35	1		02/11/22 11:44	103-65-1	
o-Xylene	**<0.35**	ug/L	1.0	0.35	1		02/11/22 11:44	95-47-6	
p-Isopropyltoluene	**<1.0**	ug/L	5.0	1.0	1		02/11/22 11:44	99-87-6	
sec-Butylbenzene	**<0.42**	ug/L	1.0	0.42	1		02/11/22 11:44	135-98-8	
tert-Butylbenzene	**<0.59**	ug/L	1.0	0.59	1		02/11/22 11:44	98-06-6	
trans-1,2-Dichloroethene	**<0.53**	ug/L	1.0	0.53	1		02/11/22 11:44	156-60-5	
trans-1,3-Dichloropropene	**<3.5**	ug/L	5.0	3.5	1		02/11/22 11:44	10061-02-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1162-013
Pace Project No.: 40240181

Sample: TRIP BLANK **Lab ID: 40240181008** Collected: 02/02/22 15:20 Received: 02/02/22 16:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-130		1		02/11/22 11:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		02/11/22 11:44	2199-69-1	
Toluene-d8 (S)	97	%	70-130		1		02/11/22 11:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

QC Batch: 407901
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

METHOD BLANK: 2351423 Matrix: Water
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.066	0.20	02/10/22 10:52	

LABORATORY CONTROL SAMPLE: 2351424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351425 2351426

Parameter	Units	40240181001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.066	5	5	4.0	4.0	79	80	85-115	2	20	M0

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

QC Batch: 407784
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010D MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

METHOD BLANK: 2350834 Matrix: Water
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	02/10/22 08:23	
Barium	ug/L	<1.5	5.0	02/10/22 08:23	
Cadmium	ug/L	<1.3	5.0	02/10/22 08:23	
Chromium	ug/L	<2.5	10.0	02/10/22 08:23	
Lead	ug/L	<5.9	20.0	02/10/22 08:23	
Selenium	ug/L	<12.2	40.0	02/10/22 08:23	
Silver	ug/L	<3.2	10.0	02/10/22 08:23	

LABORATORY CONTROL SAMPLE: 2350835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	250	254	102	80-120	
Barium	ug/L	250	260	104	80-120	
Cadmium	ug/L	250	262	105	80-120	
Chromium	ug/L	250	260	104	80-120	
Lead	ug/L	250	268	107	80-120	
Selenium	ug/L	250	271	109	80-120	
Silver	ug/L	125	102	82	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2350836 2350837

Parameter	Units	40240181001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<41.7	250	250	278	279	96	96	75-125	0	20	
Barium	ug/L	1960	250	250	2220	2230	105	108	75-125	0	20	
Cadmium	ug/L	181	250	250	453	458	109	111	75-125	1	20	
Chromium	ug/L	<12.7	250	250	257	262	101	103	75-125	2	20	
Lead	ug/L	<29.6	250	250	273	283	106	110	75-125	3	20	
Selenium	ug/L	<61.2	250	250	269	262	108	105	75-125	3	20	
Silver	ug/L	<16.0	125	125	113	116	85	88	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

QC Batch: 407721 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

METHOD BLANK: 2350677 Matrix: Water
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	02/08/22 10:30	
1,1,1-Trichloroethane	ug/L	<0.30	1.0	02/08/22 10:30	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	02/08/22 10:30	
1,1,2-Trichloroethane	ug/L	<0.34	5.0	02/08/22 10:30	
1,1-Dichloroethane	ug/L	<0.30	1.0	02/08/22 10:30	
1,1-Dichloroethene	ug/L	<0.58	1.0	02/08/22 10:30	
1,1-Dichloropropene	ug/L	<0.41	1.0	02/08/22 10:30	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	02/08/22 10:30	
1,2,3-Trichloropropane	ug/L	<0.56	5.0	02/08/22 10:30	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	02/08/22 10:30	
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	02/08/22 10:30	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	02/08/22 10:30	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	02/08/22 10:30	
1,2-Dichlorobenzene	ug/L	<0.33	1.0	02/08/22 10:30	
1,2-Dichloroethane	ug/L	<0.29	1.0	02/08/22 10:30	
1,2-Dichloropropane	ug/L	<0.45	1.0	02/08/22 10:30	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	02/08/22 10:30	
1,3-Dichlorobenzene	ug/L	<0.35	1.0	02/08/22 10:30	
1,3-Dichloropropane	ug/L	<0.30	1.0	02/08/22 10:30	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	02/08/22 10:30	
2,2-Dichloropropane	ug/L	<4.2	5.0	02/08/22 10:30	
2-Chlorotoluene	ug/L	<0.89	5.0	02/08/22 10:30	
4-Chlorotoluene	ug/L	<0.89	5.0	02/08/22 10:30	
Benzene	ug/L	<0.30	1.0	02/08/22 10:30	
Bromobenzene	ug/L	<0.36	1.0	02/08/22 10:30	
Bromochloromethane	ug/L	<0.36	5.0	02/08/22 10:30	
Bromodichloromethane	ug/L	<0.42	1.0	02/08/22 10:30	
Bromoform	ug/L	<3.8	5.0	02/08/22 10:30	
Bromomethane	ug/L	<1.2	5.0	02/08/22 10:30	
Carbon tetrachloride	ug/L	<0.37	1.0	02/08/22 10:30	
Chlorobenzene	ug/L	<0.86	1.0	02/08/22 10:30	
Chloroethane	ug/L	<1.4	5.0	02/08/22 10:30	
Chloroform	ug/L	<1.2	5.0	02/08/22 10:30	
Chloromethane	ug/L	<1.6	5.0	02/08/22 10:30	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	02/08/22 10:30	
cis-1,3-Dichloropropene	ug/L	<0.36	1.0	02/08/22 10:30	
Dibromochloromethane	ug/L	<2.6	5.0	02/08/22 10:30	
Dibromomethane	ug/L	<0.99	5.0	02/08/22 10:30	
Dichlorodifluoromethane	ug/L	<0.46	5.0	02/08/22 10:30	
Diisopropyl ether	ug/L	<1.1	5.0	02/08/22 10:30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

METHOD BLANK: 2350677 Matrix: Water
Associated Lab Samples: 40240181001, 40240181002, 40240181003, 40240181004, 40240181005, 40240181006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.33	1.0	02/08/22 10:30	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	02/08/22 10:30	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	02/08/22 10:30	
m&p-Xylene	ug/L	<0.70	2.0	02/08/22 10:30	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	02/08/22 10:30	
Methylene Chloride	ug/L	<0.32	5.0	02/08/22 10:30	
n-Butylbenzene	ug/L	<0.86	1.0	02/08/22 10:30	
n-Propylbenzene	ug/L	<0.35	1.0	02/08/22 10:30	
Naphthalene	ug/L	<1.1	5.0	02/08/22 10:30	
o-Xylene	ug/L	<0.35	1.0	02/08/22 10:30	
p-Isopropyltoluene	ug/L	<1.0	5.0	02/08/22 10:30	
sec-Butylbenzene	ug/L	<0.42	1.0	02/08/22 10:30	
Styrene	ug/L	<0.36	1.0	02/08/22 10:30	
tert-Butylbenzene	ug/L	<0.59	1.0	02/08/22 10:30	
Tetrachloroethene	ug/L	<0.41	1.0	02/08/22 10:30	
Toluene	ug/L	<0.29	1.0	02/08/22 10:30	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	02/08/22 10:30	
trans-1,3-Dichloropropene	ug/L	<3.5	5.0	02/08/22 10:30	
Trichloroethene	ug/L	<0.32	1.0	02/08/22 10:30	
Trichlorofluoromethane	ug/L	<0.42	1.0	02/08/22 10:30	
Vinyl chloride	ug/L	<0.17	1.0	02/08/22 10:30	
1,2-Dichlorobenzene-d4 (S)	%	107	70-130	02/08/22 10:30	
4-Bromofluorobenzene (S)	%	104	70-130	02/08/22 10:30	
Toluene-d8 (S)	%	101	70-130	02/08/22 10:30	

LABORATORY CONTROL SAMPLE: 2350678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.9	108	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	56.0	112	66-130	
1,1,2-Trichloroethane	ug/L	50	51.4	103	70-130	
1,1-Dichloroethane	ug/L	50	52.2	104	68-132	
1,1-Dichloroethene	ug/L	50	53.2	106	85-126	
1,2,4-Trichlorobenzene	ug/L	50	53.8	108	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	57.1	114	51-126	
1,2-Dibromoethane (EDB)	ug/L	50	51.0	102	70-130	
1,2-Dichlorobenzene	ug/L	50	52.8	106	70-130	
1,2-Dichloroethane	ug/L	50	54.3	109	70-130	
1,2-Dichloropropane	ug/L	50	53.4	107	78-125	
1,3-Dichlorobenzene	ug/L	50	53.9	108	70-130	
1,4-Dichlorobenzene	ug/L	50	51.7	103	70-130	
Benzene	ug/L	50	51.7	103	70-132	
Bromodichloromethane	ug/L	50	53.1	106	70-130	
Bromoform	ug/L	50	56.8	114	65-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

LABORATORY CONTROL SAMPLE: 2350678

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	31.1	62	44-128	
Carbon tetrachloride	ug/L	50	56.0	112	70-130	
Chlorobenzene	ug/L	50	52.8	106	70-130	
Chloroethane	ug/L	50	48.3	97	73-137	
Chloroform	ug/L	50	53.7	107	80-122	
Chloromethane	ug/L	50	50.4	101	27-148	
cis-1,2-Dichloroethene	ug/L	50	51.7	103	70-130	
cis-1,3-Dichloropropene	ug/L	50	52.1	104	70-130	
Dibromochloromethane	ug/L	50	54.0	108	70-130	
Dichlorodifluoromethane	ug/L	50	39.7	79	22-151	
Ethylbenzene	ug/L	50	55.4	111	80-123	
Isopropylbenzene (Cumene)	ug/L	50	58.4	117	70-130	
m&p-Xylene	ug/L	100	108	108	70-130	
Methyl-tert-butyl ether	ug/L	50	50.0	100	66-130	
Methylene Chloride	ug/L	50	50.0	100	70-130	
o-Xylene	ug/L	50	53.6	107	70-130	
Styrene	ug/L	50	51.6	103	70-130	
Tetrachloroethene	ug/L	50	53.8	108	70-130	
Toluene	ug/L	50	51.3	103	80-121	
trans-1,2-Dichloroethene	ug/L	50	50.7	101	70-130	
trans-1,3-Dichloropropene	ug/L	50	48.9	98	58-125	
Trichloroethene	ug/L	50	52.9	106	70-130	
Trichlorofluoromethane	ug/L	50	59.5	119	84-148	
Vinyl chloride	ug/L	50	60.0	120	63-142	
1,2-Dichlorobenzene-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			108	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351367 2351368

Parameter	Units	40240245001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.30	50	50	53.5	53.7	107	107	70-130	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	54.2	54.3	108	109	66-130	0	20	
1,1,2-Trichloroethane	ug/L	<0.34	50	50	49.0	50.0	98	100	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.30	50	50	50.1	50.7	100	101	68-132	1	20	
1,1-Dichloroethene	ug/L	<0.58	50	50	51.3	52.2	103	104	76-132	2	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	52.6	53.4	105	107	70-130	2	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	50	50	54.1	54.6	108	109	51-126	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	51.3	51.7	103	103	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<0.33	50	50	51.0	51.7	102	103	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.29	50	50	52.6	53.2	105	106	70-130	1	20	
1,2-Dichloropropane	ug/L	<0.45	50	50	48.8	49.6	98	99	77-125	2	20	
1,3-Dichlorobenzene	ug/L	<0.35	50	50	52.2	52.4	104	105	70-130	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351367 2351368

Parameter	Units	40240245001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/L	<0.89	50	50	51.2	51.1	102	102	70-130	0	20	
Benzene	ug/L	<0.30	50	50	49.9	50.4	100	101	70-132	1	20	
Bromodichloromethane	ug/L	<0.42	50	50	52.5	51.9	105	104	70-130	1	20	
Bromoform	ug/L	<3.8	50	50	52.1	52.8	104	106	65-130	1	20	
Bromomethane	ug/L	<1.2	50	50	32.1	32.9	64	66	44-128	2	21	
Carbon tetrachloride	ug/L	<0.37	50	50	55.2	55.1	110	110	70-132	0	20	
Chlorobenzene	ug/L	<0.86	50	50	50.1	50.9	100	102	70-130	1	20	
Chloroethane	ug/L	<1.4	50	50	46.8	47.1	94	94	70-137	1	20	
Chloroform	ug/L	<1.2	50	50	51.4	52.0	103	104	80-122	1	20	
Chloromethane	ug/L	<1.6	50	50	48.8	48.8	98	98	17-149	0	20	
cis-1,2-Dichloroethene	ug/L	1.3	50	50	51.1	51.4	100	100	70-130	1	20	
cis-1,3-Dichloropropene	ug/L	<0.36	50	50	50.1	50.4	100	101	70-130	1	20	
Dibromochloromethane	ug/L	<2.6	50	50	51.6	52.3	103	105	70-130	1	20	
Dichlorodifluoromethane	ug/L	<0.46	50	50	38.3	36.9	77	74	22-158	4	20	
Ethylbenzene	ug/L	<0.33	50	50	53.5	53.8	107	108	80-123	1	20	
Isopropylbenzene (Cumene)	ug/L	<1.0	50	50	56.1	56.0	112	112	70-130	0	20	
m&p-Xylene	ug/L	<0.70	100	100	105	105	105	105	70-130	0	20	
Methyl-tert-butyl ether	ug/L	<1.1	50	50	48.2	48.0	96	96	66-130	0	20	
Methylene Chloride	ug/L	<0.32	50	50	48.2	49.2	96	98	70-130	2	20	
o-Xylene	ug/L	<0.35	50	50	51.5	51.7	103	103	70-130	0	20	
Styrene	ug/L	<0.36	50	50	50.1	49.8	100	100	70-130	1	20	
Tetrachloroethene	ug/L	<0.41	50	50	51.3	51.4	103	103	70-130	0	20	
Toluene	ug/L	<0.29	50	50	49.6	49.5	99	99	80-121	0	20	
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	48.4	49.1	97	98	70-134	1	20	
trans-1,3-Dichloropropene	ug/L	<3.5	50	50	47.9	48.0	96	96	58-130	0	20	
Trichloroethene	ug/L	0.53J	50	50	52.9	52.4	105	104	70-130	1	20	
Trichlorofluoromethane	ug/L	<0.42	50	50	57.5	59.0	115	118	82-151	3	20	
Vinyl chloride	ug/L	<0.17	50	50	58.1	58.5	116	117	61-143	1	20	
1,2-Dichlorobenzene-d4 (S)	%						103	104	70-130			
4-Bromofluorobenzene (S)	%						110	110	70-130			
Toluene-d8 (S)	%						99	99	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

QC Batch: 407949
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40240181008

METHOD BLANK: 2351637 Matrix: Water
Associated Lab Samples: 40240181008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	02/11/22 09:47	
1,1,1-Trichloroethane	ug/L	<0.30	1.0	02/11/22 09:47	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	02/11/22 09:47	
1,1,2-Trichloroethane	ug/L	<0.34	5.0	02/11/22 09:47	
1,1-Dichloroethane	ug/L	<0.30	1.0	02/11/22 09:47	
1,1-Dichloroethene	ug/L	<0.58	1.0	02/11/22 09:47	
1,1-Dichloropropene	ug/L	<0.41	1.0	02/11/22 09:47	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	02/11/22 09:47	
1,2,3-Trichloropropane	ug/L	<0.56	5.0	02/11/22 09:47	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	02/11/22 09:47	
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	02/11/22 09:47	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	02/11/22 09:47	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	02/11/22 09:47	
1,2-Dichlorobenzene	ug/L	<0.33	1.0	02/11/22 09:47	
1,2-Dichloroethane	ug/L	<0.29	1.0	02/11/22 09:47	
1,2-Dichloropropane	ug/L	<0.45	1.0	02/11/22 09:47	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	02/11/22 09:47	
1,3-Dichlorobenzene	ug/L	<0.35	1.0	02/11/22 09:47	
1,3-Dichloropropane	ug/L	<0.30	1.0	02/11/22 09:47	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	02/11/22 09:47	
2,2-Dichloropropane	ug/L	<4.2	5.0	02/11/22 09:47	
2-Chlorotoluene	ug/L	<0.89	5.0	02/11/22 09:47	
4-Chlorotoluene	ug/L	<0.89	5.0	02/11/22 09:47	
Benzene	ug/L	<0.30	1.0	02/11/22 09:47	
Bromobenzene	ug/L	<0.36	1.0	02/11/22 09:47	
Bromochloromethane	ug/L	<0.36	5.0	02/11/22 09:47	
Bromodichloromethane	ug/L	<0.42	1.0	02/11/22 09:47	
Bromoform	ug/L	<3.8	5.0	02/11/22 09:47	
Bromomethane	ug/L	<1.2	5.0	02/11/22 09:47	
Carbon tetrachloride	ug/L	<0.37	1.0	02/11/22 09:47	
Chlorobenzene	ug/L	<0.86	1.0	02/11/22 09:47	
Chloroethane	ug/L	<1.4	5.0	02/11/22 09:47	
Chloroform	ug/L	<1.2	5.0	02/11/22 09:47	
Chloromethane	ug/L	<1.6	5.0	02/11/22 09:47	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	02/11/22 09:47	
cis-1,3-Dichloropropene	ug/L	<0.36	1.0	02/11/22 09:47	
Dibromochloromethane	ug/L	<2.6	5.0	02/11/22 09:47	
Dibromomethane	ug/L	<0.99	5.0	02/11/22 09:47	
Dichlorodifluoromethane	ug/L	<0.46	5.0	02/11/22 09:47	
Diisopropyl ether	ug/L	<1.1	5.0	02/11/22 09:47	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

METHOD BLANK: 2351637 Matrix: Water
Associated Lab Samples: 40240181008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.33	1.0	02/11/22 09:47	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	02/11/22 09:47	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	02/11/22 09:47	
m&p-Xylene	ug/L	<0.70	2.0	02/11/22 09:47	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	02/11/22 09:47	
Methylene Chloride	ug/L	<0.32	5.0	02/11/22 09:47	
n-Butylbenzene	ug/L	<0.86	1.0	02/11/22 09:47	
n-Propylbenzene	ug/L	<0.35	1.0	02/11/22 09:47	
Naphthalene	ug/L	<1.1	5.0	02/11/22 09:47	
o-Xylene	ug/L	<0.35	1.0	02/11/22 09:47	
p-Isopropyltoluene	ug/L	<1.0	5.0	02/11/22 09:47	
sec-Butylbenzene	ug/L	<0.42	1.0	02/11/22 09:47	
Styrene	ug/L	<0.36	1.0	02/11/22 09:47	
tert-Butylbenzene	ug/L	<0.59	1.0	02/11/22 09:47	
Tetrachloroethene	ug/L	<0.41	1.0	02/11/22 09:47	
Toluene	ug/L	<0.29	1.0	02/11/22 09:47	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	02/11/22 09:47	
trans-1,3-Dichloropropene	ug/L	<3.5	5.0	02/11/22 09:47	
Trichloroethene	ug/L	<0.32	1.0	02/11/22 09:47	
Trichlorofluoromethane	ug/L	<0.42	1.0	02/11/22 09:47	
Vinyl chloride	ug/L	<0.17	1.0	02/11/22 09:47	
1,2-Dichlorobenzene-d4 (S)	%	101	70-130	02/11/22 09:47	
4-Bromofluorobenzene (S)	%	93	70-130	02/11/22 09:47	
Toluene-d8 (S)	%	97	70-130	02/11/22 09:47	

LABORATORY CONTROL SAMPLE: 2351638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	54.6	109	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	43.1	86	66-130	
1,1,2-Trichloroethane	ug/L	50	47.2	94	70-130	
1,1-Dichloroethane	ug/L	50	53.2	106	68-132	
1,1-Dichloroethene	ug/L	50	48.2	96	85-126	
1,2,4-Trichlorobenzene	ug/L	50	45.8	92	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	45.7	91	51-126	
1,2-Dibromoethane (EDB)	ug/L	50	49.5	99	70-130	
1,2-Dichlorobenzene	ug/L	50	48.8	98	70-130	
1,2-Dichloroethane	ug/L	50	60.3	121	70-130	
1,2-Dichloropropane	ug/L	50	52.5	105	78-125	
1,3-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,4-Dichlorobenzene	ug/L	50	48.5	97	70-130	
Benzene	ug/L	50	48.5	97	70-132	
Bromodichloromethane	ug/L	50	55.1	110	70-130	
Bromoform	ug/L	50	48.8	98	65-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

LABORATORY CONTROL SAMPLE: 2351638

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromomethane	ug/L	50	17.7	35	44-128	L2
Carbon tetrachloride	ug/L	50	59.2	118	70-130	
Chlorobenzene	ug/L	50	49.9	100	70-130	
Chloroethane	ug/L	50	47.0	94	73-137	
Chloroform	ug/L	50	51.6	103	80-122	
Chloromethane	ug/L	50	47.0	94	27-148	
cis-1,2-Dichloroethene	ug/L	50	47.2	94	70-130	
cis-1,3-Dichloropropene	ug/L	50	47.7	95	70-130	
Dibromochloromethane	ug/L	50	52.7	105	70-130	
Dichlorodifluoromethane	ug/L	50	29.3	59	22-151	
Ethylbenzene	ug/L	50	48.4	97	80-123	
Isopropylbenzene (Cumene)	ug/L	50	52.8	106	70-130	
m&p-Xylene	ug/L	100	99.8	100	70-130	
Methyl-tert-butyl ether	ug/L	50	45.3	91	66-130	
Methylene Chloride	ug/L	50	48.0	96	70-130	
o-Xylene	ug/L	50	50.6	101	70-130	
Styrene	ug/L	50	53.1	106	70-130	
Tetrachloroethene	ug/L	50	52.7	105	70-130	
Toluene	ug/L	50	46.8	94	80-121	
trans-1,2-Dichloroethene	ug/L	50	47.9	96	70-130	
trans-1,3-Dichloropropene	ug/L	50	46.3	93	58-125	
Trichloroethene	ug/L	50	50.4	101	70-130	
Trichlorofluoromethane	ug/L	50	58.9	118	84-148	
Vinyl chloride	ug/L	50	51.4	103	63-142	
1,2-Dichlorobenzene-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			91	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351989 2351990

Parameter	Units	40240327001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	4.8	50	50	58.7	58.9	108	108	70-130	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	43.4	43.9	87	88	66-130	1	20	
1,1,2-Trichloroethane	ug/L	<0.34	50	50	48.3	47.9	97	96	70-130	1	20	
1,1-Dichloroethane	ug/L	<0.30	50	50	53.8	53.8	108	108	68-132	0	20	
1,1-Dichloroethene	ug/L	<0.58	50	50	48.2	49.6	96	99	76-132	3	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	46.8	46.5	94	93	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	50	50	45.3	46.1	91	92	51-126	2	20	
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	48.7	48.5	97	97	70-130	1	20	
1,2-Dichlorobenzene	ug/L	<0.33	50	50	48.8	48.2	98	96	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.29	50	50	59.3	58.2	119	116	70-130	2	20	
1,2-Dichloropropane	ug/L	<0.45	50	50	51.6	51.7	103	103	77-125	0	20	
1,3-Dichlorobenzene	ug/L	<0.35	50	50	47.8	48.1	96	96	70-130	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1162-013
Pace Project No.: 40240181

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351989 2351990

Parameter	Units	40240327001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,4-Dichlorobenzene	ug/L	<0.89	50	50	48.9	48.2	98	96	70-130	1	20	
Benzene	ug/L	<0.30	50	50	48.5	48.4	97	97	70-132	0	20	
Bromodichloromethane	ug/L	<0.42	50	50	53.5	53.2	107	106	70-130	0	20	
Bromoform	ug/L	<3.8	50	50	50.6	50.1	101	100	65-130	1	20	
Bromomethane	ug/L	<1.2	50	50	22.4	25.7	45	51	44-128	13	21	
Carbon tetrachloride	ug/L	<0.37	50	50	59.0	59.3	118	119	70-132	1	20	
Chlorobenzene	ug/L	<0.86	50	50	50.7	50.2	101	100	70-130	1	20	
Chloroethane	ug/L	<1.4	50	50	49.8	48.2	100	96	70-137	3	20	
Chloroform	ug/L	<1.2	50	50	51.6	51.5	103	103	80-122	0	20	
Chloromethane	ug/L	<1.6	50	50	48.0	48.2	96	96	17-149	0	20	
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	47.8	47.3	96	95	70-130	1	20	
cis-1,3-Dichloropropene	ug/L	<0.36	50	50	47.7	47.3	95	95	70-130	1	20	
Dibromochloromethane	ug/L	<2.6	50	50	53.2	53.3	106	107	70-130	0	20	
Dichlorodifluoromethane	ug/L	<0.46	50	50	29.3	29.5	59	59	22-158	1	20	
Ethylbenzene	ug/L	<0.33	50	50	48.5	48.4	97	97	80-123	0	20	
Isopropylbenzene (Cumene)	ug/L	<1.0	50	50	52.7	52.4	105	105	70-130	0	20	
m&p-Xylene	ug/L	<0.70	100	100	100	99.1	100	99	70-130	1	20	
Methyl-tert-butyl ether	ug/L	<1.1	50	50	45.6	47.1	91	94	66-130	3	20	
Methylene Chloride	ug/L	<0.32	50	50	48.0	47.5	96	95	70-130	1	20	
o-Xylene	ug/L	<0.35	50	50	49.9	49.6	100	99	70-130	0	20	
Styrene	ug/L	<0.36	50	50	52.4	52.5	105	105	70-130	0	20	
Tetrachloroethene	ug/L	1.9	50	50	55.5	54.4	107	105	70-130	2	20	
Toluene	ug/L	<0.29	50	50	47.4	46.8	95	94	80-121	1	20	
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	47.6	49.1	95	98	70-134	3	20	
trans-1,3-Dichloropropene	ug/L	<3.5	50	50	48.1	47.1	96	94	58-130	2	20	
Trichloroethene	ug/L	6.2	50	50	55.9	56.6	100	101	70-130	1	20	
Trichlorofluoromethane	ug/L	<0.42	50	50	59.1	59.8	118	120	82-151	1	20	
Vinyl chloride	ug/L	<0.17	50	50	52.1	52.7	104	105	61-143	1	20	
1,2-Dichlorobenzene-d4 (S)	%						99	99	70-130			
4-Bromofluorobenzene (S)	%						92	92	70-130			
Toluene-d8 (S)	%						97	98	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 1162-013
Pace Project No.: 40240181

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1162-013
Pace Project No.: 40240181

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40240181001	**TW-20**	EPA 3010A	407784	EPA 6010D	407846
40240181002	**TW-21**	EPA 3010A	407784	EPA 6010D	407846
40240181003	**TW-22**	EPA 3010A	407784	EPA 6010D	407846
40240181004	**TW-23**	EPA 3010A	407784	EPA 6010D	407846
40240181005	**TW-24**	EPA 3010A	407784	EPA 6010D	407846
40240181006	**TW-25**	EPA 3010A	407784	EPA 6010D	407846
40240181001	**TW-20**	EPA 7470	407901	EPA 7470	407944
40240181002	**TW-21**	EPA 7470	407901	EPA 7470	407944
40240181003	**TW-22**	EPA 7470	407901	EPA 7470	407944
40240181004	**TW-23**	EPA 7470	407901	EPA 7470	407944
40240181005	**TW-24**	EPA 7470	407901	EPA 7470	407944
40240181006	**TW-25**	EPA 7470	407901	EPA 7470	407944
40240181001	**TW-20**	EPA 8260	407721		
40240181002	**TW-21**	EPA 8260	407721		
40240181003	**TW-22**	EPA 8260	407721		
40240181004	**TW-23**	EPA 8260	407721		
40240181005	**TW-24**	EPA 8260	407721		
40240181006	**TW-25**	EPA 8260	407721		
40240181008	**TRIP BLANK**	EPA 8260	407949		

402401B1

Robert E. Lee & Associates, Inc.
Engineering, Surveying, Environmental Services
1250 Centennial Centre Blvd.
Hobart, WI 54155
920.662.9641 FAX 920.662.9141

To ensure the proper handling of samples, please see the back for instructions.

CHAIN OF CUSTODY RECORD

COC # 202869

Client: 1162-013
Project Name: 1162-013
Project Number: 1162-013 | BID #:

Environmental Program:
☐ LUST ☐ SDWA ☐ WPDES ☐ RCRA ☐ OTHER _____

Requested Turnaround Time
☒ Normal (10-15 DAYS) ☐ Rush
Date Needed: _____
Rushes accepted only w/prior notification

*Preservation Code
N = Nitric Acid (red) O = Sodium Hydroxide
H = Hydrochloric Acid U = Unpreserved (white)
M = Methanol S = Sulfuric Acid (green)

Sampler: CMA

Sample Type (Matrix)
DW = Drinking Water
GW = Groundwater
WW= Wastewater
Soil, Oil, Sludge, Air, Other:

Analyses Required:
(Note special detection limits or methods)

Sample Name	Date	Time		Comp	Grab	Sample Type	No. Of Containers	Filtered? (Y/N)	Preservation *(Code)	VOC	PFAS WT 33 List	RCRA Metals	Laboratory Sample I.D.	Remarks:
								N	H					
								N	U					
								Y	N					
TW-20	2-2-22	1459	A/P		X	GW	5			X	X	X	001	
TW-21	↓	1326	A/P		X	↓	↓			X	X	X	002	
TW-22		1115	A/P		X					X	X	X	003	
TW-23		1045	A/P		X					X	X	X	004	
TW-24		1420	A/P		X					X	X	X	005	
TW-25		1206	A/P		X		↓			X	X	X	006	
Field Reagent Blank		1514	A/P		X		1				X		007	
trip Blank	↓	1520	A/P		X	↓	2			X			008	
			A/P											
			A/P											
			A/P											
			A/P											

Report to: Nicole LaPlant
Company: **Robert E. Lee & Associates**
Address: **1250 Centennial Centre Blvd.**
Hobart, WI 54155
Telephone: **920-662-9641**

Invoice to: Nicole / Jaci
Company: **Robert E. Lee & Associates**
Address: **1250 Centennial Centre Blvd.**
Hobart, WI 54155
Telephone: **920-662-9641**

Relinquished By	Date	Time		Received By	Date	Time	
1) Jonah Bebb REL	2-2-22	1650	A/P	[signature]	2/2/22	1650	A/P
2)			A/P				A/P
3)			A/P				A/P

Received by Lab _____ A = AM P = PM

Laboratory Receiving Notes
Temperature of Contents 5 °C
Custody Seal Intact _____
Sample Condition _____
Sample pH _____

Client Name: REL

Sample Preservation Receipt Form

Project # 410240181

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

All containers needing preservation have been checked and noted below: ☒Yes ☐No ☐N/A

Lab Lot# of pH paper: 100104 Lab Std #ID of preservation (if pH adjusted):

Initial when completed: MP Date/Time:

Pace Lab #	Glass							Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN							
001										1		1					3													X		2.5 / 5 / 10
002										1		1					3													X		2.5 / 5 / 10
003										1		1					3													X		2.5 / 5 / 10
004										1		1					3													X		2.5 / 5 / 10
005										1		1					3													X		2.5 / 5 / 10
006										1		1					3										1			X		2.5 / 5 / 10
007										1							3													X		2.5 / 5 / 10
008																	2															2.5 / 5 / 10
009																																2.5 / 5 / 10
010																																2.5 / 5 / 10
011																																2.5 / 5 / 10
012																																2.5 / 5 / 10
013																																2.5 / 5 / 10
014																																2.5 / 5 / 10
015																																2.5 / 5 / 10
016																																2.5 / 5 / 10
017																																2.5 / 5 / 10
018																																2.5 / 5 / 10
019																																2.5 / 5 / 10
020																																2.5 / 5 / 10

2/2/22 MP

Exceptions to preservation check: VOA Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☐N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: REL

Project #:

WO# : 40240181

40240181

Courier: ☐ CS Logistics ☐ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☒ Client ☐ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer Used SR - 107 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 5 /Corr: 5

Person examining contents:

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Date: 2/2/22 /Initials: MP

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Labeled By Initials: SKW

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: ☐Yes ☒No ☐N/A		8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: 2/2/22 SKW	☒Yes ☐No ☐N/A	12. 005 BP3N ID is TW25 placed by time 2-2-22 SW
-Includes date/time/ID/Analysis Matrix: W		
Trip Blank Present:	☒Yes ☐No ☐N/A	13.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 475		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Report of Analysis

Pace Analytical Services, LLC
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Attention: Brian Basten

Project Name: 1162-013

Project Number: 40240181

Lot Number:**XB08008**

Date Completed:03/02/2022

03/02/2022 3:52 PM
Approved and released by:
Project Manager II: **Edward Barnett**

The electronic signature above is the equivalent of a handwritten signature.

Case Narrative
Pace Analytical Services, LLC
Lot Number: XB08008

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

PFAS
Surrogate recovery for the following samples was outside of acceptance limits: XB08008-001 and XB08008-004. There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Surrogate recovery for the following samples was outside the upper control limit: XB08008-002 and XB08008-003. These samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

4:2 FTS surrogate recovery for the following sample was outside the upper control limit: XB08008-005. This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Surrogate recovery for the following sample was outside control limits: XB08008-006. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

For samples XB08008-004, XB08008-005, and XB08008-006, sample matrix prevented full volume from being extracted, precluding method mandated bottle rinse. Elution solvent was aliquoted directly into the reservoir, rinsing the inside. Surrogate recovery may be adversely affected.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the Pace Quality Assurance Management Plan (QAMP), applicable standard operating procedures (SOPs), the 2003 NELAC standard, and Pace policies. Additionally, the DoD QSM version 5.3 has been followed for these samples, and specifically Table B-15 was followed for all PFAS samples. Any exceptions to the QAMP, SOPs, NELAC standards, the DoD QSM, or policies are qualified on the results page or discussed below.

All QC associated with these samples was in compliance with DOD QSM 5.3 table B-15 and our PFAS SOP.

Correction factors (CF) are used to calculate the original sample concentration. The CF is the inverse of the concentration factor (sample volume / extract final volume) times the dilution factor (DF). For undiluted analysis. For undiluted analysis, the extract is prepared for injection by adding 182 uL of sample extract + 8 uL of reagent water + 10 uL of internal standard solution to a polypropylene autosampler vial. An extra correction factor of 0.91 (182 uL / 200 uL = 0.91) applies. The CF is calculated as follows:

CF = DF * FV / Vo

FV is volume of extract (mL)
Vo is initial sample volume (mL)
DF is dilution factor. For undiluted analysis, DF = 1/0.91.

Sample concentration for aqueous samples:
Concentration (ng/L) = Cs*CF,

$$C_s = \frac{\left(\frac{(A_s x C_{is})}{A_{is}}\right) - B}{M1}$$

Where

C_s is on column concentration of target analyte in the sample (ng/L)
C_{is} is concentration of internal standard in the sample (ng/L)
A_s is peak response of target analyte in the sample
A_{is} is peak response of internal standard in the sample
M1 is the average RF from ICAL or the slope from linear regression ICAL
B is the y-intercept from the ICAL

Sample Summary

Pace Analytical Services, LLC

Lot Number: XB08008

Project Name: 1162-013

Project Number: 40240181

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	TW-20	Aqueous	02/02/2022 1459	02/08/2022
002	TW-21	Aqueous	02/02/2022 1320	02/08/2022
003	TW-22	Aqueous	02/02/2022 1115	02/08/2022
004	TW-23	Aqueous	02/02/2022 1045	02/08/2022
005	TW-24	Aqueous	02/02/2022 1420	02/08/2022
006	TW-25	Aqueous	02/02/2022 1206	02/08/2022
007	FIELD REAGENT BLANK	Aqueous	02/02/2022 1514	02/08/2022

(7 samples)

Detection Summary

Pace Analytical Services, LLC

Lot Number: XB08008

Project Name: 1162-013

Project Number: 40240181

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	TW-20	Aqueous	6:2 FTS	PFAS by ID	2.0	J	ng/L	7
001	TW-20	Aqueous	PFBS	PFAS by ID	110		ng/L	7
001	TW-20	Aqueous	PFHpS	PFAS by ID	1.0	J	ng/L	7
001	TW-20	Aqueous	PFHxS	PFAS by ID	11		ng/L	7
001	TW-20	Aqueous	PFHpA	PFAS by ID	2.7	J	ng/L	7
001	TW-20	Aqueous	PFOA	PFAS by ID	10		ng/L	7
001	TW-20	Aqueous	PFOS	PFAS by ID	57		ng/L	7
002	TW-21	Aqueous	PFBS	PFAS by ID	130		ng/L	9
002	TW-21	Aqueous	PFHpS	PFAS by ID	78		ng/L	9
002	TW-21	Aqueous	PFPeS	PFAS by ID	32	J	ng/L	9
002	TW-21	Aqueous	PFHxS	PFAS by ID	160		ng/L	9
002	TW-21	Aqueous	PFBA	PFAS by ID	11	J	ng/L	9
002	TW-21	Aqueous	PFHpA	PFAS by ID	8.4	J	ng/L	9
002	TW-21	Aqueous	PFOA	PFAS by ID	53	J	ng/L	9
002	TW-21	Aqueous	PFOS	PFAS by ID	3800		ng/L	9
003	TW-22	Aqueous	PFBS	PFAS by ID	310		ng/L	11
003	TW-22	Aqueous	PFHpS	PFAS by ID	5.1		ng/L	11
003	TW-22	Aqueous	PFPeS	PFAS by ID	20		ng/L	11
003	TW-22	Aqueous	PFHxS	PFAS by ID	54		ng/L	11
003	TW-22	Aqueous	PFBA	PFAS by ID	31		ng/L	11
003	TW-22	Aqueous	PFHpA	PFAS by ID	8.7		ng/L	11
003	TW-22	Aqueous	PFHxA	PFAS by ID	14		ng/L	11
003	TW-22	Aqueous	PFOA	PFAS by ID	31		ng/L	11
003	TW-22	Aqueous	PFPeA	PFAS by ID	14		ng/L	11
003	TW-22	Aqueous	PFOS	PFAS by ID	95		ng/L	11
004	TW-23	Aqueous	8:2 FTS	PFAS by ID	3.9	JQ	ng/L	13
004	TW-23	Aqueous	6:2 FTS	PFAS by ID	41		ng/L	13
004	TW-23	Aqueous	PFBS	PFAS by ID	50		ng/L	13
004	TW-23	Aqueous	PFHpS	PFAS by ID	52		ng/L	13
004	TW-23	Aqueous	PFPeS	PFAS by ID	6.6		ng/L	13
004	TW-23	Aqueous	PFHxS	PFAS by ID	75		ng/L	13
004	TW-23	Aqueous	PFBA	PFAS by ID	37		ng/L	13
004	TW-23	Aqueous	PFDA	PFAS by ID	1.3	J	ng/L	13
004	TW-23	Aqueous	PFHpA	PFAS by ID	39		ng/L	13
004	TW-23	Aqueous	PFHxA	PFAS by ID	35		ng/L	13
004	TW-23	Aqueous	PFNA	PFAS by ID	5.2		ng/L	13
004	TW-23	Aqueous	PFOA	PFAS by ID	24		ng/L	13
004	TW-23	Aqueous	PFPeA	PFAS by ID	120		ng/L	13
004	TW-23	Aqueous	PFOS	PFAS by ID	7500		ng/L	13
005	TW-24	Aqueous	8:2 FTS	PFAS by ID	3.7	J	ng/L	15
005	TW-24	Aqueous	6:2 FTS	PFAS by ID	16		ng/L	15
005	TW-24	Aqueous	PFBS	PFAS by ID	38		ng/L	15
005	TW-24	Aqueous	PFHpS	PFAS by ID	30		ng/L	15

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
005	TW-24	Aqueous	PFPeS	PFAS by ID	6.5		ng/L	15
005	TW-24	Aqueous	PFHxS	PFAS by ID	34		ng/L	15
005	TW-24	Aqueous	PFBA	PFAS by ID	2.5	J	ng/L	15
005	TW-24	Aqueous	PFHpA	PFAS by ID	3.1	J	ng/L	15
005	TW-24	Aqueous	PFHxA	PFAS by ID	5.5		ng/L	15
005	TW-24	Aqueous	PFNA	PFAS by ID	2.9	J	ng/L	15
005	TW-24	Aqueous	PFOA	PFAS by ID	15		ng/L	15
005	TW-24	Aqueous	PFPeA	PFAS by ID	4.4		ng/L	15
005	TW-24	Aqueous	PFOS	PFAS by ID	3500		ng/L	15
006	TW-25	Aqueous	6:2 FTS	PFAS by ID	8.2	J	ng/L	17
006	TW-25	Aqueous	PFBS	PFAS by ID	170		ng/L	17
006	TW-25	Aqueous	PFHpS	PFAS by ID	1.2	J	ng/L	17
006	TW-25	Aqueous	PFPeS	PFAS by ID	11		ng/L	17
006	TW-25	Aqueous	PFHxS	PFAS by ID	30		ng/L	17
006	TW-25	Aqueous	PFBA	PFAS by ID	8.5		ng/L	17
006	TW-25	Aqueous	PFHpA	PFAS by ID	17		ng/L	17
006	TW-25	Aqueous	PFHxA	PFAS by ID	11		ng/L	17
006	TW-25	Aqueous	PFOA	PFAS by ID	14		ng/L	17
006	TW-25	Aqueous	PFPeA	PFAS by ID	6.6		ng/L	17
006	TW-25	Aqueous	PFOS	PFAS by ID	57		ng/L	17

(63 detections)

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-001
Description: TW-20
Matrix: Aqueous
Date Sampled: 02/02/2022 1459
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/17/2022 1730	JJG	02/15/2022 1715	31886

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	2.0	J	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.65	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	0.82	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.80	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	110		3.4	0.36	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.0	J	3.4	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	0.90	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	11		3.4	0.48	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND	Q	3.4	0.52	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	2.7	J	3.4	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND	Q	3.4	0.59	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	10		3.4	0.71	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND	Q	3.4	0.47	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	57		3.4	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	9.2	25-150
13C2_6:2FTS		127	25-150
13C2_8:2FTS		105	25-150
13C2_PFDoA		92	25-150
13C2_PFTeDA		81	25-150
13C3_PFBS		75	25-150
13C3_PFHxS		92	25-150
13C3-HFPO-DA		48	25-150
13C4_PFBA	N	0.50	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-001
Description: TW-20
Matrix: Aqueous
Date Sampled: 02/02/2022 1459
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		98	25-150
13C5_PFHxA	N	4.8	25-150
13C5_PFPeA	N	9.9	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		91	25-150
13C8_PFOS		102	25-150
13C8_PFOSA		110	10-150
13C9_PFNA		97	25-150
d-EtFOSA		82	10-150
d5-EtFOSAA		96	25-150
d9-EtFOSE		104	10-150
d-MeFOSA		105	10-150
d3-MeFOSAA		124	25-150
d7-MeFOSE		92	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-002
Description: TW-21
Matrix: Aqueous
Date Sampled: 02/02/2022 1320
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	20	02/17/2022 1752	JJG	02/15/2022 1715	31886

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		140	8.5	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		140	12	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		140	28	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		140	35	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	140	15	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		140	37	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		140	8.5	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		140	24	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		140	13	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		140	17	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		280	22	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		140	16	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		140	23	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	130		71	7.3	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		71	14	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	78		71	8.8	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		71	13	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	32	J	71	10	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		140	18	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	160		71	9.7	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	11	J	71	11	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		71	9.3	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		71	8.3	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	8.4	J	71	7.9	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		71	12	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		71	8.2	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	53	J	71	15	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		71	9.6	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		71	9.3	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		71	11	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3800		71	35	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	162	25-150
13C2_6:2FTS		96	25-150
13C2_8:2FTS		100	25-150
13C2_PFDoA		94	25-150
13C2_PFTeDA		92	25-150
13C3_PFBS		97	25-150
13C3_PFHxS		102	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBA		93	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XB08008-002	
Description: TW-21		Matrix: Aqueous	
Date Sampled: 02/02/2022 1320	Project Name: 1162-013		
Date Received: 02/08/2022	Project Number: 40240181		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		103	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		95	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		95	25-150
13C8_PFOA		91	25-150
13C8_PFOS		102	25-150
13C8_PFOSA		116	10-150
13C9_PFNA		97	25-150
d-EtFOSA		97	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		112	10-150
d-MeFOSA		119	10-150
d3-MeFOSAA		107	25-150
d7-MeFOSE		105	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-003
Description: TW-22
Matrix: Aqueous
Date Sampled: 02/02/2022 1115
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/17/2022 1741	JJG	02/15/2022 1715	31886

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.9	1.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.65	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.9	0.82	ng/L	1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.80	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.9	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	310		3.4	0.36	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	5.1		3.4	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	20		3.4	0.51	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.9	0.90	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	54		3.4	0.48	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	31		3.4	0.52	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	8.7		3.4	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	14		3.4	0.59	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	31		3.4	0.71	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	14		3.4	0.47	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	95		3.4	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	177	25-150
13C2_6:2FTS		97	25-150
13C2_8:2FTS		90	25-150
13C2_PFDoA		85	25-150
13C2_PFTeDA		80	25-150
13C3_PFBS		87	25-150
13C3_PFHxS		92	25-150
13C3-HFPO-DA		89	25-150
13C4_PFBA		75	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC		Laboratory ID: XB08008-003	
Description: TW-22		Matrix: Aqueous	
Date Sampled: 02/02/2022 1115	Project Name: 1162-013		
Date Received: 02/08/2022	Project Number: 40240181		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C4_PFHpA		91	25-150
13C5_PFHxA		94	25-150
13C5_PFPeA		86	25-150
13C6_PFDA		90	25-150
13C7_PFUdA		90	25-150
13C8_PFOA		88	25-150
13C8_PFOS		91	25-150
13C8_PFOSA		109	10-150
13C9_PFNA		86	25-150
d-EtFOSA		76	10-150
d5-EtFOSAA		89	25-150
d9-EtFOSE		99	10-150
d-MeFOSA		103	10-150
d3-MeFOSAA		101	25-150
d7-MeFOSE		96	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC — Laboratory ID: XB08008-004
Description: TW-23 — Matrix: Aqueous
Date Sampled: 02/02/2022 1045 — Project Name: 1162-013
Date Received: 02/08/2022 — Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/22/2022 1916	ASD	02/21/2022 1840	32522
2	SOP SPE	PFAS by ID SOP	20	02/25/2022 1319	NK1	02/21/2022 1840	32522
3	SOP SPE	PFAS by ID SOP	1	02/24/2022 1350	MMM	02/21/2022 1840	32522

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.7	0.53	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.7	0.72	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	3.9	JQ	8.7	1.8	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	41		8.7	2.2	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	8.7	0.95	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.7	2.3	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.7	0.53	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.7	1.5	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.7	0.82	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.7	1.0	ng/L	3
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		17	1.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.7	1.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.7	1.4	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	50		4.4	0.45	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.4	0.85	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	52		4.4	0.54	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.4	0.78	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.4	0.67	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.6		4.4	0.65	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.7	1.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	75		4.4	0.60	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	37		4.4	0.66	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	1.3	J	4.4	0.57	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.4	0.52	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	39		4.4	0.49	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	35		4.4	0.75	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	5.2		4.4	0.50	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	24		4.4	0.91	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	120		4.4	0.59	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.4	0.65	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.4	0.58	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.4	0.68	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	7500		87	44	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits	Q	Run 3 % Recovery	Acceptance Limits
13C2_4:2FTS	N	191	25-150		112	25-150	N	193	25-150
13C2_6:2FTS		150	25-150		106	25-150	N	161	25-150
13C2_8:2FTS	N	179	25-150		113	25-150	N	170	25-150
13C2_PFDoA		56	25-150		101	25-150		58	25-150
13C2_PFTeDA		47	25-150		97	25-150		43	25-150
13C3_PFBS		76	25-150		109	25-150		69	25-150
13C3_PFHxS		75	25-150		107	25-150		71	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-004
Description: TW-23
Matrix: Aqueous
Date Sampled: 02/02/2022 1045
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits	Q	Run 3 % Recovery	Acceptance Limits
13C3-HFPO-DA		71	25-150		104	25-150		56	25-150
13C4_PFBA		51	25-150		102	25-150		49	25-150
13C4_PFHpA		74	25-150		100	25-150		64	25-150
13C5_PFHxA		76	25-150		104	25-150		71	25-150
13C5_PFPeA		62	25-150		106	25-150		60	25-150
13C6_PFDA		83	25-150		105	25-150		80	25-150
13C7_PFUdA		66	25-150		100	25-150		72	25-150
13C8_PFOA		75	25-150		104	25-150		67	25-150
13C8_PFOS		62	25-150		96	25-150		61	25-150
13C8_PFOSA		85	10-150		112	10-150		80	10-150
13C9_PFNA		61	25-150		96	25-150		60	25-150
d-EtFOSA		50	10-150		111	10-150		43	10-150
d5-EtFOSAA		81	25-150		103	25-150		79	25-150
d9-EtFOSE		45	10-150		98	10-150		43	10-150
d-MeFOSA		65	10-150		129	10-150		50	10-150
d3-MeFOSAA		92	25-150		126	25-150		87	25-150
d7-MeFOSE		50	10-150		114	10-150		42	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC — Laboratory ID: XB08008-005
Description: TW-24 — Matrix: Aqueous
Date Sampled: 02/02/2022 1420 — Project Name: 1162-013
Date Received: 02/08/2022 — Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/22/2022 1927	ASD	02/21/2022 1840	32522
2	SOP SPE	PFAS by ID SOP	10	02/25/2022 1330	NK1	02/21/2022 1840	32522
3	SOP SPE	PFAS by ID SOP	1	02/24/2022 1400	MMM	02/21/2022 1840	32522

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.7	0.52	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.7	0.72	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	3.7	J	8.7	1.7	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	16		8.7	2.2	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	8.7	0.95	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.7	2.3	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.7	0.53	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		8.7	1.5	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.7	0.82	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		8.7	1.0	ng/L	3
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		17	1.4	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.7	1.0	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		8.7	1.4	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	38		4.3	0.45	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.3	0.85	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	30		4.3	0.54	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.3	0.77	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.3	0.67	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	6.5		4.3	0.65	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		8.7	1.1	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	34		4.3	0.60	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	2.5	J	4.3	0.65	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.3	0.57	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.3	0.51	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	3.1	J	4.3	0.49	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	5.5		4.3	0.75	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	2.9	J	4.3	0.50	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	15		4.3	0.90	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	4.4		4.3	0.59	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.3	0.65	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.3	0.57	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.3	0.68	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	3500		43	22	ng/L	2

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits	Q	Run 3 % Recovery	Acceptance Limits
13C2_4:2FTS	N	157	25-150		107	25-150		149	25-150
13C2_6:2FTS		120	25-150		114	25-150		138	25-150
13C2_8:2FTS		122	25-150		110	25-150		102	25-150
13C2_PFDoA		51	25-150		94	25-150		49	25-150
13C2_PFTeDA		39	25-150		88	25-150		36	25-150
13C3_PFBS		77	25-150		101	25-150		72	25-150
13C3_PFHxS		83	25-150		96	25-150		67	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-005
Description: TW-24
Matrix: Aqueous
Date Sampled: 02/02/2022 1420
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits	Q	Run 3 % Recovery	Acceptance Limits
13C3-HFPO-DA		83	25-150		97	25-150		71	25-150
13C4_PFBA		71	25-150		107	25-150		70	25-150
13C4_PFHpA		81	25-150		102	25-150		66	25-150
13C5_PFHxA		87	25-150		91	25-150		69	25-150
13C5_PFPeA		74	25-150		101	25-150		71	25-150
13C6_PFDA		89	25-150		100	25-150		79	25-150
13C7_PFUdA		66	25-150		98	25-150		63	25-150
13C8_PFOA		80	25-150		102	25-150		74	25-150
13C8_PFOS		73	25-150		93	25-150		71	25-150
13C8_PFOSA		82	10-150		104	10-150		78	10-150
13C9_PFNA		77	25-150		90	25-150		69	25-150
d-EtFOSA		32	10-150		102	10-150		32	10-150
d5-EtFOSAA		61	25-150		105	25-150		64	25-150
d9-EtFOSE		29	10-150		93	10-150		34	10-150
d-MeFOSA		53	10-150		110	10-150		47	10-150
d3-MeFOSAA		83	25-150		122	25-150		75	25-150
d7-MeFOSE		39	10-150		99	10-150		37	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-006
Description: TW-25
Matrix: Aqueous
Date Sampled: 02/02/2022 1206
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/22/2022 1937	ASD	02/21/2022 1840	32522
2	SOP SPE	PFAS by ID SOP	1	02/24/2022 1411	ASD	02/21/2022 1840	32522

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		13	0.78	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		13	1.1	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		13	2.6	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	8.2	J	13	3.2	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		13	1.4	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		13	3.4	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		13	0.79	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		13	2.2	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		13	1.2	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		13	1.5	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		26	2.0	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		13	1.5	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		13	2.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	170		6.5	0.67	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		6.5	1.3	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	1.2	J	6.5	0.81	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		6.5	1.2	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		6.5	0.99	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	11		6.5	0.96	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		13	1.7	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	30		6.5	0.90	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	8.5		6.5	0.97	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		6.5	0.85	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		6.5	0.77	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	17		6.5	0.73	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	11		6.5	1.1	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		6.5	0.75	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	14		6.5	1.3	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	6.6		6.5	0.88	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		6.5	0.97	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		6.5	0.86	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		6.5	1.0	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	57		6.5	3.2	ng/L	1

Surrogate	Run 1 Q	Run 1 % Recovery	Run 1 Acceptance Limits	Run 2 Q	Run 2 % Recovery	Run 2 Acceptance Limits
13C2_4:2FTS		76	25-150		82	25-150
13C2_6:2FTS		65	25-150		76	25-150
13C2_8:2FTS		48	25-150		44	25-150
13C2_PFDoA		29	25-150		28	25-150
13C2_PFTeDA		45	25-150		38	25-150
13C3_PFBS		73	25-150		70	25-150
13C3_PFHxS		74	25-150		66	25-150
13C3-HFPO-DA		84	25-150		74	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-006
Description: TW-25
Matrix: Aqueous
Date Sampled: 02/02/2022 1206
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C4_PFBA		56	25-150		55	25-150
13C4_PFHpA		69	25-150		61	25-150
13C5_PFHxA		33	25-150		30	25-150
13C5_PFPeA		71	25-150		71	25-150
13C6_PFDA		51	25-150		50	25-150
13C7_PFUdA		36	25-150		37	25-150
13C8_PFOA		75	25-150		66	25-150
13C8_PFOS		62	25-150		54	25-150
13C8_PFOSA		55	10-150		54	10-150
13C9_PFNA		69	25-150		60	25-150
d-EtFOSA		33	10-150		26	10-150
d5-EtFOSAA		32	25-150		33	25-150
d9-EtFOSE		31	10-150		29	10-150
d-MeFOSA		41	10-150		30	10-150
d3-MeFOSAA		42	25-150		42	25-150
d7-MeFOSE		34	10-150		28	10-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC
Laboratory ID: XB08008-007
Description: FIELD REAGENT BLANK
Matrix: Aqueous
Date Sampled: 02/02/2022 1514
Project Name: 1162-013
Date Received: 02/08/2022
Project Number: 40240181

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	02/22/2022 1948	ASD	02/21/2022 1840	32522
2	SOP SPE	PFAS by ID SOP	1	02/24/2022 1422	ASD	02/21/2022 1840	32522

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	MDL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.56	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		6.8	0.74	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	PFAS by ID SOP	ND		6.8	1.1	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.63	ng/L	1
2-N-ethylperfluoro-1-octanesulfonamido-ethanol (EtFOSE)	1691-99-2	PFAS by ID SOP	ND		6.8	0.80	ng/L	2
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	PFAS by ID SOP	ND		14	1.1	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.79	ng/L	1
2-N-methylperfluoro-1-octanesulfonamido-ethanol (MeFOSE)	24448-09-7	PFAS by ID SOP	ND		6.8	1.1	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.4	0.35	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.66	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.4	0.50	ng/L	1
Perfluorododecanesulfonic acid (PFDOS)	79780-39-5	PFAS by ID SOP	ND		6.8	0.88	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.4	0.47	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.4	0.38	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.4	0.58	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.4	0.70	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.46	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.4	1.7	ng/L	1

Surrogate	Run 1 Q	Run 1 % Recovery	Run 1 Acceptance Limits	Run 2 Q	Run 2 % Recovery	Run 2 Acceptance Limits
13C2_4:2FTS		96	25-150		96	25-150
13C2_6:2FTS		147	25-150	N	181	25-150
13C2_8:2FTS		107	25-150		102	25-150
13C2_PFDoA		95	25-150		84	25-150
13C2_PFTeDA		102	25-150		92	25-150
13C3_PFBS		101	25-150		90	25-150
13C3_PFHxS		101	25-150		95	25-150
13C3-HFPO-DA		119	25-150		105	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: Pace Analytical Services, LLC			Laboratory ID: XB08008-007
Description: FIELD REAGENT BLANK			Matrix: Aqueous
Date Sampled: 02/02/2022 1514	Project Name: 1162-013		
Date Received: 02/08/2022	Project Number: 40240181		

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
13C4_PFBA		101	25-150		92	25-150
13C4_PFHpA		97	25-150		80	25-150
13C5_PFHxA		104	25-150		93	25-150
13C5_PFPeA		96	25-150		93	25-150
13C6_PFDA		100	25-150		102	25-150
13C7_PFUdA		98	25-150		93	25-150
13C8_PFOA		105	25-150		102	25-150
13C8_PFOS		102	25-150		98	25-150
13C8_PFOSA		109	10-150		114	10-150
13C9_PFNA		104	25-150		96	25-150
d-EtFOSA		94	10-150		77	10-150
d5-EtFOSAA		91	25-150		95	25-150
d9-EtFOSE		112	10-150		99	10-150
d-MeFOSA		112	10-150		91	10-150
d3-MeFOSAA		111	25-150		107	25-150
d7-MeFOSE		104	10-150		95	10-150

LOQ = Limit of Quantitation	B = Detected in the method blank	E = Quantitation of compound exceeded the calibration range	DL = Detection Limit	Q = Surrogate failure
ND = Not detected at or above the DL	N = Recovery is out of criteria	P = The RPD between two GC columns exceeds 40%	J = Estimated result < LOQ and ≥ DL	L = LCS/LCSD failure
H = Out of holding time	W = Reported on wet weight basis			S = MS/MSD failure

QC Summary

PFAS by LC/MS/MS - MB

Sample ID: XQ31886-001
Batch: 31886
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/15/2022 1715

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	02/17/2022 1340
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	02/17/2022 1340
8:2 FTS	ND		1	8.0	1.6	ng/L	02/17/2022 1340
6:2 FTS	ND		1	8.0	2.0	ng/L	02/17/2022 1340
4:2 FTS	ND		1	8.0	0.87	ng/L	02/17/2022 1340
GenX	ND		1	8.0	2.1	ng/L	02/17/2022 1340
ADONA	ND		1	8.0	0.48	ng/L	02/17/2022 1340
EtFOSA	ND		1	8.0	1.4	ng/L	02/17/2022 1340
EtFOSAA	ND		1	8.0	0.75	ng/L	02/17/2022 1340
EtFOSE	ND		1	8.0	0.95	ng/L	02/17/2022 1340
MeFOSA	ND		1	16	1.3	ng/L	02/17/2022 1340
MeFOSAA	ND		1	8.0	0.93	ng/L	02/17/2022 1340
MeFOSE	ND		1	8.0	1.3	ng/L	02/17/2022 1340
PFBS	ND		1	4.0	0.41	ng/L	02/17/2022 1340
PFDS	ND		1	4.0	0.78	ng/L	02/17/2022 1340
PFHpS	ND		1	4.0	0.50	ng/L	02/17/2022 1340
PFNS	ND		1	4.0	0.71	ng/L	02/17/2022 1340
PFOSA	ND		1	4.0	0.61	ng/L	02/17/2022 1340
PFPeS	ND		1	4.0	0.59	ng/L	02/17/2022 1340
PFDOS	ND		1	8.0	1.0	ng/L	02/17/2022 1340
PFHxS	ND		1	4.0	0.55	ng/L	02/17/2022 1340
PFBA	ND		1	4.0	0.60	ng/L	02/17/2022 1340
PFDA	ND		1	4.0	0.52	ng/L	02/17/2022 1340
PFDoA	ND		1	4.0	0.47	ng/L	02/17/2022 1340
PFHpA	ND		1	4.0	0.45	ng/L	02/17/2022 1340
PFHxA	ND		1	4.0	0.69	ng/L	02/17/2022 1340
PFNA	ND		1	4.0	0.46	ng/L	02/17/2022 1340
PFOA	ND		1	4.0	0.83	ng/L	02/17/2022 1340
PFPeA	ND		1	4.0	0.54	ng/L	02/17/2022 1340
PFTeDA	ND		1	4.0	0.60	ng/L	02/17/2022 1340
PFTrDA	ND		1	4.0	0.53	ng/L	02/17/2022 1340
PFUdA	ND		1	4.0	0.63	ng/L	02/17/2022 1340
PFOS	ND		1	4.0	2.0	ng/L	02/17/2022 1340

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		99	25-150
13C2_6:2FTS		99	25-150
13C2_8:2FTS		106	25-150
13C2_PFDoA		87	25-150
13C2_PFTeDA		87	25-150
13C3_PFBS		92	25-150
13C3_PFHxS		93	25-150
13C3-HFPO-DA		97	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: XQ31886-001
Batch: 31886
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/15/2022 1715

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		92	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		93	25-150
13C5_PFPeA		92	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		89	25-150
13C8_PFOA		93	25-150
13C8_PFOS		96	25-150
13C8_PFOSA		104	10-150
13C9_PFNA		92	25-150
d-EtFOSA		80	10-150
d5-EtFOSAA		91	25-150
d9-EtFOSE		95	10-150
d-MeFOSA		96	10-150
d3-MeFOSAA		104	25-150
d7-MeFOSE		94	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ31886-002
Batch: 31886
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/15/2022 1715

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	14		1	97	50-150	02/17/2022 1351
11Cl-PF3OUdS	15	14		1	95	50-150	02/17/2022 1351
8:2 FTS	15	15		1	98	50-150	02/17/2022 1351
6:2 FTS	15	13		1	83	50-150	02/17/2022 1351
4:2 FTS	15	14		1	94	50-150	02/17/2022 1351
GenX	32	29		1	89	50-150	02/17/2022 1351
ADONA	15	15		1	103	50-150	02/17/2022 1351
EtFOSA	16	13		1	84	50-150	02/17/2022 1351
EtFOSAA	16	14		1	88	50-150	02/17/2022 1351
EtFOSE	16	15		1	93	50-150	02/17/2022 1351
MeFOSA	16	15		1	95	50-150	02/17/2022 1351
MeFOSAA	16	13		1	78	50-150	02/17/2022 1351
MeFOSE	16	14		1	87	50-150	02/17/2022 1351
PFBS	14	13		1	95	50-150	02/17/2022 1351
PFDS	15	15		1	96	50-150	02/17/2022 1351
PFHpS	15	17		1	112	50-150	02/17/2022 1351
PFNS	15	13		1	88	50-150	02/17/2022 1351
PFOSA	16	13		1	79	50-150	02/17/2022 1351
PFPeS	15	14		1	93	50-150	02/17/2022 1351
PFDOS	15	13		1	87	50-150	02/17/2022 1351
PFHxS	15	14		1	97	50-150	02/17/2022 1351
PFBA	16	16		1	97	50-150	02/17/2022 1351
PFDA	16	15		1	94	50-150	02/17/2022 1351
PFDoA	16	15		1	96	50-150	02/17/2022 1351
PFHpA	16	16		1	98	50-150	02/17/2022 1351
PFHxA	16	16		1	100	50-150	02/17/2022 1351
PFNA	16	15		1	93	50-150	02/17/2022 1351
PFOA	16	15		1	93	50-150	02/17/2022 1351
PFPeA	16	15		1	94	50-150	02/17/2022 1351
PFTeDA	16	16		1	97	50-150	02/17/2022 1351
PFTrDA	16	14		1	87	50-150	02/17/2022 1351
PFUdA	16	15		1	94	50-150	02/17/2022 1351
PFOS	15	14		1	95	50-150	02/17/2022 1351

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		91	25-150
13C2_6:2FTS		103	25-150
13C2_8:2FTS		96	25-150
13C2_PFDoA		89	25-150
13C2_PFTeDA		88	25-150
13C3_PFBS		90	25-150
13C3_PFHxS		91	25-150
13C3-HFPO-DA		98	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ31886-002
Batch: 31886
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/15/2022 1715

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		89	25-150
13C4_PFHpA		94	25-150
13C5_PFHxA		89	25-150
13C5_PFPeA		95	25-150
13C6_PFDA		95	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		91	25-150
13C8_PFOS		97	25-150
13C8_PFOSA		106	10-150
13C9_PFNA		90	25-150
d-EtFOSA		84	10-150
d5-EtFOSAA		93	25-150
d9-EtFOSE		100	10-150
d-MeFOSA		94	10-150
d3-MeFOSAA		102	25-150
d7-MeFOSE		100	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: XQ32522-001
Batch: 32522
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/21/2022 1840

Parameter	Result	Q	Dil	LOQ	MDL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	02/22/2022 1637
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	02/22/2022 1637
8:2 FTS	ND		1	8.0	1.6	ng/L	02/22/2022 1637
6:2 FTS	ND		1	8.0	2.0	ng/L	02/22/2022 1637
4:2 FTS	ND		1	8.0	0.87	ng/L	02/22/2022 1637
GenX	ND		1	8.0	2.1	ng/L	02/22/2022 1637
ADONA	ND		1	8.0	0.48	ng/L	02/22/2022 1637
EtFOSA	ND		1	8.0	1.4	ng/L	02/22/2022 1637
EtFOSAA	ND		1	8.0	0.75	ng/L	02/22/2022 1637
EtFOSE	ND		1	8.0	0.95	ng/L	02/22/2022 1637
MeFOSA	ND		1	16	1.3	ng/L	02/22/2022 1637
MeFOSAA	ND		1	8.0	0.93	ng/L	02/22/2022 1637
MeFOSE	ND		1	8.0	1.3	ng/L	02/22/2022 1637
PFBS	ND		1	4.0	0.41	ng/L	02/22/2022 1637
PFDS	ND		1	4.0	0.78	ng/L	02/22/2022 1637
PFHpS	ND		1	4.0	0.50	ng/L	02/22/2022 1637
PFNS	ND		1	4.0	0.71	ng/L	02/22/2022 1637
PFOSA	ND		1	4.0	0.61	ng/L	02/22/2022 1637
PFPeS	ND		1	4.0	0.59	ng/L	02/22/2022 1637
PFDOS	ND		1	8.0	1.0	ng/L	02/22/2022 1637
PFHxS	ND		1	4.0	0.55	ng/L	02/22/2022 1637
PFBA	ND		1	4.0	0.60	ng/L	02/22/2022 1637
PFDA	ND		1	4.0	0.52	ng/L	02/22/2022 1637
PFDoA	ND		1	4.0	0.47	ng/L	02/22/2022 1637
PFHpA	ND		1	4.0	0.45	ng/L	02/22/2022 1637
PFHxA	ND		1	4.0	0.69	ng/L	02/22/2022 1637
PFNA	ND		1	4.0	0.46	ng/L	02/22/2022 1637
PFOA	ND		1	4.0	0.83	ng/L	02/22/2022 1637
PFPeA	ND		1	4.0	0.54	ng/L	02/22/2022 1637
PFTeDA	ND		1	4.0	0.60	ng/L	02/22/2022 1637
PFTrDA	ND		1	4.0	0.53	ng/L	02/22/2022 1637
PFUdA	ND		1	4.0	0.63	ng/L	02/22/2022 1637
PFOS	ND		1	4.0	2.0	ng/L	02/22/2022 1637

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		110	25-150
13C2_6:2FTS		88	25-150
13C2_8:2FTS		118	25-150
13C2_PFDoA		91	25-150
13C2_PFTeDA		102	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		97	25-150
13C3-HFPO-DA		111	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: XQ32522-001
Batch: 32522
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/21/2022 1840

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		102	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		110	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		107	25-150
13C7_PFUdA		90	25-150
13C8_PFOA		98	25-150
13C8_PFOS		105	25-150
13C8_PFOSA		110	10-150
13C9_PFNA		107	25-150
d-EtFOSA		92	10-150
d5-EtFOSAA		100	25-150
d9-EtFOSE		114	10-150
d-MeFOSA		97	10-150
d3-MeFOSAA		115	25-150
d7-MeFOSE		99	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ32522-002
Batch: 32522
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/21/2022 1840

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	14		1	91	50-150	02/22/2022 1647
11Cl-PF3OUdS	15	13		1	88	50-150	02/22/2022 1647
8:2 FTS	15	14		1	91	50-150	02/22/2022 1647
6:2 FTS	15	13		1	84	50-150	02/22/2022 1647
4:2 FTS	15	13		1	90	50-150	02/22/2022 1647
GenX	32	27		1	84	50-150	02/22/2022 1647
ADONA	15	15		1	98	50-150	02/22/2022 1647
EtFOSA	16	17		1	106	50-150	02/22/2022 1647
EtFOSAA	16	15		1	93	50-150	02/22/2022 1647
EtFOSE	16	14		1	85	50-150	02/22/2022 1647
MeFOSA	16	15		1	96	50-150	02/22/2022 1647
MeFOSAA	16	14		1	85	50-150	02/22/2022 1647
MeFOSE	16	16		1	99	50-150	02/22/2022 1647
PFBS	14	13		1	92	50-150	02/22/2022 1647
PFDS	15	14		1	90	50-150	02/22/2022 1647
PFHpS	15	14		1	93	50-150	02/22/2022 1647
PFNS	15	13		1	83	50-150	02/22/2022 1647
PFOSA	16	15		1	95	50-150	02/22/2022 1647
PFPeS	15	14		1	95	50-150	02/22/2022 1647
PFDOS	15	15		1	94	50-150	02/22/2022 1647
PFHxS	15	13		1	90	50-150	02/22/2022 1647
PFBA	16	15		1	95	50-150	02/22/2022 1647
PFDA	16	15		1	91	50-150	02/22/2022 1647
PFDoA	16	15		1	96	50-150	02/22/2022 1647
PFHpA	16	16		1	99	50-150	02/22/2022 1647
PFHxA	16	15		1	96	50-150	02/22/2022 1647
PFNA	16	15		1	96	50-150	02/22/2022 1647
PFOA	16	16		1	98	50-150	02/22/2022 1647
PFPeA	16	16		1	97	50-150	02/22/2022 1647
PFTeDA	16	16		1	100	50-150	02/22/2022 1647
PFTrDA	16	16		1	103	50-150	02/22/2022 1647
PFUdA	16	14		1	87	50-150	02/22/2022 1647
PFOS	15	14		1	97	50-150	02/22/2022 1647

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		104	25-150
13C2_6:2FTS		85	25-150
13C2_8:2FTS		99	25-150
13C2_PFDoA		91	25-150
13C2_PFTeDA		94	25-150
13C3_PFBS		97	25-150
13C3_PFHxS		99	25-150
13C3-HFPO-DA		111	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ32522-002
Batch: 32522
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 02/21/2022 1840

Surrogate	Q	% Rec	Acceptance Limit
13C4_PFBA		98	25-150
13C4_PFHpA		99	25-150
13C5_PFHxA		102	25-150
13C5_PFPeA		94	25-150
13C6_PFDA		106	25-150
13C7_PFUdA		93	25-150
13C8_PFOA		98	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		105	10-150
13C9_PFNA		93	25-150
d-EtFOSA		75	10-150
d5-EtFOSAA		95	25-150
d9-EtFOSE		109	10-150
d-MeFOSA		85	10-150
d3-MeFOSAA		103	25-150
d7-MeFOSE		89	10-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody

and

Miscellaneous Documents

Internal Transfer Chain of Custody

☐ Samples Pre-Logged into eCOC.

Pace Analytical
www.pacelabs.com

Workorder: 40240181 **Workorder Name:** 1162-013

State Of Origin: WI
Cert. Needed: [X] Yes ☐ No
Owner Received Date: 2/2/2022 **Results Requested By:** 2/16/2022

Report To	Subcontract To
Brian Basten Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	Pace Analytical West Columbia 106 Vantage Point Drive West Columbia, SC 29172 Phone (803)791-9700

XB08008

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved	Preserved Containers					Requested Analysis: PFAS WI 33	LAB USE ONLY
1	TW-20	PS	2/2/2022 14:59	40240181001	Water	1						X	
2	TW-21	PS	2/2/2022 13:20	40240181002	Water	1						X	
3	TW-22	PS	2/2/2022 11:15	40240181003	Water	1						X	
4	TW-23	PS	2/2/2022 10:45	40240181004	Water	1						X	
5	TW-24	PS	2/2/2022 14:20	40240181005	Water	1						X	
6	TW-25	PS	2/2/2022 12:05	40240181006	Water	1						X	
7	FIELD REAGENT BLANK	PS	2/2/2022 15:14	40240181007	Water	1						X	

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	2/7/22 1040		
2				
3	[signature]	2/8/22 1107	[signature]	2/8/22 1107

Comments:

Cooler Temperature on Receipt 3.1 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020

Sample Receipt Checklist (SRC)

Client: PACE

Cooler Inspected by/date: MEH / 2/8/2022

Lot #: XB08008

Means of receipt: ☐ Pace ☐ Client ☑ UPS ☐ FedEx ☐ Other:

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

3.1 / 3.1 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (<0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote #

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA. Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JRG2 Date: 2/8/2022

Comments: