

Notice: This form may be used to comply with the requirements of s. NR 716.14 (2), Wis. Adm. Code; however, use of this form is not required. An alternate format may be used. The rule requires that notification be provided to 1) property owners when someone else is conducting the sampling, 2) to occupants of property belonging to the responsible person, and 3) to owners and occupants of property that does not belong to the responsible person but has been affected by contamination arising on his or her property. Notification is required within 10 business days of receiving the sample results. Personal information collected will be used for program administration and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

NOTE: Under s. NR 716.14, Wis. Adm. Code, the responsible party must also submit sample results and other required information to the DNR. We recommend that copies of the sample results notifications be included with that submittal, along with all attachments. Using the same format used for data presentation for a closure request may be helpful to all parties. See s. NR 716.14, Wis. Adm. Code for the full list of information to be submitted to the DNR.

Notification of Property Owners and Occupants:

This notification form has been provided to you in order to provide the results of environmental sampling that has been conducted on property that you own or occupy. Samples were collected in accordance with the methods identified in the site investigation work plan, in accordance with s. NR. 716.09 and 716.13, Wis. Adm. Code. This sampling was conducted as a result of contamination originating at the following location.

Site Information

Site Name		DNR ID # (BRRTS #)	
Blackhawk Drycleaners		02-12-552357	
Address	City	State	ZIP Code
700 East Blackhawk Avenue	Prairie du Chien	WI	53821

Responsible Party

The person(s) responsible for completing this environmental investigation is:

Property Owner

Redevelopment Authority (RDA) of the City of Prairie du Chien

Address	City	State	ZIP Code
P.O. Box 324	Prairie du Chien	WI	53821
Contact Person	Phone Number (include area code)		
Chad Abram	(608) 326-6406		

Person or company that collected samples

SCS Engineers

Sample Results (Results Attached)

Reason for Sampling: Routine Other (define) Groundwater PFAS and routine VOC sampling

The contaminants that have been identified at this time on property that you own or occupy include:

Contaminant	In Soil?		In Groundwater?	
	Yes	No	Yes	No
Gasoline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diesel or Fuel Oil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Solvents	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Heavy Metals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pesticides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other: <u>PFAS</u>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

This sampling event included sampling of a drinking water well. <input type="radio"/> Yes <input checked="" type="radio"/> No
If yes, the sampled drinking water well had detectable contaminants. <input type="radio"/> Yes <input type="radio"/> No

Contaminants in Vapor

	Yes	No
Indoor Air	<input type="radio"/>	<input checked="" type="radio"/>
Sub-slab	<input type="radio"/>	<input checked="" type="radio"/>
Exterior Soil Gas	<input checked="" type="radio"/>	<input type="radio"/>

Site Investigation Sample Results Notification

Form 4400-249 (R 03/14)

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Attached are:

- A map that shows the locations from which samples were collected. (The map needs to meet the requirements of s. NR 716.15 (4), Wis. Adm. Code.)
- A data table with specific contaminant levels at each sample location and whether or not the sample results exceed state standards.
- A copy of the laboratory results.

You are not identified as the person that is responsible for this contamination. However, your cooperation is important. Property owners may become legally responsible for contamination if they do not allow access to the person that is responsible so that person may complete the environmental investigation and clean up activities.

Option for written exemption: You have the option of requesting a written liability exemption from the DNR for contamination that originated on another property, or on property that you lease. To do this, you must present an adequate environmental assessment of your property and pay a \$700 fee for review of this information. If you are interested in this option, please see DNR publication # RR 589, "When Contamination Crosses a Property Line - Rights and Responsibilities of Property Owners", available at: dnr.wi.gov/files/PDF/pubs/rr/rr589.pdf.

Contact Information

Please address questions regarding this notification, or requests for additional information to the contact person listed above, or to one of the following contacts:

Environmental Consultant

Company Name		Contact Person Last Name		First Name	
SCS Engineers		Langdon		Robert	
Address			City	State	ZIP Code
2830 Dairy Drive			Madison	WI	53718
Phone # (inc. area code)	Email				
(608) 212-3995	rlangdon@scsengineers.com				

Select which agency: Natural Resources Agriculture, Trade and Consumer Protection

State of Wisconsin Department of Natural Resources

Contact Person Last Name		First Name		Phone # (inc. area code)	
Vitale		Matt		(715) 492-1222	
Address			City	State	ZIP Code
1300 West Clairemont Avenue			Eau Claire	WI	54701-6127
Email					
Matthew.Vitale@wisconsin.gov					

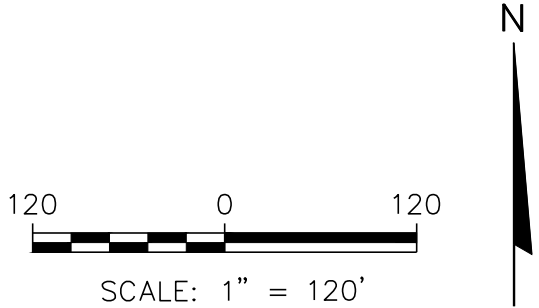
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LEGEND

- SITE BOUNDARY
- FORMER DRY CLEANERS BUILDING (APPROXIMATE)
- MONITORING WELL (BAY WEST, 2020)
- ABANDONED MONITORING WELL (ADVENT, 1991)
- MONITORING WELL (SCS, 2021)
- PIEZOMETER (SCS, 2021)
- 615.22** WATER TABLE ELEVATION MEASURED ON DECEMBER 13, 2021
- WATER TABLE CONTOUR
- APPROXIMATE GROUNDWATER FLOW DIRECTION

- NOTES:**
1. SEE FIGURE 2 FOR BASE MAP NOTES AND LEGEND ITEMS.
 2. MW-1 GROUNDWATER ELEVATION NOT USED FOR CONTOURING DUE TO CHANGE IN TOP OF CASING ELEVATION.



CLIENT PRAIRIE DU CHIEN REDEVELOPMENT AUTHORITY	PROJECT NO.	25221094.00	ENGINEER	WATER TABLE MAP - DECEMBER 13, 2021	FIGURE 4
	DRAWN BY:	04/05/2021	REL		
	APPROVED BY:	12/21/2021	ENGINEER		

SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

Table 3. Groundwater Analytical Results Summary - VOCs
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs
GP-1	4/16/2009	--	<u>1.2</u>	<0.15	<0.4	ND	ND	2-Butanone 12 Ethylbenzene 0.58
GP-2	4/16/2009	--	16	0.45	<0.4	ND	ND	Chloromethane 0.32
GP-3	4/16/2009	--	37	0.41	<0.4	ND	ND	Chloromethane 1.1
GP-4	7/24/2009	--	64	<u>0.81</u>	0.92	ND	ND	Chloromethane 0.61
GP-5	7/24/2009	--	<0.4	<0.15	<0.4	ND	ND	Chloromethane 2.1 Naphthalene 0.7
GP-6	2/17/2010	--	<u>2.6</u>	<0.15	<0.4	ND	ND	Chloromethane 0.3 Ethylbenzene 0.29 Toluene 0.78 m&p-Xylene 1.3 o-Xylene 0.82 1,2,4-Trimethylbenzene 1.1 1,3,5-Trimethylbenzene 0.25
GP-7	2/17/2010	--	13	<0.15	<0.4	ND	ND	Chloromethane 0.32 Toluene 0.45 m&p-Xylene 0.71 1,2,4-Trimethylbenzene 0.84 1,3,5-Trimethylbenzene 0.2
SB-01-GW (18.7-30)	3/10/2020	--	<u>2.8</u>	<0.15	<0.20	<0.19	<0.099	ND
SB-02-GW (17.8-30)	3/10/2020	--	<u>2.6</u>	<0.15	<0.20	<0.19	<0.099	ND
SB-03-GW (18.8-30)	3/10/2020	--	27.2	<0.15	<0.20	<0.19	<0.099	ND

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 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs
SB-04-GW (18.5-30)	3/10/2020	--	<u>5.1</u>	<0.15	<0.20	<0.19	<0.099	ND
	3/10/2020 (Dup)	--	<u>4.7</u>	<0.15	<0.20	<0.19	<0.099	ND
MW-01	2/1/2021	(1)	<u>0.92</u>	<0.15	<0.20	<0.19 v2	<0.099	ND
	4/7/2021	--	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	6/23/2021	--	<u>0.66</u> J	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	(4)	<u>0.61</u> J	<0.32	<0.47	<0.53	<0.17	ND
MW-02	2/1/2021	(2)	<u>11.9</u>	<0.15	<0.20	<0.19 v2	<0.099	ND
	4/8/2021	--	<u>8.7</u>	<1.0	<1.0	<1.0	<1.0	ND
	6/23/2021	(3)	<u>9.0</u>	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	(6)	<u>12.6</u>	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021		<u>10.3</u>	<0.32	<0.47	<0.53	<0.17	ND
MW-03	2/2/2021	(2)	<u>25.2</u>	<0.15	<0.20	<0.19 v2	<0.099	ND
	4/8/2021	--	<u>5.2</u>	<1.0	<1.0	<1.0	<1.0	ND
	6/23/2021	(3)	<u>42.6</u>	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	(6)	<u>13.1</u>	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<u>107</u>	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021 (Dup)	--	<u>108</u>	<0.32	<0.47	<0.53	<0.17	ND

Table 3. Groundwater Analytical Results Summary - VOCs
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 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs
MW-04	2/2/2021	(2)	<u>228</u>	<u>0.64</u>	<0.20	<0.19 v2	<0.099	ND
	2/2/2021 (Dup)	(1)	<u>222</u>	<u>0.57</u>	<0.20	<0.19 v2	<0.099	ND
	4/8/2021	--	<u>8.3</u>	<1.0	<1.0	<1.0	<1.0	ND
	4/8/2021 (Dup)	--	<u>8.3</u>	<1.0	<1.0	<1.0	<1.0	ND
	6/23/2021	(3)	<u>196</u>	0.34 J	<0.47	<0.53	<0.17	ND
	6/23/2021 (Dup)	(3)	<u>202</u>	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	(6)	<u>52.6</u>	<0.32	<0.47	<0.53	<0.17	Methylene Chloride 0.48 J
	12/13/2021	--	<u>87.3</u>	<0.32	<0.47	<0.53	<0.17	ND
MW-05	2/2/2021	(2)	<u>2.0</u>	<0.15	<0.20	<0.19 v2	<0.099	ND
	4/8/2021	--	<u>0.96</u> J	<1.0	<1.0	<1.0	<1.0	Methylene Chloride 0.34 J
	6/23/2021	(3)	<u>2.5</u>	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	(4)	<u>2.1</u>	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<u>1.7</u>	<0.32	<0.47	<0.53	<0.17	Methylene Chloride <u>0.67</u> J
MW-6P	8/23/2021	(6)	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021 (Dup)	(6)	0.49 J	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
MW-7	8/23/2021	(5)	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND

Table 3. Groundwater Analytical Results Summary - VOCs
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs
MW-8	8/23/2021	(4)	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	(7)	<0.41	<0.32	<0.47	<0.53	<0.17	ND
MW-8P	8/23/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
Trip Blank	3/11/2020	--	<0.17	<0.15	<0.20	<0.19	<0.099	Methylene Chloride <u>1.4</u> J, CO
	2/1/2021	(2)	<0.17	<0.15	<0.20	<0.19 v2	<0.099	ND
	4/5/2021	--	<1.0	<1.0	<1.0	<1.0	<1.0	ND
	6/23/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	8/23/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
	12/13/2021	--	<0.41	<0.32	<0.47	<0.53	<0.17	ND
Field Blank	2/2/2021	--	<0.17	<0.15	<0.20	<0.19	<0.099	Acetone 14.3 2-Butanone (MEK) 1.1 J Diethyl ether (Ethyl Ether) 0.52 J Ethylbenzene 0.12 J 4-Methyl-2-pentanone (MIBK) 0.77 J Toluene 0.33 J Xylenes (Total) 0.45 J m&p-Xylene 0.29 J o-Xylene 0.16 J

Table 3. Groundwater Analytical Results Summary - VOCs
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride	Other VOCs
NR 140 Enforcement Standards (ESs)			5	5	70	100	0.2	Acetone 9,000 2-Butanone (MEK) 4,000 Chloromethane 30 Diethyl ether (Ethyl ether) 1,000 Ethylbenzene 700 4-Methyl-2-pentanone (MIBK) 500 Methylene Chloride 5 Naphthalene 100 Toluene 800 1,2,4- and 1,3,5-Trimethylbenzene 480 Xylenes (Total) 2,000 m&p-Xylene NE o-Xylene NE
NR 140 Preventive Action Limits (PALs)			0.5	0.5	7	20	0.02	Acetone 1,800 2-Butanone (MEK) 800 Chloromethane 3 Diethyl ether (Ethyl ether) 100 Ethylbenzene 140 4-Methyl-2-pentanone (MIBK) 50 Methylene Chloride 0.5 Naphthalene 10 Toluene 160 1,2,4- and 1,3,5-Trimethylbenzene 96 Xylenes (Total) 400 m&p-Xylene NE o-Xylene NE

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)
 PCE = Tetrachloroethene
 (Dup) = Duplicate Sample
 -- = Not Applicable

cis-1,2-DCE = cis-1,2-Dichloroethene
 TCE = Trichloroethene
 NA = Not Analyzed
 NE = No Standard Established

trans-1,2-DCE = trans-1,2-Dichloroethene
 VOCs = Volatile Organic Compounds
 ND = Not Detected

**Table 3. Groundwater Analytical Results Summary - VOCs
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00**

Notes:

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from February 2021.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from February 2021.

All samples analyzed for full VOC list.

2009 and 2010 sample results from Ayers Associates Contamination Assessment reports (dated May 18, 2009 and March 18, 2010) available on Bureau for Remediation and Redevelopment Tracking System on the Web (BOTW).

March 10, 2020 sample results from April 23, 2020 Bay West LLC Phase II Environmental Site Assessment Report available on BOTW.

February and April 2021 sample results from May 2021 Bay West LLC Limited Site Investigation Report available on BOTW.

values meet or exceed NR 140 ESs.

values meet or exceed NR 140 PALs.

Laboratory Notes/Qualifiers:

1M = This analyte did not meet the secondary source verification criteria for the initial calibration. Analyte recovery exceeded the 130% upper control limit at 156%. Results may be biased high.

C0 = Result confirmed by second analysis.

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

HS = Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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 duplicate recovery was outside laboratory control limits.

v1 = The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.

v2 = The continuing calibration verification was below the method acceptance limit. The analyte was not detected in the associated samples and the sensitivity of the instrument was verified with a reporting limit check standard.

(1) Allyl chloride, Bromoform, trans-1,3-Dichloropropene, Diethyl ether (Ethyl ether), and Methylene Chloride = v2

Bromomethane = 1M

(2) Allyl chloride, Bromoform, 1,3-Dichloropropane, Diethyl ether (Ethyl ether), and Methylene Chloride = v2

Bromomethane = 1M

(3) Carbon tetrachloride = L1

(4) Bromomethane, 1,1 Dichloroethene = L1

Bromomethane = v1

(5) Bromomethane, 1,1 Dichloroethene = L1

Bromomethane = v1, M0

(6) Bromomethane, 1,1 Dichloroethene = L1

(7) Surrogate 4-Bromofluorobenzene = HS

Created by: REL Date: 6/26/2021

Last revision by: LMH Date: 1/19/2022

Checked by: AJR Date: 1/19/2022

Proj Mgr QA/QC: REL Date: 1/21/2022

Table 5. Groundwater Analytical Results Summary - PFAS
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
 (Results are in ng/L)

Free Acid Name			Perfluorobutanoic acid	Perfluoropentanoic acid	Perfluorohexanoic acid	Perfluoroheptanoic acid	Perfluorooctanoic acid	Perfluorononanoic acid	Perfluorodecanoic acid	Perfluoroundecanoic acid	Perfluorododecanoic acid	Perfluorotridecanoic acid	Perfluorotetradecanoic acid	Perfluoropentanesulfonic acid	Perfluorohexanesulfonic acid	Perfluoroheptanesulfonic acid	Perfluorooctanesulfonic acid	Perfluorononanesulfonic acid	Perfluorodecane sulfonic acid	Perfluorooctanesulfonamide	
Acronym:			PFBA	PFPeA	PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDoA	PFTriA	PFTeA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFNS	PFDS	FOSA
Sample	Date	CAS #	375-22-4	2706-90-3	307-24-4	375-85-9	335-67-1	375-95-1	335-76-2	2058-94-8	307-55-1	72629-94-8	376-06-7	375-73-5	2706-91-4	355-46-4	375-92-8	1763-23-1	68259-12-1	335-77-3	754-91-6
MW-02	2/13/2021		3.7	1.6 J	2.9	2.8	<u>11</u>	<0.70	<0.53	<0.51	<0.46	<0.59	<0.45	2.1	<0.45	3.6	1.5 J	<u>3.0</u> I	<0.42	<0.43	<0.78
MW-03	12/13/2021		6.4	10	7.9	5.4	<u>19</u>	0.86 J	<0.56	<0.54	<0.48	<0.62	<0.47	4.2	<0.47	<u>4.1</u>	2.6	<u>58</u>	<0.44	<0.45	<0.81
	12/13/2021 (Dup)		6.4	9.9	7.0	5.7	<u>22</u>	1.0 J	<0.54	<0.51	<0.46	<0.59	<0.45	3.7	<0.45	<u>4.1</u>	2.3	<u>55</u>	<0.43	<0.43	<0.78
MW-04	12/13/2021		9.0	12	16	14	<u>30</u>	<u>7.4</u>	<0.55	<0.52	<0.47	<0.60	<0.46	39	1.1 J	<u>46</u>	0.67 J	<u>6.8</u>	<0.43	<0.44	<0.79
Equipment Blank	12/13/2021		<0.43	<0.42	<0.42	<0.53	<0.57	<0.72	<0.55	<0.52	<0.47	<0.60	<0.46	<0.46	<0.46	<0.49	<0.40	<0.53	<0.43	<0.44	<0.79
Field Blank	12/13/2021		<0.48	<0.47	<0.47	<0.60	<0.63	<0.80	<0.61	<0.59	<0.52	<0.67	<0.52	<0.51	<0.51	<0.55	<0.45	<0.59	<0.48	<0.49	<0.89
Proposed Enforcement Standard*			10,000	NE	150,000	NE	20	30	300	3,000	500	NE	10,000	450,000	NE	40	NE	20	NE	NE	20
Proposed Preventive Action Limit*			2,000	NE	30,000	NE	2	3	60	600	100	NE	2,000	90,000	NE	4	NE	2	NE	NE	2

Abbreviations:
 ng/L = nanogram per liter
 CAS No. = Chemical Abstracts Service Number

PFAS = Per- and Polyfluoroalkyl Substances
 -- = Not Applicable

Dup = Duplicate Sample
 NE = Not Established

Notes:
Bold+Underlined results exceed the proposed NR 140 groundwater enforcement standards.
Italic+underlined results exceed the proposed NR 140 preventive action limits.

*Proposed groundwater PFAS standards are from Wisconsin Department of Natural Resources' March 1, 2021 PFAS Update.

Laboratory Notes/Qualifiers:
 I = Interference present
 J = Estimated value

Table 5. Groundwater Analytical Results Summary - PFAS
Blackhawk Junction - Prairie du Chien, WI / SCS Engineers Project #25221094.00
 (Results are in ng/L)

Free Acid Name			2-(N-Methylperfluorooctanesulfonamido) acetic acid	2-(N-Ethylperfluorooctanesulfonamido) acetic acid	4:2 Fluorotelomer sulfonic acid	6:2 Fluorotelomer sulfonic acid	8:2 Fluorotelomer sulfonic acid	N-Ethylperfluorooctanesulfonamide	N-Methylperfluorooctanesulfonamide	Perfluorododecane sulfonic acid	N-Methyl perfluorooctanesulfonamidoethanol	N-Ethyl perfluorooctanesulfonamidoethanol	Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)	Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA)	2-[(8-Chloro-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-hexadecafluorooctyl)oxy]-1,1,2,2-tetrafluoroethanesulfonic acid	DONA	PFOA + PFOS Combined	Combined FOA, NEFOSE, NEFOSA, NEFOSAA, PFOS, PFOA
Acronym:			N-MeFOSAA	N-EtFOSAA	4:2 FTS	6:2 FTS	8:2 FTS	N-EtFOSA	N-MeFOSA	PFDoS	N-MeFOSE	N-EtFOSE	F-53B Major	GenX	F-53B Minor	DONA	--	--
Sample	Date	CAS #	2355-31-9	2991-50-6	757124-72-4	27619-97-2	39108-34-4	4151-50-2	31506-32-8	79780-39-5	24448-09-7	1691-99-2	756426-58-1	13252-13-6	763051-92-9	919005-14-4	--	--
MW-02	2/13/2021		<0.41	<0.53	<0.53	<0.61	<0.62	<0.58	<0.48	<0.44	<0.31	<0.47	<0.29	<0.50	<0.41	<0.49	<u>14</u>	<u>14</u>
MW-03	12/13/2021		<0.43	<0.55	<0.55	2.6	<0.65	<0.60	<0.51	<0.46	<0.33	<0.49	<0.30	<0.52	<0.43	<0.51	<u>77</u>	<u>77</u>
	12/13/2021 (Dup)		<0.41	<0.53	<0.53	4.2	0.72 J	<0.58	<0.49	<0.44	<0.31	<0.47	<0.29	<0.50	<0.42	<0.49	<u>77</u>	<u>77</u>
MW-04	12/13/2021		<0.42	<0.54	<0.54	1.2 J	<0.63	<0.59	<0.50	<0.45	<0.32	<0.48	<0.30	<0.51	<0.42	<0.50	<u>36.8</u>	<u>36.8</u>
Equipment Blank	12/13/2021		<0.42	<0.54	<0.54	0.90 J	<0.63	<0.59	<0.49	<0.45	<0.32	<0.48	<0.30	<0.51	<0.42	<0.50	ND	ND
Field Blank	12/13/2021		<0.47	<0.60	<0.60	<0.70	<0.71	<0.66	<0.55	<0.50	<0.36	<0.54	<0.33	<0.57	<0.47	<0.56	ND	ND
Proposed Enforcement Standard*			NE	20	NE	NE	NE	20	NE	NE	NE	20	NE	300	NE	3,000	20	20
Proposed Preventive Action Limit*			NE	2	NE	NE	NE	2	NE	NE	NE	2	NE	30	NE	600	2	2

Abbreviations:
 ng/L = nanogram per liter
 CAS No. = Chemical Abstracts Service Number

PFAS = Per- and Polyfluoroalkyl Substances
 -- = Not Applicable

Dup = Duplicate Sample
 NE = Not Established

Notes:
Bold+Underlined results exceed the proposed NR 140 groundwater enforcement standards.
Italic+underlined results exceed the proposed NR 140 preventive action limits.

*Proposed groundwater PFAS standards are from Wisconsin Department of Natural Resources' March 1, 2021 PFAS Update.

Laboratory Notes/Qualifiers:
 I = Interference present
 J = Estimated value

Created by: LMH Date: 1/20/2022
 Last revision by: LMH Date: 1/20/2022
 Checked by: REO Date: 1/21/2022
 Proj Mgr QA/QC: REL Date: 1/21/2021

January 21, 2022

Rob Langdon
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Dear Rob Langdon:

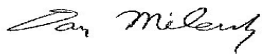
Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise 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,



Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

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

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SAMPLE SUMMARY

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40238348001	MW-8P	Water	12/13/21 15:15	12/15/21 07:45
40238348002	MW-8	Water	12/13/21 13:50	12/15/21 07:45
40238348003	MW-7	Water	12/13/21 11:45	12/15/21 07:45
40238348004	MW-3DUP	Water	12/13/21 14:00	12/15/21 07:45
40238348005	MW-6P	Water	12/13/21 12:30	12/15/21 07:45
40238348006	MW-5	Water	12/13/21 13:20	12/15/21 07:45
40238348007	MW-2	Water	12/13/21 15:05	12/15/21 07:45
40238348008	MW-3	Water	12/13/21 14:00	12/15/21 07:45
40238348009	MW-4	Water	12/13/21 11:55	12/15/21 07:45
40238348010	EQUIPMENT BLANK	Water	12/13/21 11:10	12/15/21 07:45
40238348011	FIELD BLANK	Water	12/13/21 13:05	12/15/21 07:45
40238348012	TRIP BLANK	Water	12/13/21 00:00	12/15/21 07:45

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SAMPLE ANALYTE COUNT

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40238348001	MW-8P	EPA 8260	LAP	63	PASI-G
40238348002	MW-8	EPA 8260	LAP	63	PASI-G
40238348003	MW-7	EPA 8260	LAP	63	PASI-G
40238348004	MW-3DUP	EPA 8260	LAP	63	PASI-G
40238348005	MW-6P	EPA 8260	LAP	63	PASI-G
40238348006	MW-5	EPA 8260	LAP	63	PASI-G
40238348007	MW-2	EPA 8260	LAP	63	PASI-G
40238348008	MW-3	EPA 8260	LAP	63	PASI-G
40238348009	MW-4	EPA 8260	LAP	63	PASI-G
40238348012	TRIP BLANK	EPA 8260	LAP	63	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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SUMMARY OF DETECTION

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40238348004	MW-3DUP					
EPA 8260	Tetrachloroethene	108	ug/L	1.0	12/17/21 12:40	
40238348006	MW-5					
EPA 8260	Methylene Chloride	0.67J	ug/L	5.0	12/17/21 13:17	
EPA 8260	Tetrachloroethene	1.7	ug/L	1.0	12/17/21 13:17	
40238348007	MW-2					
EPA 8260	Tetrachloroethene	10.3	ug/L	1.0	12/17/21 13:36	
40238348008	MW-3					
EPA 8260	Tetrachloroethene	107	ug/L	1.0	12/17/21 13:55	
40238348009	MW-4					
EPA 8260	Tetrachloroethene	87.3	ug/L	1.0	12/17/21 14:14	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-8P **Lab ID: 40238348001** Collected: 12/13/21 15:15 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 11:44	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 11:44	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 11:44	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 11:44	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 11:44	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 11:44	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 11:44	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 11:44	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 11:44	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 11:44	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 11:44	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 11:44	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 11:44	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 11:44	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 11:44	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 11:44	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 11:44	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 11:44	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 11:44	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 11:44	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 11:44	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 11:44	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 11:44	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 11:44	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 11:44	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 11:44	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 11:44	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 11:44	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 11:44	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 11:44	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 11:44	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 11:44	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 11:44	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 11:44	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 11:44	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 11:44	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 11:44	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 11:44	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 11:44	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 11:44	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 11:44	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 11:44	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 11:44	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 11:44	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 11:44	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-8P **Lab ID: 40238348001** Collected: 12/13/21 15:15 Received: 12/15/21 07:45 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		12/17/21 11:44	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 11:44	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		12/17/21 11:44	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 11:44	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 11:44	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 11:44	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 11:44	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 11:44	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 11:44	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 11:44	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 11:44	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 11:44	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 11:44	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 11:44	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 11:44	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		12/17/21 11:44	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		12/17/21 11:44	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		12/17/21 11:44	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-8 **Lab ID: 40238348002** Collected: 12/13/21 13:50 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 12:03	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:03	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 12:03	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:03	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 12:03	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 12:03	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:03	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 12:03	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 12:03	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 12:03	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:03	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 12:03	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 12:03	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 12:03	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:03	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:03	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 12:03	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 12:03	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 12:03	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 12:03	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:03	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:03	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 12:03	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 12:03	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:03	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 12:03	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 12:03	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 12:03	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 12:03	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 12:03	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:03	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 12:03	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:03	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:03	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 12:03	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:03	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:03	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 12:03	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 12:03	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:03	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 12:03	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:03	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 12:03	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:03	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:03	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-8 **Lab ID: 40238348002** Collected: 12/13/21 13:50 Received: 12/15/21 07:45 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		12/17/21 12:03	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 12:03	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:03	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 12:03	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:03	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 12:03	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:03	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 12:03	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 12:03	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:03	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 12:03	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 12:03	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:03	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 12:03	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 12:03	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		12/17/21 12:03	460-00-4	HS
1,2-Dichlorobenzene-d4 (S)	108	%	70-130		1		12/17/21 12:03	2199-69-1	
Toluene-d8 (S)	102	%	70-130		1		12/17/21 12:03	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-7 **Lab ID: 40238348003** Collected: 12/13/21 11:45 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 12:22	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:22	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 12:22	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:22	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 12:22	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 12:22	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:22	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 12:22	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 12:22	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 12:22	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:22	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 12:22	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 12:22	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 12:22	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:22	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:22	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 12:22	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 12:22	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 12:22	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 12:22	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:22	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:22	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 12:22	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 12:22	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:22	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 12:22	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 12:22	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 12:22	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 12:22	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 12:22	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:22	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 12:22	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:22	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:22	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 12:22	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:22	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:22	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 12:22	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 12:22	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:22	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 12:22	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:22	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 12:22	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:22	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:22	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-7 **Lab ID: 40238348003** Collected: 12/13/21 11:45 Received: 12/15/21 07:45 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		12/17/21 12:22	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 12:22	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:22	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 12:22	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:22	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 12:22	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:22	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 12:22	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 12:22	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:22	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 12:22	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 12:22	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:22	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 12:22	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 12:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		12/17/21 12:22	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		12/17/21 12:22	2199-69-1	
Toluene-d8 (S)	100	%	70-130		1		12/17/21 12:22	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-3DUP **Lab ID: 40238348004** Collected: 12/13/21 14:00 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 12:40	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:40	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 12:40	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:40	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 12:40	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 12:40	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:40	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 12:40	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 12:40	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 12:40	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:40	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 12:40	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 12:40	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 12:40	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:40	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:40	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 12:40	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 12:40	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 12:40	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 12:40	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:40	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:40	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 12:40	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 12:40	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:40	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 12:40	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 12:40	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 12:40	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 12:40	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 12:40	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:40	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 12:40	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:40	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:40	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 12:40	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:40	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:40	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 12:40	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 12:40	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:40	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 12:40	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:40	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 12:40	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:40	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:40	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-3DUP **Lab ID: 40238348004** Collected: 12/13/21 14:00 Received: 12/15/21 07:45 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		12/17/21 12:40	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 12:40	79-34-5	
Tetrachloroethene	108	ug/L	1.0	0.41	1		12/17/21 12:40	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 12:40	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:40	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 12:40	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:40	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 12:40	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 12:40	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:40	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 12:40	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 12:40	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:40	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 12:40	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 12:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		12/17/21 12:40	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		12/17/21 12:40	2199-69-1	
Toluene-d8 (S)	103	%	70-130		1		12/17/21 12:40	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-6P **Lab ID: 40238348005** Collected: 12/13/21 12:30 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 12:59	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:59	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 12:59	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:59	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 12:59	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 12:59	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:59	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 12:59	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 12:59	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 12:59	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 12:59	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 12:59	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 12:59	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 12:59	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:59	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 12:59	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 12:59	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 12:59	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 12:59	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 12:59	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:59	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:59	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 12:59	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 12:59	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:59	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 12:59	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 12:59	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 12:59	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 12:59	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 12:59	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:59	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 12:59	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:59	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:59	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 12:59	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:59	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 12:59	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 12:59	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 12:59	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:59	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 12:59	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 12:59	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 12:59	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 12:59	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:59	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-6P **Lab ID: 40238348005** Collected: 12/13/21 12:30 Received: 12/15/21 07:45 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		12/17/21 12:59	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 12:59	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		12/17/21 12:59	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 12:59	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 12:59	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 12:59	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 12:59	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 12:59	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 12:59	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 12:59	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 12:59	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 12:59	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 12:59	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 12:59	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 12:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		12/17/21 12:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		12/17/21 12:59	2199-69-1	
Toluene-d8 (S)	105	%	70-130		1		12/17/21 12:59	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-5 **Lab ID: 40238348006** Collected: 12/13/21 13:20 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 13:17	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:17	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 13:17	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:17	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 13:17	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 13:17	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:17	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 13:17	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 13:17	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 13:17	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:17	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 13:17	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 13:17	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 13:17	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:17	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:17	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 13:17	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 13:17	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 13:17	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 13:17	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:17	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:17	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 13:17	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 13:17	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:17	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 13:17	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 13:17	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 13:17	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 13:17	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 13:17	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:17	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 13:17	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 13:17	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:17	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 13:17	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:17	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:17	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 13:17	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 13:17	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:17	99-87-6	
Methylene Chloride	0.67J	ug/L	5.0	0.32	1		12/17/21 13:17	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:17	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 13:17	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:17	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:17	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-5 **Lab ID: 40238348006** Collected: 12/13/21 13:20 Received: 12/15/21 07:45 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		12/17/21 13:17	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 13:17	79-34-5	
Tetrachloroethene	1.7	ug/L	1.0	0.41	1		12/17/21 13:17	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 13:17	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:17	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 13:17	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:17	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 13:17	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 13:17	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:17	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 13:17	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 13:17	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:17	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 13:17	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 13:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		12/17/21 13:17	460-00-4	
1,2-Dichlorobenzene-d4 (S)	112	%	70-130		1		12/17/21 13:17	2199-69-1	
Toluene-d8 (S)	104	%	70-130		1		12/17/21 13:17	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-2 **Lab ID: 40238348007** Collected: 12/13/21 15:05 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 13:36	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:36	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 13:36	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:36	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 13:36	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 13:36	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:36	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 13:36	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 13:36	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 13:36	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:36	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 13:36	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 13:36	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 13:36	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:36	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:36	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 13:36	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 13:36	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 13:36	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 13:36	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:36	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:36	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 13:36	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 13:36	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:36	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 13:36	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 13:36	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 13:36	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 13:36	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 13:36	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:36	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 13:36	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 13:36	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:36	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 13:36	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:36	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:36	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 13:36	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 13:36	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:36	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 13:36	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:36	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 13:36	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:36	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:36	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-2 **Lab ID: 40238348007** Collected: 12/13/21 15:05 Received: 12/15/21 07:45 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		12/17/21 13:36	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 13:36	79-34-5	
Tetrachloroethene	10.3	ug/L	1.0	0.41	1		12/17/21 13:36	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 13:36	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:36	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 13:36	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:36	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 13:36	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 13:36	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:36	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 13:36	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 13:36	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:36	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 13:36	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 13:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	111	%	70-130		1		12/17/21 13:36	460-00-4	
1,2-Dichlorobenzene-d4 (S)	114	%	70-130		1		12/17/21 13:36	2199-69-1	
Toluene-d8 (S)	102	%	70-130		1		12/17/21 13:36	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-3 **Lab ID: 40238348008** Collected: 12/13/21 14:00 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 13:55	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:55	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 13:55	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:55	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 13:55	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 13:55	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:55	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 13:55	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 13:55	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 13:55	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 13:55	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 13:55	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 13:55	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 13:55	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:55	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 13:55	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 13:55	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 13:55	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 13:55	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 13:55	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:55	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:55	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 13:55	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 13:55	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:55	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 13:55	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 13:55	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 13:55	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 13:55	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 13:55	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:55	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 13:55	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 13:55	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:55	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 13:55	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:55	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 13:55	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 13:55	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 13:55	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:55	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 13:55	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 13:55	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 13:55	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 13:55	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:55	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Sample: MW-3 **Lab ID: 40238348008** Collected: 12/13/21 14:00 Received: 12/15/21 07:45 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		12/17/21 13:55	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 13:55	79-34-5	
Tetrachloroethene	107	ug/L	1.0	0.41	1		12/17/21 13:55	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 13:55	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 13:55	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 13:55	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 13:55	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 13:55	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 13:55	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 13:55	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 13:55	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 13:55	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 13:55	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 13:55	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 13:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		12/17/21 13:55	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		12/17/21 13:55	2199-69-1	
Toluene-d8 (S)	104	%	70-130		1		12/17/21 13:55	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-4 **Lab ID: 40238348009** Collected: 12/13/21 11:55 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 14:14	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 14:14	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 14:14	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 14:14	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 14:14	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 14:14	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 14:14	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 14:14	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 14:14	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 14:14	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 14:14	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 14:14	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 14:14	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 14:14	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 14:14	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 14:14	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 14:14	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 14:14	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 14:14	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 14:14	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 14:14	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 14:14	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 14:14	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 14:14	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 14:14	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 14:14	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 14:14	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 14:14	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 14:14	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 14:14	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 14:14	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 14:14	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 14:14	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 14:14	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 14:14	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 14:14	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 14:14	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 14:14	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 14:14	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 14:14	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 14:14	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 14:14	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 14:14	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 14:14	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 14:14	100-42-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: MW-4 **Lab ID: 40238348009** Collected: 12/13/21 11:55 Received: 12/15/21 07:45 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		12/17/21 14:14	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 14:14	79-34-5	
Tetrachloroethene	87.3	ug/L	1.0	0.41	1		12/17/21 14:14	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 14:14	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 14:14	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 14:14	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 14:14	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 14:14	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 14:14	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 14:14	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 14:14	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 14:14	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 14:14	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 14:14	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 14:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		12/17/21 14:14	460-00-4	
1,2-Dichlorobenzene-d4 (S)	109	%	70-130		1		12/17/21 14:14	2199-69-1	
Toluene-d8 (S)	102	%	70-130		1		12/17/21 14:14	2037-26-5	

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: TRIP BLANK **Lab ID: 40238348012** Collected: 12/13/21 00:00 Received: 12/15/21 07:45 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV									
Analytical Method: EPA 8260									
Pace Analytical Services - Green Bay									
Benzene	<0.30	ug/L	1.0	0.30	1		12/17/21 18:38	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 18:38	108-86-1	
Bromochloromethane	<0.36	ug/L	5.0	0.36	1		12/17/21 18:38	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 18:38	75-27-4	
Bromoform	<3.8	ug/L	5.0	3.8	1		12/17/21 18:38	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		12/17/21 18:38	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 18:38	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		12/17/21 18:38	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		12/17/21 18:38	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		12/17/21 18:38	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		12/17/21 18:38	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		12/17/21 18:38	75-00-3	
Chloroform	<1.2	ug/L	5.0	1.2	1		12/17/21 18:38	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		12/17/21 18:38	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 18:38	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		12/17/21 18:38	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		12/17/21 18:38	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		12/17/21 18:38	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		12/17/21 18:38	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		12/17/21 18:38	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 18:38	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 18:38	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		12/17/21 18:38	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		12/17/21 18:38	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 18:38	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		12/17/21 18:38	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		12/17/21 18:38	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		12/17/21 18:38	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		12/17/21 18:38	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		12/17/21 18:38	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		12/17/21 18:38	142-28-9	
2,2-Dichloropropane	<4.2	ug/L	5.0	4.2	1		12/17/21 18:38	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		12/17/21 18:38	563-58-6	
cis-1,3-Dichloropropene	<0.36	ug/L	1.0	0.36	1		12/17/21 18:38	10061-01-5	
trans-1,3-Dichloropropene	<3.5	ug/L	5.0	3.5	1		12/17/21 18:38	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 18:38	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		12/17/21 18:38	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		12/17/21 18:38	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		12/17/21 18:38	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		12/17/21 18:38	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		12/17/21 18:38	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		12/17/21 18:38	1634-04-4	
Naphthalene	<1.1	ug/L	5.0	1.1	1		12/17/21 18:38	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		12/17/21 18:38	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		12/17/21 18:38	100-42-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Sample: TRIP BLANK **Lab ID: 40238348012** Collected: 12/13/21 00:00 Received: 12/15/21 07:45 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		12/17/21 18:38	630-20-6	
1,1,1,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		12/17/21 18:38	79-34-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		12/17/21 18:38	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		12/17/21 18:38	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		12/17/21 18:38	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		12/17/21 18:38	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		12/17/21 18:38	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	5.0	0.34	1		12/17/21 18:38	79-00-5	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		12/17/21 18:38	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		12/17/21 18:38	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	5.0	0.56	1		12/17/21 18:38	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		12/17/21 18:38	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		12/17/21 18:38	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		12/17/21 18:38	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		12/17/21 18:38	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		12/17/21 18:38	460-00-4	
1,2-Dichlorobenzene-d4 (S)	110	%	70-130		1		12/17/21 18:38	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		12/17/21 18:38	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

QC Batch: 404301 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40238348001, 40238348002, 40238348003, 40238348004, 40238348005, 40238348006, 40238348007, 40238348008, 40238348009, 40238348012

METHOD BLANK: 2333945 Matrix: Water
Associated Lab Samples: 40238348001, 40238348002, 40238348003, 40238348004, 40238348005, 40238348006, 40238348007, 40238348008, 40238348009, 40238348012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	12/17/21 08:19	
1,1,1-Trichloroethane	ug/L	<0.30	1.0	12/17/21 08:19	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	12/17/21 08:19	
1,1,2-Trichloroethane	ug/L	<0.34	5.0	12/17/21 08:19	
1,1-Dichloroethane	ug/L	<0.30	1.0	12/17/21 08:19	
1,1-Dichloroethene	ug/L	<0.58	1.0	12/17/21 08:19	
1,1-Dichloropropene	ug/L	<0.41	1.0	12/17/21 08:19	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	12/17/21 08:19	
1,2,3-Trichloropropane	ug/L	<0.56	5.0	12/17/21 08:19	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	12/17/21 08:19	
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	12/17/21 08:19	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	12/17/21 08:19	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	12/17/21 08:19	
1,2-Dichlorobenzene	ug/L	<0.33	1.0	12/17/21 08:19	
1,2-Dichloroethane	ug/L	<0.29	1.0	12/17/21 08:19	
1,2-Dichloropropane	ug/L	<0.45	1.0	12/17/21 08:19	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	12/17/21 08:19	
1,3-Dichlorobenzene	ug/L	<0.35	1.0	12/17/21 08:19	
1,3-Dichloropropane	ug/L	<0.30	1.0	12/17/21 08:19	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	12/17/21 08:19	
2,2-Dichloropropane	ug/L	<4.2	5.0	12/17/21 08:19	
2-Chlorotoluene	ug/L	<0.89	5.0	12/17/21 08:19	
4-Chlorotoluene	ug/L	<0.89	5.0	12/17/21 08:19	
Benzene	ug/L	<0.30	1.0	12/17/21 08:19	
Bromobenzene	ug/L	<0.36	1.0	12/17/21 08:19	
Bromochloromethane	ug/L	<0.36	5.0	12/17/21 08:19	
Bromodichloromethane	ug/L	<0.42	1.0	12/17/21 08:19	
Bromoform	ug/L	<3.8	5.0	12/17/21 08:19	
Bromomethane	ug/L	<1.2	5.0	12/17/21 08:19	
Carbon tetrachloride	ug/L	<0.37	1.0	12/17/21 08:19	
Chlorobenzene	ug/L	<0.86	1.0	12/17/21 08:19	
Chloroethane	ug/L	<1.4	5.0	12/17/21 08:19	
Chloroform	ug/L	<1.2	5.0	12/17/21 08:19	
Chloromethane	ug/L	<1.6	5.0	12/17/21 08:19	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	12/17/21 08:19	
cis-1,3-Dichloropropene	ug/L	<0.36	1.0	12/17/21 08:19	
Dibromochloromethane	ug/L	<2.6	5.0	12/17/21 08:19	
Dibromomethane	ug/L	<0.99	5.0	12/17/21 08:19	
Dichlorodifluoromethane	ug/L	<0.46	5.0	12/17/21 08:19	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

METHOD BLANK: 2333945 Matrix: Water
Associated Lab Samples: 40238348001, 40238348002, 40238348003, 40238348004, 40238348005, 40238348006, 40238348007, 40238348008, 40238348009, 40238348012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diisopropyl ether	ug/L	<1.1	5.0	12/17/21 08:19	
Ethylbenzene	ug/L	<0.33	1.0	12/17/21 08:19	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	12/17/21 08:19	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	12/17/21 08:19	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	12/17/21 08:19	
Methylene Chloride	ug/L	<0.32	5.0	12/17/21 08:19	
n-Butylbenzene	ug/L	<0.86	1.0	12/17/21 08:19	
n-Propylbenzene	ug/L	<0.35	1.0	12/17/21 08:19	
Naphthalene	ug/L	<1.1	5.0	12/17/21 08:19	
p-Isopropyltoluene	ug/L	<1.0	5.0	12/17/21 08:19	
sec-Butylbenzene	ug/L	<0.42	1.0	12/17/21 08:19	
Styrene	ug/L	<0.36	1.0	12/17/21 08:19	
tert-Butylbenzene	ug/L	<0.59	1.0	12/17/21 08:19	
Tetrachloroethene	ug/L	<0.41	1.0	12/17/21 08:19	
Toluene	ug/L	<0.29	1.0	12/17/21 08:19	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	12/17/21 08:19	
trans-1,3-Dichloropropene	ug/L	<3.5	5.0	12/17/21 08:19	
Trichloroethene	ug/L	<0.32	1.0	12/17/21 08:19	
Trichlorofluoromethane	ug/L	<0.42	1.0	12/17/21 08:19	
Vinyl chloride	ug/L	<0.17	1.0	12/17/21 08:19	
Xylene (Total)	ug/L	<1.0	3.0	12/17/21 08:19	
1,2-Dichlorobenzene-d4 (S)	%	110	70-130	12/17/21 08:19	
4-Bromofluorobenzene (S)	%	108	70-130	12/17/21 08:19	
Toluene-d8 (S)	%	102	70-130	12/17/21 08:19	

LABORATORY CONTROL SAMPLE: 2333946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.3	101	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.7	107	66-130	
1,1,2-Trichloroethane	ug/L	50	50.3	101	70-130	
1,1-Dichloroethane	ug/L	50	51.1	102	68-132	
1,1-Dichloroethene	ug/L	50	47.9	96	85-126	
1,2,4-Trichlorobenzene	ug/L	50	51.3	103	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	49.3	99	51-126	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	51.1	102	70-130	
1,2-Dichloroethane	ug/L	50	50.6	101	70-130	
1,2-Dichloropropane	ug/L	50	52.0	104	78-125	
1,3-Dichlorobenzene	ug/L	50	52.0	104	70-130	
1,4-Dichlorobenzene	ug/L	50	50.7	101	70-130	
Benzene	ug/L	50	50.0	100	70-132	
Bromodichloromethane	ug/L	50	49.8	100	70-130	

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QUALITY CONTROL DATA

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

LABORATORY CONTROL SAMPLE: 2333946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	45.2	90	65-130	
Bromomethane	ug/L	50	42.6	85	44-128	
Carbon tetrachloride	ug/L	50	50.2	100	70-130	
Chlorobenzene	ug/L	50	49.4	99	70-130	
Chloroethane	ug/L	50	47.4	95	73-137	
Chloroform	ug/L	50	50.1	100	80-122	
Chloromethane	ug/L	50	51.4	103	27-148	
cis-1,2-Dichloroethene	ug/L	50	48.7	97	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.9	98	70-130	
Dibromochloromethane	ug/L	50	49.6	99	70-130	
Dichlorodifluoromethane	ug/L	50	45.9	92	22-151	
Ethylbenzene	ug/L	50	51.8	104	80-123	
Isopropylbenzene (Cumene)	ug/L	50	51.9	104	70-130	
Methyl-tert-butyl ether	ug/L	50	44.2	88	66-130	
Methylene Chloride	ug/L	50	49.4	99	70-130	
Styrene	ug/L	50	55.9	112	70-130	
Tetrachloroethene	ug/L	50	52.3	105	70-130	
Toluene	ug/L	50	49.0	98	80-121	
trans-1,2-Dichloroethene	ug/L	50	49.7	99	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.8	96	58-125	
Trichloroethene	ug/L	50	52.5	105	70-130	
Trichlorofluoromethane	ug/L	50	49.4	99	84-148	
Vinyl chloride	ug/L	50	54.6	109	63-142	
Xylene (Total)	ug/L	150	154	103	70-130	
1,2-Dichlorobenzene-d4 (S)	%			109	70-130	
4-Bromofluorobenzene (S)	%			113	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2334666 2334667

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40238317001 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/L	<0.30	50	50	50	51.1	51.5	102	103	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	50	53.0	54.9	106	110	66-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.34	50	50	50	50.5	49.7	101	99	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.30	50	50	50	51.8	53.0	104	106	68-132	2	20	
1,1-Dichloroethene	ug/L	<0.58	50	50	50	49.1	46.3	98	93	76-132	6	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	50	53.5	56.2	107	112	70-130	5	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	50	50	50	47.7	47.6	95	95	51-126	0	20	
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	50	50.4	48.3	101	97	70-130	4	20	
1,2-Dichlorobenzene	ug/L	<0.33	50	50	50	51.3	53.0	103	106	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.29	50	50	50	50.7	51.4	101	103	70-130	1	20	
1,2-Dichloropropane	ug/L	<0.45	50	50	50	50.9	53.1	102	106	77-125	4	20	
1,3-Dichlorobenzene	ug/L	<0.35	50	50	50	51.7	54.2	103	108	70-130	5	20	

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QUALITY CONTROL DATA

Project: 25221094 BLACK HAWK JUNCTION
Pace Project No.: 40238348

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2334666		2334667		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40238317001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
1,4-Dichlorobenzene	ug/L	<0.89	50	50	52.1	52.8	104	106	70-130	1	20		
Benzene	ug/L	<0.30	50	50	50.7	51.2	101	102	70-132	1	20		
Bromodichloromethane	ug/L	<0.42	50	50	50.9	52.1	102	104	70-130	2	20		
Bromoform	ug/L	<3.8	50	50	47.4	46.4	95	93	65-130	2	20		
Bromomethane	ug/L	<1.2	50	50	41.5	40.1	83	80	44-128	3	21		
Carbon tetrachloride	ug/L	<0.37	50	50	51.5	51.9	103	104	70-132	1	20		
Chlorobenzene	ug/L	<0.86	50	50	51.3	51.3	103	103	70-130	0	20		
Chloroethane	ug/L	<1.4	50	50	46.4	45.0	93	90	70-137	3	20		
Chloroform	ug/L	<1.2	50	50	50.3	51.1	101	102	80-122	2	20		
Chloromethane	ug/L	<1.6	50	50	49.5	48.8	99	98	17-149	1	20		
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	48.7	49.8	97	100	70-130	2	20		
cis-1,3-Dichloropropene	ug/L	<0.36	50	50	49.3	49.9	99	100	70-130	1	20		
Dibromochloromethane	ug/L	<2.6	50	50	50.4	50.5	101	101	70-130	0	20		
Dichlorodifluoromethane	ug/L	<0.46	50	50	43.1	42.2	86	84	22-158	2	20		
Ethylbenzene	ug/L	<0.33	50	50	52.6	52.4	105	105	80-123	0	20		
Isopropylbenzene (Cumene)	ug/L	<1.0	50	50	52.9	53.4	106	107	70-130	1	20		
Methyl-tert-butyl ether	ug/L	<1.1	50	50	43.7	43.5	87	87	66-130	0	20		
Methylene Chloride	ug/L	<0.32	50	50	49.7	49.0	99	98	70-130	2	20		
Styrene	ug/L	<0.36	50	50	57.0	57.6	114	115	70-130	1	20		
Tetrachloroethene	ug/L	<0.41	50	50	53.1	53.0	106	106	70-130	0	20		
Toluene	ug/L	<0.29	50	50	50.2	50.3	100	101	80-121	0	20		
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	49.7	50.6	99	101	70-134	2	20		
trans-1,3-Dichloropropene	ug/L	<3.5	50	50	48.7	50.0	97	100	58-130	3	20		
Trichloroethene	ug/L	<0.32	50	50	52.3	53.4	105	107	70-130	2	20		
Trichlorofluoromethane	ug/L	<0.42	50	50	50.3	49.4	101	99	82-151	2	20		
Vinyl chloride	ug/L	<0.17	50	50	53.0	53.1	106	106	61-143	0	20		
Xylene (Total)	ug/L	<1.0	150	150	156	155	104	103	70-130	0	20		
1,2-Dichlorobenzene-d4 (S)	%						106	108	70-130				
4-Bromofluorobenzene (S)	%						106	111	70-130				
Toluene-d8 (S)	%						100	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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

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.

WORKORDER QUALIFIERS

WO: 40238348

[1] Revised Report: Unnecessary qualifiers were removed from the PFAS data.

ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25221094 BLACK HAWK JUNCTION

Pace Project No.: 40238348

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40238348001	MW-8P	EPA 8260	404301		
40238348002	MW-8	EPA 8260	404301		
40238348003	MW-7	EPA 8260	404301		
40238348004	MW-3DUP	EPA 8260	404301		
40238348005	MW-6P	EPA 8260	404301		
40238348006	MW-5	EPA 8260	404301		
40238348007	MW-2	EPA 8260	404301		
40238348008	MW-3	EPA 8260	404301		
40238348009	MW-4	EPA 8260	404301		
40238348012	TRIP BLANK	EPA 8260	404301		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

W02 58348

ALL SHADED AREAS are for LAB USE ONLY

Company: *SCS Engineers*

Billing Information: *same as contact*

Address: *2830 Dairy Dr.*

Report To: *Rob Langdon*

Email To: *RLangdon@scsengineers.com*

Copy To:

Site Collection Info/Address:

Customer Project Name/Number: *Blackhawk Junction/25221094*

State: *WI* County/City: *Madison* Time Zone Collected: [] PT [] MT [] CT [] ET

Phone: *608 212 3495*

Site/Facility ID #:

Compliance Monitoring? [] Yes [] No

Collected By (print): *Ryan Matzuk*

Purchase Order #: Quote #:

DW PWS ID #: DW Location Code:

Collected By (signature): *[Signature]*

Turnaround Date Required:

Immediately Packed on Ice: [X] Yes [] No

Sample Disposal: [] Dispose as appropriate [] Return [] Archive [] Hold

Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [] Yes [] No Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Composite End		Res Cl	# of Ctns
			Date	Time	Date	Time		
MW-8P	GW	Grab	12/13	1515				
MW-8				1350				
MW-7				1145				
MW-3 DUP				1400				
MW-6P				1230				
MW-5				1320				
MW-2				1505				
MW-3				1400				
MW-4				1155				

Container Preservative Type **

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses

PFAS by 537	VOC W I List	Other	Lab Profile/Line:
			Lab Sample Receipt Checklist:
			Custody Seals Present/Intact Y N NA
			Custody Signatures Present Y N NA
			Collector Signature Present Y N NA
			Bottles Intact Y N NA
			Correct Bottles Y N NA
			Sufficient Volume Y N NA
			Samples Received on Ice Y N NA
			VOA - Headspace Acceptable Y N NA
			USDA Regulated Soils Y N NA
			Samples in Holding Time Y N NA
			Residual Chlorine Present Y N NA
			Cl Strips: Y N NA
			Sample pH Acceptable Y N NA
			pH Strips: Y N NA
			Sulfide Present Y N NA
			Lead Acetate Strips: Y N NA
			LAB USE ONLY:
			Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards: Type of Ice Used: Wet Blue Dry None Packing Material Used: *see Scar 12/15/21 MAP* Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A Lab Tracking #: *2697489* Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt: oC Cooler 1 Therm Corr. Factor: oC Cooler 1 Corrected Temp: oC Comments: *see Scar 12/15/21*

Relinquished by/Company: (Signature) *[Signature]* Date/Time: *12/14 900*

Relinquished by/Company: (Signature) *CS Logistics* Date/Time: *12/15/21 745*

Received by/Company: (Signature) *[Signature]* Date/Time: *12/15/21 745*

Received by/Company: (Signature) *[Signature]* Date/Time: *12/15/21*

MTJL LAB USE ONLY Table #: Acctnum: Template: Prelogin: PM: PB: Trip Blank Received: Y N NA HCL MeOH TSP Other: Non Conformance(s): YES / NO Page: *Page 32 of 94*



CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

40258318

Company: **SCS Engineers**

Billing Information: **Same as contract**

ALL SHADED AREAS are for LAB USE ONLY

Address: **2830 Dairy Dr, Madison, WI**

Report To:

Container Preservative Type **
 3 4

Lab Project Manager:

Copy To:

Email To: **RLangdon@SCSEngineers.com**

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Customer Project Name/Number: **Blackhawk Junction / 25221094**

State: **WI** County/City: **Madison** Time Zone Collected: [] PT [] MT [] CT [] ET

Analyses

Lab Profile/Line:

Phone: **608 212 3995**

Site/Facility ID #:

Compliance Monitoring? [] Yes [] No

Lab Sample Receipt Checklist:

Email: **RLangdon@SCSEngineers.com**

Collected By (print): **Ryan Matzuk**

DW PWS ID #: DW Location Code:

Custody Seals Present/Intact Y N NA

Collected By (signature): *[Signature]*

Purchase Order #: Quote #:

Immediately Packed on Ice: Yes [] No

Custody Signatures Present Y N NA

Sample Disposal: [] Dispose as appropriate [] Return [] Archive: [] Hold:

Rush: [] Same Day [] Next Day [] 2 Day [] 3 Day [] 4 Day [] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [] Yes No

Collector Signature Present Y N NA

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Analysis:

Analysis:

Bottles Intact Y N NA

Customer Sample ID

Matrix *

Comp / Grab

Collected (or Composite Start) Date Time

Composite End Date Time

Res Cl # of Ctns

PFAS by 537
VOC-WI List
PFAS by 537

Correct Bottles Y N NA

Equipment Blank

~~Blank~~

Grab

12/13 1110

Sufficient Volume Y N NA

Field Blank

↓

12/13 1305

X

Samples Received on Ice Y N NA

Trip Blank

↓

12/13 -

X

VOA - Headspace Acceptable Y N NA

USDA Regulated Soils Y N NA

Samples in Holding Time Y N NA

Residual Chlorine Present Y N NA

Cl Strips: Y N NA

Sample pH Acceptable Y N NA

pH Strips: Y N NA

Sulfide Present Y N NA

Lead Acetate Strips: Y N NA

LAB USE ONLY: Lab Sample # / Comments:

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Temp Blank Received: Y N NA

Packing Material Used: **see scan**

Lab Tracking #: **2697488**

Samples received via: FEDEX UPS Client Courier Pace Courier

Therm ID#: **see scan**

Radchem sample(s) screened (<500 cpm): Y N NA

Relinquished by/Company: (Signature) *[Signature]*

MTJL LAB USE ONLY

Cooler 1 Temp Upon Receipt: **see scan** °C

Date/Time: **12/14 900**

Received by/Company: (Signature) *[Signature]*

Table #: **12115/21**

Cooler 1 Therm Corr. Factor: **see scan** °C

Relinquished by/Company: (Signature) **CS Logistics**

Date/Time: **12/15/21**

Template: **12115/21**

Cooler 1 Corrected Temp: **see scan** °C

Relinquished by/Company: (Signature)

Received by/Company: (Signature)

Prelogin:

Trip Blank Received: Y N NA

Date/Time:

Received by/Company: (Signature)

PM:

HCL MeOH TSP Other

Date/Time:

Received by/Company: (Signature)

PB:

Non Conformance(s): YES / NO

Sample Preservation Receipt Form

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

Client Name: SCS

Project # 40384

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:

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																3																		2.5 / 5 / 10
002																3																		2.5 / 5 / 10
003																3																		2.5 / 5 / 10
004									2							3																		2.5 / 5 / 10
005																3																		2.5 / 5 / 10
006																3																		2.5 / 5 / 10
007									2							3																		2.5 / 5 / 10
008									2							3																		2.5 / 5 / 10
009									2							3																		2.5 / 5 / 10
010									2							3																		2.5 / 5 / 10
011									2							3																		2.5 / 5 / 10
012															2																			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

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	BP1U 1 liter plastic unpres	VG9A 40 mL clear ascorbic	JGFU 4 oz amber jar unpres
BG1U 1 liter clear glass	BP3U 250 mL plastic unpres	DG9T 40 mL amber Na Thio	JG9U 9 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP3B 250 mL plastic NaOH	VG9U 40 mL clear vial unpres	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9H 40 mL clear vial HCL	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3S 250 mL plastic H2SO4	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG5U 100 mL amber glass unpres		VG9D 40 mL clear vial DI	ZPLC ziploc bag
AG2S 500 mL amber glass H2SO4			GN
BG3U 250 mL clear glass unpres			



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: SCS Engineers

Project #: _____

WO#: **40238348**

Courier: CS Logistics Fed Ex Speedee UPS Walto
 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-114 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 4 /Corr: 4.1

Temp Blank Present: Yes no

Biological Tissue is Frozen: yes no

Person examining contents:
Date: 12/15/21 /Initials: MP
Labeled By Initials: SRK

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

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1. <u>12/15/21 SRK</u>
Chain of Custody Filled Out:	<u>12/15/21 SRK</u> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Matrix Pg# 12/15/21 MP filter 12/15/21 SRK</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>471</u>		

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

Report Prepared for:

Dan Milewsky
PACE Wisconsin
1241 Bellevue Street
Green Bay WI 54302

**REPORT OF
LABORATORY
ANALYSIS
FOR PFAAs**

Report Prepared Date:

January 21, 2022

Report Information:

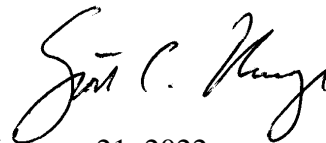
Pace Project #: 10591671
Sample Receipt Date: 12/16/2021
Client Project #: 40238348 SCS Engineers
Client Sub PO #: N/A
State Cert #: N/A

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PFAA Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:



January 21, 2022

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

DISCUSSION

This report presents the results from the analyses performed on six samples submitted by a representative of Pace Wisconsin. The samples were analyzed for thirty-three perfluorinated compounds using Wisconsin DNR Guidance for PFAS. Reporting limits were set to MDLs.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank was free of the target perfluorinated compounds at the reporting limits. This indicates that the sample processing procedures did not significantly contribute to the analyte content determined for the sample material.

Laboratory spike samples were also prepared with the sample batch using clean reference matrix that had been fortified with native standards. The recovery results were within the method limits. The RPDs (relative percent differences) between one designated spike and its duplicate were within the method limits. These spikes indicate that extraction performed as expected. Matrix spikes were prepared with the sample batch using sample material from a separate project; results from that analysis will be provided upon request.

The four injection internal standards (13C4 PFOA, 13C4 PFOS, 13C2_PFDA, and 13C2_PFHxA) pass for each analysis in the batch verifying that the instrument detector is working as expected.

Diminished extracted internal standard (EIS) recovery ("R" flagged) were present in BLANK-95550 and "EQUIPMENT BLANK", however, the use of the isotope dilution method generally precludes any adverse impact on those individual native compounds that have a directly associated.

Values were flagged "I" where incorrect isotope ratios were obtained.

Concentrations below the calibration range were flagged "J" and should be regarded as estimates.

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon- rimary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Appendix A

Sample Management

Internal Transfer Chain of Custody



Samples Pre-Logged into eCOC.

State Of Origin: WI

Cert. Needed: Yes No

Owner Received Date: 12/15/2021 Results Requested By: 1/07/2022

Workorder: 40238348 Workorder Name: 25221094 BLACK HAWK JUNCTION

Report To: Subcontract To: Requesting Analysis

Dan Milewsky
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers		LAB USE ONLY
						Unpreserved		
1	MW-3DUP	PS	12/13/2021 14:00	40238348004	Water	2		001
2	MW-2	PS	12/13/2021 15:05	40238348007	Water	2		002
3	MW-3	PS	12/13/2021 14:00	40238348008	Water	2		003
4	MW-4	PS	12/13/2021 11:55	40238348009	Water	2		004
5	EQUIPMENT BLANK	PS	12/13/2021 11:10	40238348010	Water	2		005
6	FIELD BLANK	PS	12/13/2021 13:05	40238348011	Water	2		006

PFAS (WDNR 33 Targets)

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Samples Intact	Y or N
1	<i>Anthony Leland</i>	12/15/21 17:00	ACS/PALU	12/16/21 11:35		Y	Y	N
2								
3								

Cooler Temperature on Receipt -0.4 °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.

WO# : 10591671



10591671



Document Name: Sample Condition Upon Receipt (SCUR) - MN

Document Revised: 02Dec2021 Page 1 of 1

Document No.: ENV-FRM-MIN4-0150 Rev.03

Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt

Client Name:

PACE BAY

Project #:

WO#: 10591671

PM: SCU

Due Date: 01/10/22

CLIENT: PASI-WI

Courier:

Fed Ex, UPS, USPS, Client, Pace, Speedee, Commercial

Tracking Number:

See Exceptions ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap, Bubble Bags, None, Other Temp Blank? Yes No

Thermometer: T1, T2, T3, T4, T5 Type of Ice: Wet, Blue, None, Dry, Melted

Did Samples Originate in West Virginia? Were All Container Temps Taken? Cooler Temp Read w/temp blank: -0.4 Average Corrected Temp (no temp blank only): See Exceptions ENV-FRM-MIN4-0142 1 Container

USDA Regulated Soil: (N/A, water sample/Other:) Date/Initials of Person Examining Contents: AC3 11/16/21

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork.

Table with 2 columns: Questions and COMMENTS. Contains 14 numbered rows of questions and checkboxes.

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Date/Time: Field Data Required? Yes No Comments/Resolution:

Project Manager Review: [Signature] Date: 12/16/21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e., out of hold, incorrect preservative, out of temp, incorrect containers).

Wisconsin DNR PFAS Updates - effective March 1, 2021

Update to the Wisconsin DNR PFAS list

After careful consideration, the Wisconsin Department of Natural Resources (DNR) will no longer expect laboratories to report 10:2 FTS, PFHxDA or PFODA, as part of the WI DNR default PFAS list, at this time. This applies to new and existing projects, unless otherwise directed by the DNR. The DNR will continue to evaluate which PFAS are critical for reporting in Wisconsin as PFAS analysis and science continues to evolve. This decision was based on the exclusion of these compounds in the forthcoming EPA method. Therefore, the updated DNR PFAS list now consists of 33 PFAS and is provided on the third page of this document.

The remainder of this document clarifies the administrative rule requirements and general recommendations that the DNR has for the regulated community regarding PFAS sampling. Where guidance is provided, it is done so to assist the regulated community in submitting information to the DNR that it can use to make regulatory decisions with confidence.

Reporting PFAS results based on Wisconsin DHS recommended PFAS groundwater standards

The DNR expects laboratories to have PFAS method detection limits (MDLs) equal to or below the recommended groundwater enforcement standards (ES).

The DNR does not expect laboratories to have PFAS MDLs that are below the recommended groundwater preventative action limits (PAL) for all of the PFAS on the DNR PFAS list if the laboratory's routine method procedure does not generate MDLs below the PALs. Neutral PFAS are examples of PFAS for which laboratories may not have MDLs below the recommended PALs. The recommended groundwater ESs and PALs are provided for the updated DNR PFAS list on the third page of this document.

The DNR expects all sample results to be reported to the statistical MDL.

Certification requirements and expectations

The DNR's administrative rules require the analysis of drinking water samples submitted under s. NR 716.13 or s. NR 809.73 to be performed by a Wisconsin certified laboratory if one exists.

The DNR's administrative rules require the analysis of non-drinking water samples submitted under ss. NR 200.027 (except for those tests excluded in NR 219.037), NR 507.17, NR 664.0013 or NR 716.13 to be performed by a Wisconsin certified laboratory if one exists.

For samples that do not fall under ss. NR 200.027, NR 507.17, NR 664.0013, NR 716.13 or NR 809.73, the DNR recommends the analysis to be performed by a Wisconsin certified laboratory if one exists.

If a Wisconsin certified laboratory does not exist, the DNR recommends that the samples be performed by a laboratory that has applied for Wisconsin PFAS certification. The list of laboratories that have applied for Wisconsin PFAS certification can be found at <https://dnr.wisconsin.gov/topic/Contaminants/Labs.html>.

Analysis requirements and expectations

Laboratories perform PFAS analysis according to the instructions provided to them by their client. If the client does not provide instructions, the DNR expects drinking water and non-drinking water samples to be performed using the laboratory's isotope dilution method that utilizes the Wisconsin PFAS Aqueous (Non-Potable Water) and Non-Aqueous Matrices Method Expectations guidance document.

In addition, unless otherwise instructed by the client, the DNR expects drinking water and non-drinking water samples to be tested for the 33 compounds on the DNR PFAS list.

Non-drinking water matrices field quality control samples requirements

For non-drinking water matrices, laboratories are not responsible for sending out instructions or supplies for collecting field quality control samples unless requested by their client.

Responsible parties as defined in ch. NR 716 and owners and operators of solid waste disposal facilities regulated under chs. NR 500 to 538 are obligated to ensure that field quality control samples (e.g. field blanks, field duplicates, equipment blanks) are collected as required by the administrative code sections presented below. These parties and agents acting on their behalf shall inform laboratories of the field quality control samples that must be collected in order for the laboratory to provide the proper sampling supplies for collection.

Groundwater: s. NR 140.16 Monitoring and laboratory data requirements.

(1)

(a) All groundwater quality samples collected to determine compliance with ch. 160, Stats., shall comply with this section except as noted.

(b) *Groundwater sampling requirements.* All groundwater quality samples shall be collected and handled in accordance with procedures specified by the applicable regulatory agency or, where no sampling procedures are specified by that agency, in accordance with the sampling procedures referenced in par. (c). The sampling procedures specified by a regulatory agency may include requirements for field filtration.

(c) *Department groundwater sampling procedures.*

1. If sampling procedures are not specified by the applicable regulatory agency pursuant to par. (b), all groundwater quality samples shall be collected and handled in accordance with the sampling procedures contained in the following publications:

a. Groundwater Sampling Desk Reference. Wisconsin Department of Natural Resources, PUBL-DG-037-96, September, 1996.

b. Groundwater Sampling Field Manual. Wisconsin Department of Natural Resources, PUBL-DG-038-96, September, 1996.

Landfills: s. NR 507.16 Sampling plan. The owner or operator shall submit a sampling plan for all monitoring devices at the facility for approval as part of the feasibility report. The sampling plan shall be implemented as approved in writing by the department. The sampling plan shall follow procedures and methodologies specified by the department and shall comply with the requirements in s. NR 140.16.

Site Investigations: s. NR 716.13 Sampling and analysis requirements.

(6)

Responsible parties shall provide for the following quality control and quality assurance procedures, at a minimum, when collecting samples for laboratory analysis for a field investigation conducted under this chapter:

(a) Chain of custody shall be documented from the time of sample collection to the receipt of the sample by the analytical laboratory. Chain of custody documentation shall be in compliance with ch. NR 149, and shall be submitted to the department with the sample results.

(b) For soil samples, one temperature blank for every shipping container of samples that require cooling for preservation, unless samples are received by the laboratory on ice, unless another temperature is required by the analytical method used.

(c) For water samples:

1. One replicate sample for every 10 or less samples.

2. One equipment blank for every 10 or less samples, unless dedicated sampling equipment is used to prevent cross-contamination.

3. One trip blank for each shipping container that contained volatile samples.

4. One temperature blank for every shipping container of samples that require cooling for preservation, unless samples are shipped on ice.

(d) Decontamination of all sampling instruments between each sampling event, unless dedicated or disposable sampling devices are used in a manner that prevents cross contamination or other unintended contamination of samples.

(10)

Responsible parties shall ensure that groundwater samples are collected and handled according to the procedures specified in s. NR 140.16 (1), unless the department approves the use of an alternative procedure.

Any questions contact Tom Trainor at tom.trainor@wisconsin.gov or 920.412.5970.

Disclaimer: This document is intended solely as guidance and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

WISCONSIN DNR PFAS LIST - 1.1.21

#	Acronym (EPA)	Name (# carbons) (trade name)	CAS #	ES (ng/L) *	PAL (ng/L) *	Acronyms (other)
Carboxylic Acids						
1	PFBA	Perfluorobutanoic acid [C4] (FC 23, Fluorad FC 23)	375-22-4	10,000	2,000	HFBA
2	PFPeA	Perfluoropentanoic acid [C5]	2706-90-3			
3	PFHxA	Perfluorohexanoic acid [C6]	307-24-4	150,000	30,000	
4	PFHpA	Perfluoroheptanoic acid [C7]	375-85-9			
5	PFOA	Perfluorooctanoic acid [C8]	335-67-1	20 ^c	2 ^c	8PF
6	PFNA	Perfluorononanoic acid [C9]	375-95-1	30	3	
7	PFDA	Perfluorodecanoic acid [C10]	335-76-2	300	60	Nfda, PFDeA
8	PFUnA	Perfluoroundecanoic acid [C11]	2058-94-8	3,000	600	PFUnA, PFUnDA
9	PFDoA	Perfluorododecanoic acid [C12]	307-55-1	500	100	PFDoDA, PFDOA, PFDDA
10	PFTrDA	Perfluorotridecanoic acid [C13]	72629-94-8			PFTriA, PFTra
11	PFTA	Perfluorotetradecanoic acid [C14]	376-06-7	10,000	2,000	PFTeDA, PFTDA, PFTeA, PFTeTA, PFTTeA
Sulfonic Acids						
12	PFBS	Perfluorobutanesulfonic acid [C4] (FC-98)	375-73-5	450,000	90,000	PFBus
13	PFPeS	Perfluoropentanesulfonic acid [C5]	2706-91-4			
14	PFHS	Perfluorohexanesulfonic acid [C6]	355-46-4	40	4	PFHS
15	PFHpS	Perfluoroheptanesulfonic acid [C7]	375-92-8			
16	PFOS	Perfluorooctanesulfonic acid [C8] (FC 95, Fluorad FC 95)	1763-23-1	20 ^c	2 ^c	nPFOS, P8S
17	PFNS	Perfluorononanesulfonic acid [C9]	68259-12-1			
18	PFDS	Perfluorodecanesulfonic acid [C10]	335-77-3			
19	PFDoS	Perfluorododecanesulfonic acid [C12]	79780-39-5			PFDoDS, PFDOS
20	4:2 FTS	4:2 fluorotelomersulfonic acid [C6]	757124-72-4			4:2 FTSA, 4:2 FtS, FTS 4:2
21	6:2 FTS	6:2 fluorotelomersulfonic acid [C8]	27619-97-2			6:2 FTSA, 6:2 Fts, Fts 6:2, 6:2 PFOS, THPFOS
22	8:2 FTS	8:2 fluorotelomersulfonic acid [C10]	39108-34-4			8:2 FTSA, 8:2 Fts, Fts 8:2, 8:2 PFOS
Sulfonamides, Sulfonamidoacetic acids, Sulfonamidoethanols						
23	PFOSA	Perfluorooctanesulfonamide [C8]	754-91-6	20 ^c	2 ^c	FOSA, pfosa
24	NMeFOSA	N-Methylperfluorooctanesulfonamide [C9] (Fluorad FX 12)	31506-32-8			MeFOSA, N-MeFOSA, N-Me-FOSA
25	NETFOSA	N-Ethylperfluorooctanesulfonamide [C10] (Alstar, Finitron, Fluramin, FX 12, Mirex S, Sulfluramid, Valcano)	4151-50-2	20 ^c	2 ^c	EtFOSA, N-EtFOSA
26	NMeFOSAA	N-Methylperfluorooctanesulfonamidoacetic acid [C11]	2355-31-9			MeFOSAA, N-MeFOSAA, NMe-PFOSA-AcOH
27	NETFOSAA	N-Ethylperfluorooctanesulfonamidoacetic acid [C12]	2991-50-6	20 ^c	2 ^c	EtFOSAA, N-EtFOSAA, NET-PFOSA-AcOH
28	NMeFOSE	N-Methylperfluorooctanesulfonamidoethanol [C11]	24448-09-7			MeFOSE, N-MeFOSE, MeFOSE Alcohol
29	NETFOSE	N-Ethylperfluorooctanesulfonamidoethanol [C12] (FC-10, Fluorad FC 10)	1691-99-2	20 ^c	2 ^c	EtFOSE, N-EtFOSE, N-Et-FOSE
Replacement Chemicals						
30	HFPO-DA	Hexafluoropropylene oxide dimer acid [C6] (FRD-903, GenX)	13252-13-6	300	30	PFPOPrA
31	DONA	4,8-dioxa-3H-perfluorononanoic acid [C7]	919005-14-4	3,000	600	ADONA (sodium salt of DONA)
32	9CI-PF3ONS	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid [C8]	756426-58-1			F-53B Major, C8 Cl-PFESA
33	11CI-PF3OUdS	11-chloroheicosfluoro-3-oxaundecane-1-sulfonic acid [C10]	763051-92-9			F-53B Minor, C10 Cl-PFESA
		No recommended standard yet from cycle 11				

Page 4
 DHS recommends a combined ES of 20 ng/L and a combined PAL of 2 ng/L for PFOS, PFOA, PFOSA, NETFOSA, and NETFOSE.

The Enforcement Standard (ES) and Preventive Action Limit (PAL) listed in this table have been recommended by the Department of Health Services to the Department of Natural Resources. The Department of Natural Resources is in the rule making process to include these values into ch. NR 140. The standards presented in this table are not required on January 1, 2021 as the rule making process has not been completed yet.

Chain-of-Custody Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company: **SCS Engineers**
 Billing Information: *Same as contract*
 Address: **2830 Dairy Dr.**
 Report To: **Rob Langdon**
 Copy To:

Customer Project Name/Number: **Blackhawk Junction/25221094**
 State: **WI** County/City: **Madison** Time Zone Collected: **[] PT [] MT [] CT [] ET**
 Phone: **608 212 3995** Site/Facility ID #: _____
 Email: **RLangdon@scsengineers.com**
 Collected By (print): **Ryan Matzink** Purchase Order #: _____
 Quote #: _____
 Turnaround Date Required: _____
 Rush: Same Day Next Day 2 Day 3 Day 4 Day 5 Day (Expedite Charges Apply)
 Sample Disposal: Dispose as appropriate Return Archive: _____
 Hold: _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Res Cl	# of Ctns
			Date	Time		
MW-8P	GW	Grab	12/13	1515		
MW-8				1350		
MW-7				1145		
MW-3 DUP				1400		
MW-6P				1230		
MW-5				1320		
MW-2				1505		
MW-3				1400		
MW-4				1155		

Customer Remarks / Special Conditions / Possible Hazards: _____
 Type of Ice Used: Wet Blue Dry None
 Packing Material Used: *see SCUR 12/15/12 MAP*
 Radchem sample(s) screened (<500 cpm): Y N NA

Relinquished by/Company: (Signature) _____ Date/Time: **12/14 900**
 Relinquished by/Company: (Signature) _____ Date/Time: **745**
 Relinquished by/Company: (Signature) _____ Date/Time: **12/15/12 745**
 Relinquished by/Company: (Signature) _____ Date/Time: _____

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here **0258338**
ALL SHADED AREAS are for LAB USE ONLY
 Container Preservative Type: **U 3**
 Lab Project Manager: _____
 ** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:
PFAS by 537	Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA VOA - Headspace Acceptable Y N NA USDA-Regulated Soils Y N NA Samples in Holding Time Y N NA Residual Chlorine Present Y N NA C1 Strips: Y N NA pH Strips: Y N NA Sulfide Present Y N NA Lead Acetate Strips: Y N NA LAB USE ONLY: Lab Sample # / Comments: _____
VOC W/LIST	
117 IM	
001	
007	
003	
004	
005	
006	
007	
008	
009	
010	

Lab Sample Temperature Info:
 Temp Blank Received: Y N NA
 Therm NR: _____
 Cooler 1 Temp Upon Receipt: _____ oC
 Cooler 1 Therm Corr. Factor: _____ oC
 Cooler 1 Corrected Temp: _____ oC
 Comments: *see SCUR 12/15/12*

Lab Tracking #: **2697489**
 Samples received via: FEDEX UPS Client Courier Pace Courier
 Date/Time: _____
 Date/Time: **745**
 Date/Time: **12/15/12**

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Billing Information: Same as contact

Company: SCS Engineers

Address: 2830 Darcy Dr, Madison, WI

Report To: Ryan Matzuk

Copy To: Ryan Matzuk

Customer Project Name/Number: Blackhawk Junction / 25221094

State: WI Madison

Phone: 608 212 3015 Site/Facility ID #: 25221094

Email: RLaingdon@SCSEngineers.com

Collected By (print): Ryan Matzuk

Turnaround Date Required: Immediately Packed on Ice: Yes No

Field Filtered (if applicable): Yes No

Analysis: VOC WJ List

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Res Cl	# of Ctns	Type of Ice Used:	Wet	Blue	Dry	None	Short Holds Present (<72 hours):	Y	N	N/A	
			Date	Time												
Equipment Blank		Grab	12/13	1110												
Field Blank		↓	12/13	1305												
Trip Blank		↓	12/13	---												

Customer Remarks / Special Conditions / Possible Hazards:

Packing Material Used: 12/15/12 (mp) seawe

Radchem sample(s) screened (<500 cpm): Y N NA

Received by/Company: (Signature) Date/Time: 12/14 9:00

Received by/Company: (Signature) Date/Time: 745

Received by/Company: (Signature) Date/Time: 12/15/12

Received by/Company: (Signature) Date/Time: 94

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or MTJIL Log-in Number Here

Container Preservative Type: 3 U

Lab Project Manager:

Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Lab Profile/Line: Lab Sample Receipt Checklist:

Custody Seals Present/Intact Y N NA

Custody Signatures Present Y N NA

Collector Signature Present Y N NA

Bottles Intact Y N NA

Correct Bottles Y N NA

Sufficient Volume Y N NA

Samples Received on Ice Y N NA

VOL headspace Acceptable Y N NA

USDA Regulated Soils Y N NA

Samples in Holding Time Y N NA

Residual Chlorine Present Y N NA

CL Strips Y N NA

Sample pH Acceptable Y N NA

pH Strips Y N NA

Sulfide Present Y N NA

Lead Acetate Strips Y N NA

LAB USE ONLY: Lab Sample #/Comments:

Lab Sample #: 011010

Lab Sample #: 02011

Lab Sample #: 013012

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample #: 12/15/12

Lab Sample Temperature Info:

Temp Blank Received: Y N NA

Therm ID#:

Cooler 1 Temp Upon Receipt: °C

Cooler 1 Therm Corr: Factor: °C

Cooler 1 Corrected Temp: °C


Comments: 12/15/12

Trip Blank Received: Y N NA

HCL MeOH TSP Other

Non-Conformance(s): YES / NO

Page: of:

 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: SCS Engineers
 Courier: CS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____

Project #: _____
WO# : 40238348

 40238348

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-114 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun
 Cooler Temperature Uncorr: 4 /Corr: 4.1
 Temp Blank Present: yes no Biological Tissue is Frozen: yes no
 Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
 Date: 12/15/21 / Initials: MP
 Labeled By Initials: SRK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1. <u>12/15/21 SRK</u>
Chain of Custody Filled Out:	<u>12/15/21 SRK</u> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>Matrix pg# 12/15/21 MP filter 12/15/21 SRK</u>
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>471</u>		

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

Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Appendix B

Sample Analysis Summary



Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3DUP	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348004	Total Amount Extracted	262mL
Lab File ID	Q220110A_069	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	6.4	1.9	0.42	0.42	1	375-22-4		01/11/2022 06:57
PFPeA	9.9	1.9	0.42	0.42	1	2706-90-3		01/11/2022 06:57
HFPO-DA	ND	1.9	0.50	0.50	1	13252-13-6		01/11/2022 06:57
PFBS	3.7	1.7	0.45	0.45	1	375-73-5		01/11/2022 06:57
PFHxA	7.0	1.9	0.42	0.42	1	307-24-4		01/11/2022 06:57
4:2 FTS	ND	1.8	0.53	0.53	1	757124-72-4		01/11/2022 06:57
PFPeS	ND	1.8	0.45	0.45	1	2706-91-4		01/11/2022 06:57
PFHpA	5.7	1.9	0.52	0.52	1	375-85-9		01/11/2022 06:57
DONA	ND	1.8	0.49	0.49	1	919005-14-4		01/11/2022 06:57
PFHxS	4.1	1.7	0.48	0.48	1	355-46-4		01/11/2022 06:57
PFOA	22	1.9	0.56	0.56	1	335-67-1		01/11/2022 06:57
6:2 FTS	4.2	1.8	0.61	0.61	1	27619-97-2		01/11/2022 06:57
PFHpS	2.3	1.8	0.39	0.39	1	375-92-8		01/11/2022 06:57
PFNA	1.0 J	1.9	0.71	0.71	1	375-95-1		01/11/2022 06:57
PFOSAm	ND	1.9	0.78	0.78	1	754-91-6		01/11/2022 06:57
PFOS	55	1.8	0.52	0.52	1	1763-23-1		01/11/2022 06:57
MeFOSA	ND	1.9	0.49	0.49	1	31506-32-8		01/11/2022 06:57
PFDA	ND	1.9	0.54	0.54	1	335-76-2		01/11/2022 06:57
EtFOSAm	ND	1.9	0.58	0.58	1	4151-50-2		01/11/2022 06:57
8:2 FTS	0.72 J	1.8	0.62	0.62	1	39108-34-4		01/11/2022 06:57
9-CI-PF3ON	ND	1.8	0.29	0.29	1	756426-58-1		01/11/2022 06:57
PFNS	ND	1.8	0.43	0.43	1	68259-12-1		01/11/2022 06:57
PFUnDA	ND	1.9	0.51	0.51	1	2058-94-8		01/11/2022 06:57
NMeFOSAA	ND	1.9	0.41	0.41	1	2355-31-9		01/11/2022 06:57
NEtFOSAA	ND	1.9	0.53	0.53	1	2991-50-6		01/11/2022 06:57
PFDS	ND	1.8	0.43	0.43	1	335-77-3		01/11/2022 06:57
PFDOA	ND	1.9	0.46	0.46	1	307-55-1		01/11/2022 06:57
MeFOSE	ND	1.9	0.31	0.31	1	24448-09-7		01/11/2022 06:57
EtFOSE	ND	1.9	0.47	0.47	1	1691-99-2		01/11/2022 06:57
11-CI-PF3OUdS	ND	1.8	0.42	0.42	1	763051-92-9		01/11/2022 06:57
PFTTrDA	ND	1.9	0.59	0.59	1	72629-94-8		01/11/2022 06:57
PFDoS	ND	1.8	0.44	0.44	1	79780-39-5		01/11/2022 06:57
PFTDA	ND	1.9	0.45	0.45	1	376-06-7		01/11/2022 06:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3DUP	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348004	Total Amount Extracted	262mL
Lab File ID	Q220110A_069	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	19	19	99	50-150		01/11/2022 06:57
13C4 PFOA	19	19	100	50-150		01/11/2022 06:57
13C2 PFDA	19	18	92	50-150		01/11/2022 06:57
13C4 PFOS	18	18	101	50-150		01/11/2022 06:57

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	19	18	97	25-150		01/11/2022 06:57
13C5 PFPeA	19	20	103	25-150		01/11/2022 06:57
13C3 PFBS	18	19	108	25-150		01/11/2022 06:57
13C2 4:2FTS	18	16	92	25-150		01/11/2022 06:57
13C5 PFHxA	19	19	101	25-150		01/11/2022 06:57
13C4 PFHpA	19	17	92	25-150		01/11/2022 06:57
13C3 PFHxS	18	19	104	25-150		01/11/2022 06:57
13C2 6:2FTS	18	19	107	25-150		01/11/2022 06:57
13C8 PFOA	19	20	104	25-150		01/11/2022 06:57
13C9 PFNA	19	19	97	25-150		01/11/2022 06:57
13C8 PFOS	18	18	100	25-150		01/11/2022 06:57
13C2 8:2FTS	18	18	99	25-150		01/11/2022 06:57
13C6 PFDA	19	19	97	25-150		01/11/2022 06:57
d3-MeFOSAA	19	18	94	25-150		01/11/2022 06:57
13C8 PFOSA	19	15	81	25-150		01/11/2022 06:57
d5-EtFOSAA	19	18	94	25-150		01/11/2022 06:57
13C7 PFUdA	19	19	99	25-150		01/11/2022 06:57
13C2 PFDoA	19	18	95	25-150		01/11/2022 06:57
13C2 PFTeDA	19	16	85	25-150		01/11/2022 06:57
13C3 HFPO-DA	19	20	106	25-150		01/11/2022 06:57
d7-N-MeFOSE	19	13	67	10-150		01/11/2022 06:57
d9-N-EtFOSE	19	11	60	10-150		01/11/2022 06:57
d3-N-MeFOSA	19	8.9	47	10-150		01/11/2022 06:57
d5-N-EtFOSA	19	8.6	45	10-150		01/11/2022 06:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3DUP	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348004	Total Amount Extracted	262mL
Lab File ID	Q220110A_069	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.48	6.48	10		01/11/2022 06:57
13C4 PFOA	N/A	N/A	7.76	7.76	15		01/11/2022 06:57
13C2 PFDA	N/A	N/A	9.06	9.07	10		01/11/2022 06:57
13C4 PFOS	N/A	N/A	9.53	9.55	81		01/11/2022 06:57

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.95	4.98	21		01/11/2022 06:57
13C5 PFPeA	N/A	N/A	5.82	5.81	13		01/11/2022 06:57
13C3 PFBS	N/A	N/A	6.73	6.74	84		01/11/2022 06:57
13C2 4:2FTS	N/A	N/A	6.21	6.21	99		01/11/2022 06:57
13C5 PFHxA	N/A	N/A	6.48	6.49	11		01/11/2022 06:57
13C4 PFHpA	N/A	N/A	7.13	7.14	54		01/11/2022 06:57
13C3 PFHxS	N/A	N/A	8.16	8.19	10		01/11/2022 06:57
13C2 6:2FTS	N/A	N/A	7.43	7.45	52		01/11/2022 06:57
13C8 PFOA	N/A	N/A	7.76	7.79	14		01/11/2022 06:57
13C9 PFNA	N/A	N/A	8.40	8.45	13		01/11/2022 06:57
13C8 PFOS	N/A	N/A	9.53	9.58	11		01/11/2022 06:57
13C2 8:2FTS	N/A	N/A	8.69	8.72	93		01/11/2022 06:57
13C6 PFDA	N/A	N/A	9.07	9.10	81		01/11/2022 06:57
d3-MeFOSAA	N/A	N/A	8.95	8.97	75		01/11/2022 06:57
13C8 PFOSA	N/A	N/A	11.45	11.41	98		01/11/2022 06:57
d5-EtFOSAA	N/A	N/A	9.25	9.27	43		01/11/2022 06:57
13C7 PFUdA	N/A	N/A	9.73	9.77	12		01/11/2022 06:57
13C2 PFDoA	N/A	N/A	10.40	10.43	63		01/11/2022 06:57
13C2 PFTeDA	N/A	N/A	11.70	11.73	65		01/11/2022 06:57
13C3 HFPO-DA	N/A	N/A	6.75	6.73	11		01/11/2022 06:57
d7-N-MeFOSE	N/A	N/A	13.26	13.21	12		01/11/2022 06:57
d9-N-EtFOSE	N/A	N/A	13.73	13.70	34		01/11/2022 06:57
d3-N-MeFOSA	N/A	N/A	13.46	13.41	45		01/11/2022 06:57
d5-N-EtFOSA	N/A	N/A	13.90	13.87	66		01/11/2022 06:57

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3DUP	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348004	Total Amount Extracted	262mL
Lab File ID	Q220110A_069	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.96	4.99	24		01/11/2022 06:57
PFPeA	N/A	N/A	5.83	5.82	30		01/11/2022 06:57
HFPO-DA	0.00	0.40	0.00	6.77	ND		01/11/2022 06:57
PFBS	0.35	0.34	6.74	6.75	58		01/11/2022 06:57
PFHxA	0.08	0.09	6.49	6.50	61		01/11/2022 06:57
4:2 FTS	0.00	0.91	0.00	6.22	ND		01/11/2022 06:57
PFPeS	0.52	0.42	7.48	7.49	ND		01/11/2022 06:57
PFHpA	0.44	0.42	7.14	7.15	25		01/11/2022 06:57
DONA	0.00	0.38	0.00	7.36	ND		01/11/2022 06:57
PFHxS	0.31	0.36	8.17	8.19	56		01/11/2022 06:57
PFOA	0.28	0.32	7.77	7.78	18		01/11/2022 06:57
6:2 FTS	1.20	1.30	7.43	7.43	52		01/11/2022 06:57
PFHpS	0.35	0.39	8.86	8.89	20		01/11/2022 06:57
PFNA	0.26	0.23	8.41	8.42	76	J	01/11/2022 06:57
PFOSAm	N/A	N/A	11.45	11.40	ND		01/11/2022 06:57
PFOS	0.16	0.21	9.53	9.56	37		01/11/2022 06:57
MeFOSA	0.00	0.45	0.00	13.44	ND		01/11/2022 06:57
PFDA	0.00	0.17	0.00	9.03	ND		01/11/2022 06:57
EtFOSAm	0.00	0.35	0.00	13.89	ND		01/11/2022 06:57
8:2 FTS	1.80	1.40	8.70	8.64	11	J	01/11/2022 06:57
9-Cl-PF3ON	0.00	0.03	0.00	9.99	ND		01/11/2022 06:57
PFNS	0.00	0.22	0.00	10.22	ND		01/11/2022 06:57
PFUnDA	0.00	0.16	0.00	9.75	ND		01/11/2022 06:57
NMeFOSAA	0.00	0.77	8.87	8.97	ND		01/11/2022 06:57
NEtFOSAA	0.00	0.52	0.00	9.28	ND		01/11/2022 06:57
PFDS	0.00	0.26	0.00	10.87	ND		01/11/2022 06:57
PFDOA	0.00	0.17	0.00	10.41	ND		01/11/2022 06:57
MeFOSE	N/A	N/A	0.00	13.26	ND		01/11/2022 06:57
EtFOSE	0.00	0.00	0.00	13.72	ND		01/11/2022 06:57
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/11/2022 06:57
PFTTrDA	0.00	0.19	0.00	11.07	ND		01/11/2022 06:57
PFDoS	0.00	0.23	0.00	12.08	ND		01/11/2022 06:57
PFTDA	0.00	0.14	0.00	11.70	ND		01/11/2022 06:57

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-2	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348007	Total Amount Extracted	264mL
Lab File ID	Q220110A_070	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 15:05	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	3.7	1.9	0.42	0.42	1	375-22-4		01/11/2022 07:15
PFPeA	1.6 J	1.9	0.42	0.42	1	2706-90-3		01/11/2022 07:15
HFPO-DA	ND	1.9	0.50	0.50	1	13252-13-6		01/11/2022 07:15
PFBS	2.1	1.7	0.45	0.45	1	375-73-5		01/11/2022 07:15
PFHxA	2.9	1.9	0.42	0.42	1	307-24-4		01/11/2022 07:15
4:2 FTS	ND	1.8	0.53	0.53	1	757124-72-4		01/11/2022 07:15
PFPeS	ND	1.8	0.45	0.45	1	2706-91-4		01/11/2022 07:15
PFHpA	2.8	1.9	0.52	0.52	1	375-85-9		01/11/2022 07:15
DONA	ND	1.8	0.49	0.49	1	919005-14-4		01/11/2022 07:15
PFHxS	3.6	1.7	0.48	0.48	1	355-46-4		01/11/2022 07:15
PFOA	11	1.9	0.55	0.55	1	335-67-1		01/11/2022 07:15
6:2 FTS	ND	1.8	0.61	0.61	1	27619-97-2		01/11/2022 07:15
PFHpS	1.5 J	1.8	0.39	0.39	1	375-92-8		01/11/2022 07:15
PFNA	ND	1.9	0.70	0.70	1	375-95-1		01/11/2022 07:15
PFOSAm	ND	1.9	0.78	0.78	1	754-91-6		01/11/2022 07:15
PFOS	3.0 I	1.8	0.52	0.52	1	1763-23-1		01/11/2022 07:15
MeFOSA	ND	1.9	0.48	0.48	1	31506-32-8		01/11/2022 07:15
PFDA	ND	1.9	0.53	0.53	1	335-76-2		01/11/2022 07:15
EtFOSAm	ND	1.9	0.58	0.58	1	4151-50-2		01/11/2022 07:15
8:2 FTS	ND	1.8	0.62	0.62	1	39108-34-4		01/11/2022 07:15
9-CI-PF3ON	ND	1.8	0.29	0.29	1	756426-58-1		01/11/2022 07:15
PFNS	ND	1.8	0.42	0.42	1	68259-12-1		01/11/2022 07:15
PFUnDA	ND	1.9	0.51	0.51	1	2058-94-8		01/11/2022 07:15
NMeFOSAA	ND	1.9	0.41	0.41	1	2355-31-9		01/11/2022 07:15
NEtFOSAA	ND	1.9	0.53	0.53	1	2991-50-6		01/11/2022 07:15
PFDS	ND	1.8	0.43	0.43	1	335-77-3		01/11/2022 07:15
PFDOA	ND	1.9	0.46	0.46	1	307-55-1		01/11/2022 07:15
MeFOSE	ND	1.9	0.31	0.31	1	24448-09-7		01/11/2022 07:15
EtFOSE	ND	1.9	0.47	0.47	1	1691-99-2		01/11/2022 07:15
11-CI-PF3OUdS	ND	1.8	0.41	0.41	1	763051-92-9		01/11/2022 07:15
PFTTrDA	ND	1.9	0.59	0.59	1	72629-94-8		01/11/2022 07:15
PFDoS	ND	1.8	0.44	0.44	1	79780-39-5		01/11/2022 07:15
PFTDA	ND	1.9	0.45	0.45	1	376-06-7		01/11/2022 07:15

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-2	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348007	Total Amount Extracted	264mL
Lab File ID	Q220110A_070	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 15:05	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	19	19	98	50-150		01/11/2022 07:15
13C4 PFOA	19	19	100	50-150		01/11/2022 07:15
13C2 PFDA	19	16	85	50-150		01/11/2022 07:15
13C4 PFOS	18	20	111	50-150		01/11/2022 07:15

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	19	19	98	25-150		01/11/2022 07:15
13C5 PFPeA	19	19	102	25-150		01/11/2022 07:15
13C3 PFBS	18	20	115	25-150		01/11/2022 07:15
13C2 4:2FTS	18	17	94	25-150		01/11/2022 07:15
13C5 PFHxA	19	18	93	25-150		01/11/2022 07:15
13C4 PFHpA	19	18	97	25-150		01/11/2022 07:15
13C3 PFHxS	18	18	103	25-150		01/11/2022 07:15
13C2 6:2FTS	18	20	111	25-150		01/11/2022 07:15
13C8 PFOA	19	19	99	25-150		01/11/2022 07:15
13C9 PFNA	19	18	96	25-150		01/11/2022 07:15
13C8 PFOS	18	18	97	25-150		01/11/2022 07:15
13C2 8:2FTS	18	16	90	25-150		01/11/2022 07:15
13C6 PFDA	19	18	97	25-150		01/11/2022 07:15
d3-MeFOSAA	19	17	90	25-150		01/11/2022 07:15
13C8 PFOSA	19	16	84	25-150		01/11/2022 07:15
d5-EtFOSAA	19	18	93	25-150		01/11/2022 07:15
13C7 PFUdA	19	18	94	25-150		01/11/2022 07:15
13C2 PFDoA	19	21	109	25-150		01/11/2022 07:15
13C2 PFTeDA	19	16	82	25-150		01/11/2022 07:15
13C3 HFPO-DA	19	21	113	25-150		01/11/2022 07:15
d7-N-MeFOSE	19	14	76	10-150		01/11/2022 07:15
d9-N-EtFOSE	19	13	70	10-150		01/11/2022 07:15
d3-N-MeFOSA	19	7.3	38	10-150		01/11/2022 07:15
d5-N-EtFOSA	19	7.4	39	10-150		01/11/2022 07:15

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-2	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348007	Total Amount Extracted	264mL
Lab File ID	Q220110A_070	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 15:05	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.48	11		01/11/2022 07:15
13C4 PFOA	N/A	N/A	7.76	7.76	12		01/11/2022 07:15
13C2 PFDA	N/A	N/A	9.08	9.07	69		01/11/2022 07:15
13C4 PFOS	N/A	N/A	9.54	9.55	10		01/11/2022 07:15

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.96	4.98	21		01/11/2022 07:15
13C5 PFPeA	N/A	N/A	5.82	5.81	15		01/11/2022 07:15
13C3 PFBS	N/A	N/A	6.73	6.74	10		01/11/2022 07:15
13C2 4:2FTS	N/A	N/A	6.22	6.21	10		01/11/2022 07:15
13C5 PFHxA	N/A	N/A	6.49	6.49	15		01/11/2022 07:15
13C4 PFHpA	N/A	N/A	7.13	7.14	68		01/11/2022 07:15
13C3 PFHxS	N/A	N/A	8.17	8.19	12		01/11/2022 07:15
13C2 6:2FTS	N/A	N/A	7.43	7.45	55		01/11/2022 07:15
13C8 PFOA	N/A	N/A	7.76	7.79	15		01/11/2022 07:15
13C9 PFNA	N/A	N/A	8.41	8.45	13		01/11/2022 07:15
13C8 PFOS	N/A	N/A	9.54	9.58	82		01/11/2022 07:15
13C2 8:2FTS	N/A	N/A	8.70	8.72	12		01/11/2022 07:15
13C6 PFDA	N/A	N/A	9.08	9.10	76		01/11/2022 07:15
d3-MeFOSAA	N/A	N/A	8.96	8.97	97		01/11/2022 07:15
13C8 PFOSA	N/A	N/A	11.45	11.41	10		01/11/2022 07:15
d5-EtFOSAA	N/A	N/A	9.26	9.27	78		01/11/2022 07:15
13C7 PFUdA	N/A	N/A	9.74	9.77	11		01/11/2022 07:15
13C2 PFDoA	N/A	N/A	10.40	10.43	75		01/11/2022 07:15
13C2 PFTeDA	N/A	N/A	11.68	11.73	65		01/11/2022 07:15
13C3 HFPO-DA	N/A	N/A	6.75	6.73	66		01/11/2022 07:15
d7-N-MeFOSE	N/A	N/A	13.25	13.21	99		01/11/2022 07:15
d9-N-EtFOSE	N/A	N/A	13.73	13.70	39		01/11/2022 07:15
d3-N-MeFOSA	N/A	N/A	13.45	13.41	44		01/11/2022 07:15
d5-N-EtFOSA	N/A	N/A	13.90	13.87	62		01/11/2022 07:15

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-2	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348007	Total Amount Extracted	264mL
Lab File ID	Q220110A_070	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 15:05	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.96	4.99	16		01/11/2022 07:15
PFPeA	N/A	N/A	5.83	5.82	14	J	01/11/2022 07:15
HFPO-DA	0.00	0.40	0.00	6.77	ND		01/11/2022 07:15
PFBS	0.27	0.34	6.74	6.75	82		01/11/2022 07:15
PFHxA	0.09	0.09	6.50	6.50	97		01/11/2022 07:15
4:2 FTS	0.00	0.91	0.00	6.22	ND		01/11/2022 07:15
PFPeS	0.35	0.42	7.47	7.49	ND		01/11/2022 07:15
PFHpA	0.44	0.42	7.14	7.15	11		01/11/2022 07:15
DONA	0.00	0.38	0.00	7.36	ND		01/11/2022 07:15
PFHxS	0.33	0.36	8.17	8.19	57		01/11/2022 07:15
PFOA	0.29	0.32	7.77	7.78	11		01/11/2022 07:15
6:2 FTS	0.92	1.30	7.43	7.43	ND		01/11/2022 07:15
PFHpS	0.42	0.39	8.87	8.89	20	J	01/11/2022 07:15
PFNA	0.66	0.23	8.25	8.42	ND		01/11/2022 07:15
PFOSAm	N/A	N/A	0.00	11.40	ND		01/11/2022 07:15
PFOS	0.04	0.21	9.14	9.56	81	I	01/11/2022 07:15
MeFOSA	0.00	0.45	0.00	13.44	ND		01/11/2022 07:15
PFDA	0.00	0.17	0.00	9.03	ND		01/11/2022 07:15
EtFOSAm	0.00	0.35	0.00	13.89	ND		01/11/2022 07:15
8:2 FTS	0.00	1.40	0.00	8.64	ND		01/11/2022 07:15
9-Cl-PF3ON	0.00	0.03	0.00	9.99	ND		01/11/2022 07:15
PFNS	0.00	0.22	0.00	10.22	ND		01/11/2022 07:15
PFUnDA	0.00	0.16	0.00	9.75	ND		01/11/2022 07:15
NMeFOSAA	0.00	0.77	0.00	8.97	ND		01/11/2022 07:15
NEtFOSAA	0.00	0.52	0.00	9.28	ND		01/11/2022 07:15
PFDS	0.00	0.26	0.00	10.87	ND		01/11/2022 07:15
PFDOA	0.00	0.17	0.00	10.41	ND		01/11/2022 07:15
MeFOSE	N/A	N/A	0.00	13.26	ND		01/11/2022 07:15
EtFOSE	0.00	0.00	0.00	13.72	ND		01/11/2022 07:15
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/11/2022 07:15
PFTTrDA	0.00	0.19	0.00	11.07	ND		01/11/2022 07:15
PFDoS	0.00	0.23	0.00	12.08	ND		01/11/2022 07:15
PFTDA	0.00	0.14	0.00	11.70	ND		01/11/2022 07:15

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348008	Total Amount Extracted	252mL
Lab File ID	Q220110A_071	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	6.4	2.0	0.44	0.44	1	375-22-4		01/11/2022 07:34
PFPeA	10	2.0	0.43	0.43	1	2706-90-3		01/11/2022 07:34
HFPO-DA	ND	2.0	0.52	0.52	1	13252-13-6		01/11/2022 07:34
PFBS	4.2	1.8	0.47	0.47	1	375-73-5		01/11/2022 07:34
PFHxA	7.9	2.0	0.43	0.43	1	307-24-4		01/11/2022 07:34
4:2 FTS	ND	1.9	0.55	0.55	1	757124-72-4		01/11/2022 07:34
PFPeS	ND	1.9	0.47	0.47	1	2706-91-4		01/11/2022 07:34
PFHpA	5.4	2.0	0.55	0.55	1	375-85-9		01/11/2022 07:34
DONA	ND	1.9	0.51	0.51	1	919005-14-4		01/11/2022 07:34
PFHxS	4.1	1.8	0.50	0.50	1	355-46-4		01/11/2022 07:34
PFOA	19	2.0	0.58	0.58	1	335-67-1		01/11/2022 07:34
6:2 FTS	2.6	1.9	0.64	0.64	1	27619-97-2		01/11/2022 07:34
PFHpS	2.6	1.9	0.41	0.41	1	375-92-8		01/11/2022 07:34
PFNA	0.86 J	2.0	0.73	0.73	1	375-95-1		01/11/2022 07:34
PFOSAm	ND	2.0	0.81	0.81	1	754-91-6		01/11/2022 07:34
PFOS	58	1.8	0.54	0.54	1	1763-23-1		01/11/2022 07:34
MeFOSA	ND	2.0	0.51	0.51	1	31506-32-8		01/11/2022 07:34
PFDA	ND	2.0	0.56	0.56	1	335-76-2		01/11/2022 07:34
EtFOSAm	ND	2.0	0.60	0.60	1	4151-50-2		01/11/2022 07:34
8:2 FTS	ND	1.9	0.65	0.65	1	39108-34-4		01/11/2022 07:34
9-CI-PF3ON	ND	1.8	0.30	0.30	1	756426-58-1		01/11/2022 07:34
PFNS	ND	1.9	0.44	0.44	1	68259-12-1		01/11/2022 07:34
PFUnDA	ND	2.0	0.54	0.54	1	2058-94-8		01/11/2022 07:34
NMeFOSAA	ND	2.0	0.43	0.43	1	2355-31-9		01/11/2022 07:34
NEtFOSAA	ND	2.0	0.55	0.55	1	2991-50-6		01/11/2022 07:34
PFDS	ND	1.9	0.45	0.45	1	335-77-3		01/11/2022 07:34
PFDOA	ND	2.0	0.48	0.48	1	307-55-1		01/11/2022 07:34
MeFOSE	ND	2.0	0.33	0.33	1	24448-09-7		01/11/2022 07:34
EtFOSE	ND	2.0	0.49	0.49	1	1691-99-2		01/11/2022 07:34
11-CI-PF3OUdS	ND	1.9	0.43	0.43	1	763051-92-9		01/11/2022 07:34
PFTTrDA	ND	2.0	0.62	0.62	1	72629-94-8		01/11/2022 07:34
PFDoS	ND	1.9	0.46	0.46	1	79780-39-5		01/11/2022 07:34
PFTDA	ND	2.0	0.47	0.47	1	376-06-7		01/11/2022 07:34

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348008	Total Amount Extracted	252mL
Lab File ID	Q220110A_071	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	17	84	50-150		01/11/2022 07:34
13C4 PFOA	20	19	98	50-150		01/11/2022 07:34
13C2 PFDA	20	18	91	50-150		01/11/2022 07:34
13C4 PFOS	19	20	103	50-150		01/11/2022 07:34

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	18	93	25-150		01/11/2022 07:34
13C5 PFPeA	20	19	96	25-150		01/11/2022 07:34
13C3 PFBS	18	19	103	25-150		01/11/2022 07:34
13C2 4:2FTS	19	17	90	25-150		01/11/2022 07:34
13C5 PFHxA	20	17	86	25-150		01/11/2022 07:34
13C4 PFHpA	20	18	91	25-150		01/11/2022 07:34
13C3 PFHxS	19	18	95	25-150		01/11/2022 07:34
13C2 6:2FTS	19	19	102	25-150		01/11/2022 07:34
13C8 PFOA	20	21	105	25-150		01/11/2022 07:34
13C9 PFNA	20	20	101	25-150		01/11/2022 07:34
13C8 PFOS	19	18	94	25-150		01/11/2022 07:34
13C2 8:2FTS	19	17	90	25-150		01/11/2022 07:34
13C6 PFDA	20	17	87	25-150		01/11/2022 07:34
d3-MeFOSAA	20	16	83	25-150		01/11/2022 07:34
13C8 PFOSA	20	15	77	25-150		01/11/2022 07:34
d5-EtFOSAA	20	18	91	25-150		01/11/2022 07:34
13C7 PFUdA	20	18	89	25-150		01/11/2022 07:34
13C2 PFDoA	20	19	96	25-150		01/11/2022 07:34
13C2 PFTeDA	20	17	87	25-150		01/11/2022 07:34
13C3 HFPO-DA	20	18	91	25-150		01/11/2022 07:34
d7-N-MeFOSE	20	14	73	10-150		01/11/2022 07:34
d9-N-EtFOSE	20	13	67	10-150		01/11/2022 07:34
d3-N-MeFOSA	20	7.5	38	10-150		01/11/2022 07:34
d5-N-EtFOSA	20	8.4	42	10-150		01/11/2022 07:34

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348008	Total Amount Extracted	252mL
Lab File ID	Q220110A_071	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.48	6.48	17		01/11/2022 07:34
13C4 PFOA	N/A	N/A	7.76	7.76	13		01/11/2022 07:34
13C2 PFDA	N/A	N/A	9.08	9.07	70		01/11/2022 07:34
13C4 PFOS	N/A	N/A	9.54	9.55	92		01/11/2022 07:34

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.96	4.98	21		01/11/2022 07:34
13C5 PFPeA	N/A	N/A	5.82	5.81	13		01/11/2022 07:34
13C3 PFBS	N/A	N/A	6.73	6.74	95		01/11/2022 07:34
13C2 4:2FTS	N/A	N/A	6.22	6.21	14		01/11/2022 07:34
13C5 PFHxA	N/A	N/A	6.48	6.49	15		01/11/2022 07:34
13C4 PFHpA	N/A	N/A	7.13	7.14	57		01/11/2022 07:34
13C3 PFHxS	N/A	N/A	8.17	8.19	11		01/11/2022 07:34
13C2 6:2FTS	N/A	N/A	7.43	7.45	54		01/11/2022 07:34
13C8 PFOA	N/A	N/A	7.76	7.79	13		01/11/2022 07:34
13C9 PFNA	N/A	N/A	8.41	8.45	12		01/11/2022 07:34
13C8 PFOS	N/A	N/A	9.54	9.58	78		01/11/2022 07:34
13C2 8:2FTS	N/A	N/A	8.70	8.72	10		01/11/2022 07:34
13C6 PFDA	N/A	N/A	9.08	9.10	10		01/11/2022 07:34
d3-MeFOSAA	N/A	N/A	8.96	8.97	84		01/11/2022 07:34
13C8 PFOSA	N/A	N/A	11.45	11.41	12		01/11/2022 07:34
d5-EtFOSAA	N/A	N/A	9.26	9.27	55		01/11/2022 07:34
13C7 PFUdA	N/A	N/A	9.75	9.77	12		01/11/2022 07:34
13C2 PFDoA	N/A	N/A	10.40	10.43	54		01/11/2022 07:34
13C2 PFTeDA	N/A	N/A	11.70	11.73	55		01/11/2022 07:34
13C3 HFPO-DA	N/A	N/A	6.74	6.73	11		01/11/2022 07:34
d7-N-MeFOSE	N/A	N/A	13.25	13.21	11		01/11/2022 07:34
d9-N-EtFOSE	N/A	N/A	13.73	13.70	38		01/11/2022 07:34
d3-N-MeFOSA	N/A	N/A	13.45	13.41	46		01/11/2022 07:34
d5-N-EtFOSA	N/A	N/A	13.90	13.87	66		01/11/2022 07:34

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-3	Extraction Date	01/07/2022 10:07
Lab Sample ID	40238348008	Total Amount Extracted	252mL
Lab File ID	Q220110A_071	Ical ID	220106A01
Matrix	Non_Potable_Water	CCal File	Q220110A_065
Collected	12/13/2021 14:00	Ending CCal File	Q220110A_074
Received	12/16/2021 11:25	Blank File	Q220110A_048

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.97	4.99	24		01/11/2022 07:34
PFPeA	N/A	N/A	5.83	5.82	33		01/11/2022 07:34
HFPO-DA	0.00	0.40	0.00	6.77	ND		01/11/2022 07:34
PFBS	0.32	0.34	6.74	6.75	78		01/11/2022 07:34
PFHxA	0.07	0.09	6.50	6.50	10		01/11/2022 07:34
4:2 FTS	0.00	0.91	0.00	6.22	ND		01/11/2022 07:34
PFPeS	0.48	0.42	7.48	7.49	ND		01/11/2022 07:34
PFHpA	0.44	0.42	7.14	7.15	20		01/11/2022 07:34
DONA	0.00	0.38	0.00	7.36	ND		01/11/2022 07:34
PFHxS	0.30	0.36	8.17	8.19	68		01/11/2022 07:34
PFOA	0.33	0.32	7.77	7.78	16		01/11/2022 07:34
6:2 FTS	1.30	1.30	7.44	7.43	32		01/11/2022 07:34
PFHpS	0.33	0.39	8.87	8.89	23		01/11/2022 07:34
PFNA	0.34	0.23	8.42	8.42	73	J	01/11/2022 07:34
PFOSAm	N/A	N/A	11.44	11.44	ND		01/11/2022 07:34
PFOS	0.17	0.21	9.55	9.56	41		01/11/2022 07:34
MeFOSA	0.00	0.45	0.00	13.44	ND		01/11/2022 07:34
PFDA	0.00	0.17	0.00	9.03	ND		01/11/2022 07:34
EtFOSAm	0.00	0.35	0.00	13.89	ND		01/11/2022 07:34
8:2 FTS	1.10	1.40	8.71	8.64	ND		01/11/2022 07:34
9-Cl-PF3ON	0.00	0.03	0.00	9.99	ND		01/11/2022 07:34
PFNS	0.00	0.22	0.00	10.22	ND		01/11/2022 07:34
PFUnDA	0.00	0.16	0.00	9.75	ND		01/11/2022 07:34
NMeFOSAA	0.00	0.77	0.00	8.97	ND		01/11/2022 07:34
NEtFOSAA	0.00	0.52	0.00	9.28	ND		01/11/2022 07:34
PFDS	0.00	0.26	0.00	10.87	ND		01/11/2022 07:34
PFDOA	0.00	0.17	0.00	10.41	ND		01/11/2022 07:34
MeFOSE	N/A	N/A	0.00	13.26	ND		01/11/2022 07:34
EtFOSE	0.00	0.00	0.00	13.72	ND		01/11/2022 07:34
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/11/2022 07:34
PFTTrDA	0.00	0.19	0.00	11.07	ND		01/11/2022 07:34
PFDoS	0.00	0.23	0.00	12.08	ND		01/11/2022 07:34
PFTDA	0.00	0.14	0.00	11.70	ND		01/11/2022 07:34

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-4	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348009	Total Amount Extracted	258mL
Lab File ID	Q220112A_035	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:55	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	9.0	1.9	0.43	0.43	1	375-22-4		01/12/2022 18:04
PFPeA	12	1.9	0.42	0.42	1	2706-90-3		01/12/2022 18:04
HFPO-DA	ND	1.9	0.51	0.51	1	13252-13-6		01/12/2022 18:04
PFBS	39	1.7	0.46	0.46	1	375-73-5		01/12/2022 18:04
PFHxA	16	1.9	0.42	0.42	1	307-24-4		01/12/2022 18:04
4:2 FTS	ND	1.8	0.54	0.54	1	757124-72-4		01/12/2022 18:04
PFPeS	1.1 J	1.8	0.46	0.46	1	2706-91-4		01/12/2022 18:04
PFHpA	14	1.9	0.53	0.53	1	375-85-9		01/12/2022 18:04
DONA	ND	1.8	0.50	0.50	1	919005-14-4		01/12/2022 18:04
PFHxS	46	1.8	0.49	0.49	1	355-46-4		01/12/2022 18:04
PFOA	30	1.9	0.57	0.57	1	335-67-1		01/12/2022 18:04
6:2 FTS	1.2 J	1.8	0.62	0.62	1	27619-97-2		01/12/2022 18:04
PFHpS	0.67 J	1.8	0.40	0.40	1	375-92-8		01/12/2022 18:04
PFNA	7.4	1.9	0.72	0.72	1	375-95-1		01/12/2022 18:04
PFOSAm	ND	1.9	0.79	0.79	1	754-91-6		01/12/2022 18:04
PFOS	6.8	1.8	0.53	0.53	1	1763-23-1		01/12/2022 18:04
MeFOSA	ND	1.9	0.50	0.50	1	31506-32-8		01/12/2022 18:04
PFDA	ND	1.9	0.55	0.55	1	335-76-2		01/12/2022 18:04
EtFOSAm	ND	1.9	0.59	0.59	1	4151-50-2		01/12/2022 18:04
8:2 FTS	ND	1.9	0.63	0.63	1	39108-34-4		01/12/2022 18:04
9-CI-PF3ON	ND	1.8	0.30	0.30	1	756426-58-1		01/12/2022 18:04
PFNS	ND	1.9	0.43	0.43	1	68259-12-1		01/12/2022 18:04
PFUnDA	ND	1.9	0.52	0.52	1	2058-94-8		01/12/2022 18:04
NMeFOSAA	ND	1.9	0.42	0.42	1	2355-31-9		01/12/2022 18:04
NEtFOSAA	ND	1.9	0.54	0.54	1	2991-50-6		01/12/2022 18:04
PFDS	ND	1.9	0.44	0.44	1	335-77-3		01/12/2022 18:04
PFDOA	ND	1.9	0.47	0.47	1	307-55-1		01/12/2022 18:04
MeFOSE	ND	1.9	0.32	0.32	1	24448-09-7		01/12/2022 18:04
EtFOSE	ND	1.9	0.48	0.48	1	1691-99-2		01/12/2022 18:04
11-CI-PF3OUdS	ND	1.8	0.42	0.42	1	763051-92-9		01/12/2022 18:04
PFTTrDA	ND	1.9	0.60	0.60	1	72629-94-8		01/12/2022 18:04
PFDoS	ND	1.9	0.45	0.45	1	79780-39-5		01/12/2022 18:04
PFTDA	ND	1.9	0.46	0.46	1	376-06-7		01/12/2022 18:04

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-4	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348009	Total Amount Extracted	258mL
Lab File ID	Q220112A_035	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:55	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	19	20	101	50-150		01/12/2022 18:04
13C4 PFOA	19	21	109	50-150		01/12/2022 18:04
13C2 PFDA	19	19	100	50-150		01/12/2022 18:04
13C4 PFOS	19	19	103	50-150		01/12/2022 18:04

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	19	19	99	25-150		01/12/2022 18:04
13C5 PFPeA	19	18	93	25-150		01/12/2022 18:04
13C3 PFBS	18	17	97	25-150		01/12/2022 18:04
13C2 4:2FTS	18	19	105	25-150		01/12/2022 18:04
13C5 PFHxA	19	18	91	25-150		01/12/2022 18:04
13C4 PFHpA	19	20	103	25-150		01/12/2022 18:04
13C3 PFHxS	18	17	93	25-150		01/12/2022 18:04
13C2 6:2FTS	18	22	120	25-150		01/12/2022 18:04
13C8 PFOA	19	21	109	25-150		01/12/2022 18:04
13C9 PFNA	19	20	101	25-150		01/12/2022 18:04
13C8 PFOS	19	19	102	25-150		01/12/2022 18:04
13C2 8:2FTS	19	20	109	25-150		01/12/2022 18:04
13C6 PFDA	19	19	100	25-150		01/12/2022 18:04
d3-MeFOSAA	19	16	82	25-150		01/12/2022 18:04
13C8 PFOSA	19	16	82	25-150		01/12/2022 18:04
d5-EtFOSAA	19	15	75	25-150		01/12/2022 18:04
13C7 PFUdA	19	17	86	25-150		01/12/2022 18:04
13C2 PFDoA	19	14	70	25-150		01/12/2022 18:04
13C2 PFTeDA	19	13	67	25-150		01/12/2022 18:04
13C3 HFPO-DA	19	18	93	25-150		01/12/2022 18:04
d7-N-MeFOSE	19	12	59	10-150		01/12/2022 18:04
d9-N-EtFOSE	19	11	59	10-150		01/12/2022 18:04
d3-N-MeFOSA	19	9.6	49	10-150		01/12/2022 18:04
d5-N-EtFOSA	19	9.6	50	10-150		01/12/2022 18:04

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-4	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348009	Total Amount Extracted	258mL
Lab File ID	Q220112A_035	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:55	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.51	6.48	11		01/12/2022 18:04
13C4 PFOA	N/A	N/A	7.78	7.77	13		01/12/2022 18:04
13C2 PFDA	N/A	N/A	9.08	9.07	73		01/12/2022 18:04
13C4 PFOS	N/A	N/A	9.55	9.55	95		01/12/2022 18:04

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.97	4.98	22		01/12/2022 18:04
13C5 PFPeA	N/A	N/A	5.83	5.81	12		01/12/2022 18:04
13C3 PFBS	N/A	N/A	6.76	6.74	49		01/12/2022 18:04
13C2 4:2FTS	N/A	N/A	6.24	6.21	12		01/12/2022 18:04
13C5 PFHxA	N/A	N/A	6.51	6.49	84		01/12/2022 18:04
13C4 PFHpA	N/A	N/A	7.15	7.14	12		01/12/2022 18:04
13C3 PFHxS	N/A	N/A	8.18	8.19	10		01/12/2022 18:04
13C2 6:2FTS	N/A	N/A	7.45	7.45	38		01/12/2022 18:04
13C8 PFOA	N/A	N/A	7.78	7.79	17		01/12/2022 18:04
13C9 PFNA	N/A	N/A	8.42	8.45	13		01/12/2022 18:04
13C8 PFOS	N/A	N/A	9.55	9.58	98		01/12/2022 18:04
13C2 8:2FTS	N/A	N/A	8.70	8.72	73		01/12/2022 18:04
13C6 PFDA	N/A	N/A	9.08	9.10	14		01/12/2022 18:04
d3-MeFOSAA	N/A	N/A	8.97	8.97	99		01/12/2022 18:04
13C8 PFOSA	N/A	N/A	11.48	11.41	13		01/12/2022 18:04
d5-EtFOSAA	N/A	N/A	9.27	9.27	65		01/12/2022 18:04
13C7 PFUdA	N/A	N/A	9.75	9.77	98		01/12/2022 18:04
13C2 PFDoA	N/A	N/A	10.43	10.43	54		01/12/2022 18:04
13C2 PFTeDA	N/A	N/A	11.73	11.73	70		01/12/2022 18:04
13C3 HFPO-DA	N/A	N/A	6.77	6.73	39		01/12/2022 18:04
d7-N-MeFOSE	N/A	N/A	13.30	13.27	13		01/12/2022 18:04
d9-N-EtFOSE	N/A	N/A	13.79	13.76	33		01/12/2022 18:04
d3-N-MeFOSA	N/A	N/A	13.51	13.48	43		01/12/2022 18:04
d5-N-EtFOSA	N/A	N/A	13.95	13.94	55		01/12/2022 18:04

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	MW-4	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348009	Total Amount Extracted	258mL
Lab File ID	Q220112A_035	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:55	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.98	4.99	26		01/12/2022 18:04
PFPeA	N/A	N/A	5.84	5.82	27		01/12/2022 18:04
HFPO-DA	0.00	0.43	0.00	6.77	ND		01/12/2022 18:04
PFBS	0.33	0.31	6.76	6.75	73		01/12/2022 18:04
PFHxA	0.08	0.09	6.52	6.50	13		01/12/2022 18:04
4:2 FTS	0.00	0.97	0.00	6.22	ND		01/12/2022 18:04
PFPeS	0.32	0.40	7.50	7.49	10	J	01/12/2022 18:04
PFHpA	0.43	0.44	7.16	7.15	14		01/12/2022 18:04
DONA	0.00	0.36	0.00	7.36	ND		01/12/2022 18:04
PFHxS	0.34	0.34	8.19	8.18	10		01/12/2022 18:04
PFOA	0.33	0.33	7.79	7.78	19		01/12/2022 18:04
6:2 FTS	1.30	1.40	7.45	7.43	46	J	01/12/2022 18:04
PFHpS	0.31	0.38	8.88	8.89	96	J	01/12/2022 18:04
PFNA	0.27	0.24	8.43	8.42	22		01/12/2022 18:04
PFOSAm	N/A	N/A	0.00	11.40	ND		01/12/2022 18:04
PFOS	0.11	0.21	9.30	9.56	15		01/12/2022 18:04
MeFOSA	0.00	0.44	0.00	13.44	ND		01/12/2022 18:04
PFDA	0.00	0.20	0.00	9.03	ND		01/12/2022 18:04
EtFOSAm	0.00	0.38	0.00	13.89	ND		01/12/2022 18:04
8:2 FTS	0.00	1.40	0.00	8.71	ND		01/12/2022 18:04
9-Cl-PF3ON	0.00	0.03	0.00	10.05	ND		01/12/2022 18:04
PFNS	0.00	0.23	0.00	10.22	ND		01/12/2022 18:04
PFUnDA	0.00	0.17	0.00	9.75	ND		01/12/2022 18:04
NMeFOSAA	0.00	0.75	0.00	8.97	ND		01/12/2022 18:04
NEtFOSAA	0.00	0.47	0.00	9.28	ND		01/12/2022 18:04
PFDS	0.00	0.26	0.00	10.87	ND		01/12/2022 18:04
PFDOA	0.00	0.18	0.00	10.41	ND		01/12/2022 18:04
MeFOSE	N/A	N/A	0.00	13.26	ND		01/12/2022 18:04
EtFOSE	0.00	0.00	0.00	13.72	ND		01/12/2022 18:04
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/12/2022 18:04
PFTTrDA	0.00	0.21	0.00	11.07	ND		01/12/2022 18:04
PFDoS	0.00	0.24	0.00	12.08	ND		01/12/2022 18:04
PFTDA	0.00	0.12	0.00	11.70	ND		01/12/2022 18:04

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	EQUIPMENT BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348010	Total Amount Extracted	258mL
Lab File ID	Q220112A_036	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:10	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	1.9	0.43	0.43	1	375-22-4		01/12/2022 18:22
PFPeA	ND	1.9	0.42	0.42	1	2706-90-3		01/12/2022 18:22
HFPO-DA	ND	1.9	0.51	0.51	1	13252-13-6		01/12/2022 18:22
PFBS	ND	1.7	0.46	0.46	1	375-73-5		01/12/2022 18:22
PFHxA	ND	1.9	0.42	0.42	1	307-24-4		01/12/2022 18:22
4:2 FTS	ND	1.8	0.54	0.54	1	757124-72-4		01/12/2022 18:22
PFPeS	ND	1.8	0.46	0.46	1	2706-91-4		01/12/2022 18:22
PFHpA	ND	1.9	0.53	0.53	1	375-85-9		01/12/2022 18:22
DONA	ND	1.8	0.50	0.50	1	919005-14-4		01/12/2022 18:22
PFHxS	ND	1.8	0.49	0.49	1	355-46-4		01/12/2022 18:22
PFOA	ND	1.9	0.57	0.57	1	335-67-1		01/12/2022 18:22
6:2 FTS	0.90 J	1.8	0.62	0.62	1	27619-97-2		01/12/2022 18:22
PFHpS	ND	1.8	0.40	0.40	1	375-92-8		01/12/2022 18:22
PFNA	ND	1.9	0.72	0.72	1	375-95-1		01/12/2022 18:22
PFOSAm	ND	1.9	0.79	0.79	1	754-91-6		01/12/2022 18:22
PFOS	ND	1.8	0.53	0.53	1	1763-23-1		01/12/2022 18:22
MeFOSA	ND	1.9	0.49	0.49	1	31506-32-8		01/12/2022 18:22
PFDA	ND	1.9	0.55	0.55	1	335-76-2		01/12/2022 18:22
EtFOSAm	ND	1.9	0.59	0.59	1	4151-50-2		01/12/2022 18:22
8:2 FTS	ND	1.9	0.63	0.63	1	39108-34-4		01/12/2022 18:22
9-CI-PF3ON	ND	1.8	0.30	0.30	1	756426-58-1		01/12/2022 18:22
PFNS	ND	1.9	0.43	0.43	1	68259-12-1		01/12/2022 18:22
PFUnDA	ND	1.9	0.52	0.52	1	2058-94-8		01/12/2022 18:22
NMeFOSAA	ND	1.9	0.42	0.42	1	2355-31-9		01/12/2022 18:22
NEtFOSAA	ND	1.9	0.54	0.54	1	2991-50-6		01/12/2022 18:22
PFDS	ND	1.9	0.44	0.44	1	335-77-3		01/12/2022 18:22
PFDOA	ND	1.9	0.47	0.47	1	307-55-1		01/12/2022 18:22
MeFOSE	ND	1.9	0.32	0.32	1	24448-09-7		01/12/2022 18:22
EtFOSE	ND	1.9	0.48	0.48	1	1691-99-2		01/12/2022 18:22
11-CI-PF3OUdS	ND	1.8	0.42	0.42	1	763051-92-9		01/12/2022 18:22
PFTTrDA	ND	1.9	0.60	0.60	1	72629-94-8		01/12/2022 18:22
PFDoS	ND	1.9	0.45	0.45	1	79780-39-5		01/12/2022 18:22
PFTDA	ND	1.9	0.46	0.46	1	376-06-7		01/12/2022 18:22

REPORT OF LABORATORY ANALYSIS

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	EQUIPMENT BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348010	Total Amount Extracted	258mL
Lab File ID	Q220112A_036	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:10	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	19	21	107	50-150		01/12/2022 18:22
13C4 PFOA	19	19	99	50-150		01/12/2022 18:22
13C2 PFDA	19	17	89	50-150		01/12/2022 18:22
13C4 PFOS	19	18	99	50-150		01/12/2022 18:22

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	19	19	99	25-150		01/12/2022 18:22
13C5 PFPeA	19	18	95	25-150		01/12/2022 18:22
13C3 PFBS	18	18	100	25-150		01/12/2022 18:22
13C2 4:2FTS	18	20	111	25-150		01/12/2022 18:22
13C5 PFHxA	19	18	95	25-150		01/12/2022 18:22
13C4 PFHpA	19	20	101	25-150		01/12/2022 18:22
13C3 PFHxS	18	18	97	25-150		01/12/2022 18:22
13C2 6:2FTS	18	21	113	25-150		01/12/2022 18:22
13C8 PFOA	19	20	101	25-150		01/12/2022 18:22
13C9 PFNA	19	19	99	25-150		01/12/2022 18:22
13C8 PFOS	19	18	96	25-150		01/12/2022 18:22
13C2 8:2FTS	19	16	86	25-150		01/12/2022 18:22
13C6 PFDA	19	18	94	25-150		01/12/2022 18:22
d3-MeFOSAA	19	11	56	25-150		01/12/2022 18:22
13C8 PFOSA	19	12	64	25-150		01/12/2022 18:22
d5-EtFOSAA	19	11	55	25-150		01/12/2022 18:22
13C7 PFUdA	19	14	73	25-150		01/12/2022 18:22
13C2 PFDoA	19	13	65	25-150		01/12/2022 18:22
13C2 PFTeDA	19	12	62	25-150		01/12/2022 18:22
13C3 HFPO-DA	19	20	103	25-150		01/12/2022 18:22
d7-N-MeFOSE	19	3.8	20	10-150		01/12/2022 18:22
d9-N-EtFOSE	19	3.2	16	10-150		01/12/2022 18:22
d3-N-MeFOSA	19	0.19	1	10-150	R	01/12/2022 18:22
d5-N-EtFOSA	19	0.20	1	10-150	R	01/12/2022 18:22

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	EQUIPMENT BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348010	Total Amount Extracted	258mL
Lab File ID	Q220112A_036	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:10	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.48	13		01/12/2022 18:22
13C4 PFOA	N/A	N/A	7.78	7.77	16		01/12/2022 18:22
13C2 PFDA	N/A	N/A	9.09	9.07	75		01/12/2022 18:22
13C4 PFOS	N/A	N/A	9.55	9.55	11		01/12/2022 18:22

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.96	4.98	21		01/12/2022 18:22
13C5 PFPeA	N/A	N/A	5.82	5.81	14		01/12/2022 18:22
13C3 PFBS	N/A	N/A	6.74	6.74	92		01/12/2022 18:22
13C2 4:2FTS	N/A	N/A	6.22	6.21	16		01/12/2022 18:22
13C5 PFHxA	N/A	N/A	6.50	6.49	12		01/12/2022 18:22
13C4 PFHpA	N/A	N/A	7.14	7.14	81		01/12/2022 18:22
13C3 PFHxS	N/A	N/A	8.18	8.19	16		01/12/2022 18:22
13C2 6:2FTS	N/A	N/A	7.45	7.45	76		01/12/2022 18:22
13C8 PFOA	N/A	N/A	7.78	7.79	18		01/12/2022 18:22
13C9 PFNA	N/A	N/A	8.43	8.45	11		01/12/2022 18:22
13C8 PFOS	N/A	N/A	9.56	9.58	10		01/12/2022 18:22
13C2 8:2FTS	N/A	N/A	8.71	8.72	21		01/12/2022 18:22
13C6 PFDA	N/A	N/A	9.09	9.10	13		01/12/2022 18:22
d3-MeFOSAA	N/A	N/A	8.97	8.97	10		01/12/2022 18:22
13C8 PFOSA	N/A	N/A	11.49	11.41	16		01/12/2022 18:22
d5-EtFOSAA	N/A	N/A	9.28	9.27	41		01/12/2022 18:22
13C7 PFUdA	N/A	N/A	9.76	9.77	11		01/12/2022 18:22
13C2 PFDoA	N/A	N/A	10.43	10.43	57		01/12/2022 18:22
13C2 PFTeDA	N/A	N/A	11.73	11.73	59		01/12/2022 18:22
13C3 HFPO-DA	N/A	N/A	6.76	6.73	21		01/12/2022 18:22
d7-N-MeFOSE	N/A	N/A	13.31	13.27	57		01/12/2022 18:22
d9-N-EtFOSE	N/A	N/A	13.80	13.76	20		01/12/2022 18:22
d3-N-MeFOSA	N/A	N/A	13.51	13.48	10	R	01/12/2022 18:22
d5-N-EtFOSA	N/A	N/A	13.97	13.94	94	R	01/12/2022 18:22

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	EQUIPMENT BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348010	Total Amount Extracted	258mL
Lab File ID	Q220112A_036	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 11:10	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.96	4.99	ND		01/12/2022 18:22
PFPeA	N/A	N/A	5.83	5.82	ND		01/12/2022 18:22
HFPO-DA	0.00	0.43	0.00	6.77	ND		01/12/2022 18:22
PFBS	0.40	0.31	6.75	6.75	ND		01/12/2022 18:22
PFHxA	0.00	0.09	0.00	6.50	ND		01/12/2022 18:22
4:2 FTS	0.00	0.97	0.00	6.22	ND		01/12/2022 18:22
PFPeS	0.00	0.40	0.00	7.49	ND		01/12/2022 18:22
PFHpA	0.00	0.44	0.00	7.15	ND		01/12/2022 18:22
DONA	0.00	0.36	0.00	7.36	ND		01/12/2022 18:22
PFHxS	0.00	0.34	0.00	8.18	ND		01/12/2022 18:22
PFOA	0.00	0.33	0.00	7.78	ND		01/12/2022 18:22
6:2 FTS	1.40	1.40	7.45	7.43	66	J	01/12/2022 18:22
PFHpS	0.00	0.38	0.00	8.89	ND		01/12/2022 18:22
PFNA	0.00	0.24	0.00	8.42	ND		01/12/2022 18:22
PFOSAm	N/A	N/A	11.49	11.40	ND		01/12/2022 18:22
PFOS	0.00	0.21	9.57	9.56	ND		01/12/2022 18:22
MeFOSA	0.00	0.44	0.00	13.44	ND		01/12/2022 18:22
PFDA	0.00	0.20	0.00	9.03	ND		01/12/2022 18:22
EtFOSAm	0.00	0.38	0.00	13.89	ND		01/12/2022 18:22
8:2 FTS	0.00	1.40	0.00	8.71	ND		01/12/2022 18:22
9-Cl-PF3ON	0.00	0.03	0.00	10.05	ND		01/12/2022 18:22
PFNS	0.00	0.23	0.00	10.22	ND		01/12/2022 18:22
PFUnDA	0.00	0.17	0.00	9.75	ND		01/12/2022 18:22
NMeFOSAA	0.00	0.75	0.00	8.97	ND		01/12/2022 18:22
NEtFOSAA	0.00	0.47	0.00	9.28	ND		01/12/2022 18:22
PFDS	0.00	0.26	0.00	10.87	ND		01/12/2022 18:22
PFDOA	0.00	0.18	0.00	10.41	ND		01/12/2022 18:22
MeFOSE	N/A	N/A	0.00	13.26	ND		01/12/2022 18:22
EtFOSE	0.00	0.00	0.00	13.72	ND		01/12/2022 18:22
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/12/2022 18:22
PFTTrDA	0.00	0.21	0.00	11.07	ND		01/12/2022 18:22
PFDoS	0.00	0.24	0.00	12.08	ND		01/12/2022 18:22
PFTDA	0.00	0.12	0.00	11.70	ND		01/12/2022 18:22

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	FIELD BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348011	Total Amount Extracted	231mL
Lab File ID	Q220112A_037	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 13:05	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.2	0.48	0.48	1	375-22-4		01/12/2022 18:41
PFPeA	ND	2.2	0.47	0.47	1	2706-90-3		01/12/2022 18:41
HFPO-DA	ND	2.2	0.57	0.57	1	13252-13-6		01/12/2022 18:41
PFBS	ND	1.9	0.51	0.51	1	375-73-5		01/12/2022 18:41
PFHxA	ND	2.2	0.47	0.47	1	307-24-4		01/12/2022 18:41
4:2 FTS	ND	2.0	0.60	0.60	1	757124-72-4		01/12/2022 18:41
PFPeS	ND	2.0	0.51	0.51	1	2706-91-4		01/12/2022 18:41
PFHpA	ND	2.2	0.60	0.60	1	375-85-9		01/12/2022 18:41
DONA	ND	2.0	0.56	0.56	1	919005-14-4		01/12/2022 18:41
PFHxS	ND	2.0	0.55	0.55	1	355-46-4		01/12/2022 18:41
PFOA	ND	2.2	0.63	0.63	1	335-67-1		01/12/2022 18:41
6:2 FTS	ND	2.1	0.70	0.70	1	27619-97-2		01/12/2022 18:41
PFHpS	ND	2.1	0.45	0.45	1	375-92-8		01/12/2022 18:41
PFNA	ND	2.2	0.80	0.80	1	375-95-1		01/12/2022 18:41
PFOSAm	ND	2.2	0.89	0.89	1	754-91-6		01/12/2022 18:41
PFOS	ND	2.0	0.59	0.59	1	1763-23-1		01/12/2022 18:41
MeFOSA	ND	2.2	0.55	0.55	1	31506-32-8		01/12/2022 18:41
PFDA	ND	2.2	0.61	0.61	1	335-76-2		01/12/2022 18:41
EtFOSAm	ND	2.2	0.66	0.66	1	4151-50-2		01/12/2022 18:41
8:2 FTS	ND	2.1	0.71	0.71	1	39108-34-4		01/12/2022 18:41
9-CI-PF3ON	ND	2.0	0.33	0.33	1	756426-58-1		01/12/2022 18:41
PFNS	ND	2.1	0.48	0.48	1	68259-12-1		01/12/2022 18:41
PFUnDA	ND	2.2	0.59	0.59	1	2058-94-8		01/12/2022 18:41
NMeFOSAA	ND	2.2	0.47	0.47	1	2355-31-9		01/12/2022 18:41
NEtFOSAA	ND	2.2	0.60	0.60	1	2991-50-6		01/12/2022 18:41
PFDS	ND	2.1	0.49	0.49	1	335-77-3		01/12/2022 18:41
PFDOA	ND	2.2	0.52	0.52	1	307-55-1		01/12/2022 18:41
MeFOSE	ND	2.2	0.36	0.36	1	24448-09-7		01/12/2022 18:41
EtFOSE	ND	2.2	0.54	0.54	1	1691-99-2		01/12/2022 18:41
11-CI-PF3OUdS	ND	2.0	0.47	0.47	1	763051-92-9		01/12/2022 18:41
PFTTrDA	ND	2.2	0.67	0.67	1	72629-94-8		01/12/2022 18:41
PFDoS	ND	2.1	0.50	0.50	1	79780-39-5		01/12/2022 18:41
PFTDA	ND	2.2	0.52	0.52	1	376-06-7		01/12/2022 18:41

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	FIELD BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348011	Total Amount Extracted	231mL
Lab File ID	Q220112A_037	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 13:05	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	22	22	101	50-150		01/12/2022 18:41
13C4 PFOA	22	23	104	50-150		01/12/2022 18:41
13C2 PFDA	22	23	106	50-150		01/12/2022 18:41
13C4 PFOS	21	22	106	50-150		01/12/2022 18:41

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	22	23	106	25-150		01/12/2022 18:41
13C5 PFPeA	22	22	100	25-150		01/12/2022 18:41
13C3 PFBS	20	20	99	25-150		01/12/2022 18:41
13C2 4:2FTS	20	23	113	25-150		01/12/2022 18:41
13C5 PFHxA	22	21	96	25-150		01/12/2022 18:41
13C4 PFHpA	22	24	111	25-150		01/12/2022 18:41
13C3 PFHxS	20	20	99	25-150		01/12/2022 18:41
13C2 6:2FTS	21	21	101	25-150		01/12/2022 18:41
13C8 PFOA	22	20	93	25-150		01/12/2022 18:41
13C9 PFNA	22	17	78	25-150		01/12/2022 18:41
13C8 PFOS	21	15	71	25-150		01/12/2022 18:41
13C2 8:2FTS	21	14	69	25-150		01/12/2022 18:41
13C6 PFDA	22	16	72	25-150		01/12/2022 18:41
d3-MeFOSAA	22	12	58	25-150		01/12/2022 18:41
13C8 PFOSA	22	15	69	25-150		01/12/2022 18:41
d5-EtFOSAA	22	13	61	25-150		01/12/2022 18:41
13C7 PFUdA	22	13	58	25-150		01/12/2022 18:41
13C2 PFDoA	22	14	66	25-150		01/12/2022 18:41
13C2 PFTeDA	22	14	62	25-150		01/12/2022 18:41
13C3 HFPO-DA	22	28	128	25-150		01/12/2022 18:41
d7-N-MeFOSE	22	15	69	10-150		01/12/2022 18:41
d9-N-EtFOSE	22	13	59	10-150		01/12/2022 18:41
d3-N-MeFOSA	22	9.2	42	10-150		01/12/2022 18:41
d5-N-EtFOSA	22	9.4	43	10-150		01/12/2022 18:41

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	FIELD BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348011	Total Amount Extracted	231mL
Lab File ID	Q220112A_037	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 13:05	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.48	6.48	12		01/12/2022 18:41
13C4 PFOA	N/A	N/A	7.78	7.77	14		01/12/2022 18:41
13C2 PFDA	N/A	N/A	9.09	9.07	80		01/12/2022 18:41
13C4 PFOS	N/A	N/A	9.56	9.55	14		01/12/2022 18:41

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.94	4.98	25		01/12/2022 18:41
13C5 PFPeA	N/A	N/A	5.80	5.81	15		01/12/2022 18:41
13C3 PFBS	N/A	N/A	6.73	6.74	12		01/12/2022 18:41
13C2 4:2FTS	N/A	N/A	6.21	6.21	22		01/12/2022 18:41
13C5 PFHxA	N/A	N/A	6.48	6.49	13		01/12/2022 18:41
13C4 PFHpA	N/A	N/A	7.13	7.14	14		01/12/2022 18:41
13C3 PFHxS	N/A	N/A	8.18	8.19	18		01/12/2022 18:41
13C2 6:2FTS	N/A	N/A	7.44	7.45	57		01/12/2022 18:41
13C8 PFOA	N/A	N/A	7.78	7.79	16		01/12/2022 18:41
13C9 PFNA	N/A	N/A	8.43	8.45	10		01/12/2022 18:41
13C8 PFOS	N/A	N/A	9.56	9.58	14		01/12/2022 18:41
13C2 8:2FTS	N/A	N/A	8.71	8.72	96		01/12/2022 18:41
13C6 PFDA	N/A	N/A	9.09	9.10	91		01/12/2022 18:41
d3-MeFOSAA	N/A	N/A	8.97	8.97	80		01/12/2022 18:41
13C8 PFOSA	N/A	N/A	11.48	11.41	13		01/12/2022 18:41
d5-EtFOSAA	N/A	N/A	9.28	9.27	50		01/12/2022 18:41
13C7 PFUdA	N/A	N/A	9.76	9.77	10		01/12/2022 18:41
13C2 PFDoA	N/A	N/A	10.42	10.43	62		01/12/2022 18:41
13C2 PFTeDA	N/A	N/A	11.71	11.73	67		01/12/2022 18:41
13C3 HFPO-DA	N/A	N/A	6.75	6.73	10		01/12/2022 18:41
d7-N-MeFOSE	N/A	N/A	13.28	13.27	11		01/12/2022 18:41
d9-N-EtFOSE	N/A	N/A	13.76	13.76	45		01/12/2022 18:41
d3-N-MeFOSA	N/A	N/A	13.48	13.48	49		01/12/2022 18:41
d5-N-EtFOSA	N/A	N/A	13.92	13.94	63		01/12/2022 18:41

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Sample Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	FIELD BLANK	Extraction Date	01/10/2022 10:41
Lab Sample ID	40238348011	Total Amount Extracted	231mL
Lab File ID	Q220112A_037	Ical ID	220111B01
Matrix	Non_Potable_Water	CCal File	Q220112A_027
Collected	12/13/2021 13:05	Ending CCal File	Q220112A_040
Received	12/16/2021 11:25	Blank File	Q220113A_010

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.95	4.99	ND		01/12/2022 18:41
PFPeA	N/A	N/A	5.81	5.82	ND		01/12/2022 18:41
HFPO-DA	0.00	0.43	0.00	6.77	ND		01/12/2022 18:41
PFBS	0.39	0.31	6.74	6.75	ND		01/12/2022 18:41
PFHxA	0.00	0.09	0.00	6.50	ND		01/12/2022 18:41
4:2 FTS	0.00	0.97	0.00	6.22	ND		01/12/2022 18:41
PFPeS	0.00	0.40	0.00	7.49	ND		01/12/2022 18:41
PFHpA	0.00	0.44	0.00	7.15	ND		01/12/2022 18:41
DONA	0.00	0.36	0.00	7.36	ND		01/12/2022 18:41
PFHxS	0.00	0.34	0.00	8.18	ND		01/12/2022 18:41
PFOA	0.00	0.33	0.00	7.78	ND		01/12/2022 18:41
6:2 FTS	1.60	1.40	7.44	7.43	ND		01/12/2022 18:41
PFHpS	0.00	0.38	0.00	8.89	ND		01/12/2022 18:41
PFNA	0.00	0.24	0.00	8.42	ND		01/12/2022 18:41
PFOSAm	N/A	N/A	11.49	11.40	ND		01/12/2022 18:41
PFOS	0.00	0.21	0.00	9.56	ND		01/12/2022 18:41
MeFOSA	0.00	0.44	0.00	13.44	ND		01/12/2022 18:41
PFDA	0.00	0.20	0.00	9.03	ND		01/12/2022 18:41
EtFOSAm	0.00	0.38	0.00	13.89	ND		01/12/2022 18:41
8:2 FTS	0.00	1.40	0.00	8.71	ND		01/12/2022 18:41
9-Cl-PF3ON	0.00	0.03	0.00	10.05	ND		01/12/2022 18:41
PFNS	0.00	0.23	0.00	10.22	ND		01/12/2022 18:41
PFUnDA	0.00	0.17	0.00	9.75	ND		01/12/2022 18:41
NMeFOSAA	0.00	0.75	0.00	8.97	ND		01/12/2022 18:41
NEtFOSAA	0.00	0.47	0.00	9.28	ND		01/12/2022 18:41
PFDS	0.00	0.26	0.00	10.87	ND		01/12/2022 18:41
PFDOA	0.00	0.18	0.00	10.41	ND		01/12/2022 18:41
MeFOSE	N/A	N/A	0.00	13.26	ND		01/12/2022 18:41
EtFOSE	0.00	0.00	0.00	13.72	ND		01/12/2022 18:41
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/12/2022 18:41
PFTTrDA	0.00	0.21	0.00	11.07	ND		01/12/2022 18:41
PFDoS	0.00	0.24	0.00	12.08	ND		01/12/2022 18:41
PFTDA	0.00	0.12	0.00	11.70	ND		01/12/2022 18:41

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKBJ	Extraction Date	01/07/2022 10:07
Lab Sample ID	BLANK-95476	Total Amount Extracted	255mL
Lab File ID	Q220110A_048	Ical ID	220106A01
Matrix	Water	CCal File	Q220110A_043
Collected	01/04/2022 12:57	Ending CCal File	Q220110A_054
Received	01/04/2022 12:57	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	2.0	0.43	0.43	1	375-22-4		01/11/2022 00:26
PFPeA	ND	2.0	0.43	0.43	1	2706-90-3		01/11/2022 00:26
HFPO-DA	ND	2.0	0.52	0.52	1	13252-13-6		01/11/2022 00:26
PFBS	ND	1.7	0.46	0.46	1	375-73-5		01/11/2022 00:26
PFHxA	ND	2.0	0.43	0.43	1	307-24-4		01/11/2022 00:26
4:2 FTS	ND	1.8	0.55	0.55	1	757124-72-4		01/11/2022 00:26
PFPeS	ND	1.8	0.46	0.46	1	2706-91-4		01/11/2022 00:26
PFHpA	ND	2.0	0.54	0.54	1	375-85-9		01/11/2022 00:26
DONA	ND	1.8	0.50	0.50	1	919005-14-4		01/11/2022 00:26
PFHxS	ND	1.8	0.50	0.50	1	355-46-4		01/11/2022 00:26
PFOA	ND	2.0	0.57	0.57	1	335-67-1		01/11/2022 00:26
6:2 FTS	ND	1.9	0.63	0.63	1	27619-97-2		01/11/2022 00:26
PFHpS	ND	1.9	0.40	0.40	1	375-92-8		01/11/2022 00:26
PFNA	ND	2.0	0.72	0.72	1	375-95-1		01/11/2022 00:26
PFOSAm	ND	2.0	0.80	0.80	1	754-91-6		01/11/2022 00:26
PFOS	ND	1.8	0.54	0.54	1	1763-23-1		01/11/2022 00:26
MeFOSA	ND	2.0	0.50	0.50	1	31506-32-8		01/11/2022 00:26
PFDA	ND	2.0	0.55	0.55	1	335-76-2		01/11/2022 00:26
EtFOSAm	ND	2.0	0.59	0.59	1	4151-50-2		01/11/2022 00:26
8:2 FTS	ND	1.9	0.64	0.64	1	39108-34-4		01/11/2022 00:26
9-CI-PF3ON	ND	1.8	0.30	0.30	1	756426-58-1		01/11/2022 00:26
PFNS	ND	1.9	0.44	0.44	1	68259-12-1		01/11/2022 00:26
PFUnDA	ND	2.0	0.53	0.53	1	2058-94-8		01/11/2022 00:26
NMeFOSAA	ND	2.0	0.42	0.42	1	2355-31-9		01/11/2022 00:26
NEtFOSAA	ND	2.0	0.54	0.54	1	2991-50-6		01/11/2022 00:26
PFDS	ND	1.9	0.44	0.44	1	335-77-3		01/11/2022 00:26
PFDOA	ND	2.0	0.47	0.47	1	307-55-1		01/11/2022 00:26
MeFOSE	ND	2.0	0.32	0.32	1	24448-09-7		01/11/2022 00:26
EtFOSE	ND	2.0	0.49	0.49	1	1691-99-2		01/11/2022 00:26
11-CI-PF3OUdS	ND	1.8	0.43	0.43	1	763051-92-9		01/11/2022 00:26
PFTTrDA	ND	2.0	0.61	0.61	1	72629-94-8		01/11/2022 00:26
PFDoS	ND	1.9	0.45	0.45	1	79780-39-5		01/11/2022 00:26
PFTDA	ND	2.0	0.47	0.47	1	376-06-7		01/11/2022 00:26

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKBJ	Extraction Date	01/07/2022 10:07
Lab Sample ID	BLANK-95476	Total Amount Extracted	255mL
Lab File ID	Q220110A_048	Ical ID	220106A01
Matrix	Water	CCal File	Q220110A_043
Collected	01/04/2022 12:57	Ending CCal File	Q220110A_054
Received	01/04/2022 12:57	Blank File	

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	20	18	94	50-150		01/11/2022 00:26
13C4 PFOA	20	21	105	50-150		01/11/2022 00:26
13C2 PFDA	20	21	105	50-150		01/11/2022 00:26
13C4 PFOS	19	20	105	50-150		01/11/2022 00:26

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	20	21	106	50-150		01/11/2022 00:26
13C5 PFPeA	20	21	106	50-150		01/11/2022 00:26
13C3 PFBS	18	19	102	50-150		01/11/2022 00:26
13C2 4:2FTS	18	18	98	50-150		01/11/2022 00:26
13C5 PFHxA	20	22	113	50-150		01/11/2022 00:26
13C4 PFHpA	20	20	102	50-150		01/11/2022 00:26
13C3 PFHxS	19	20	107	50-150		01/11/2022 00:26
13C2 6:2FTS	19	18	99	50-150		01/11/2022 00:26
13C8 PFOA	20	19	97	50-150		01/11/2022 00:26
13C9 PFNA	20	20	102	50-150		01/11/2022 00:26
13C8 PFOS	19	19	104	50-150		01/11/2022 00:26
13C2 8:2FTS	19	19	100	50-150		01/11/2022 00:26
13C6 PFDA	20	21	105	50-150		01/11/2022 00:26
d3-MeFOSAA	20	15	76	50-150		01/11/2022 00:26
13C8 PFOSA	20	17	85	50-150		01/11/2022 00:26
d5-EtFOSAA	20	14	73	50-150		01/11/2022 00:26
13C7 PFUdA	20	17	88	50-150		01/11/2022 00:26
13C2 PFDoA	20	19	95	50-150		01/11/2022 00:26
13C2 PFTeDA	20	17	85	50-150		01/11/2022 00:26
13C3 HFPO-DA	20	21	108	50-150		01/11/2022 00:26
d7-N-MeFOSE	20	15	79	20-150		01/11/2022 00:26
d9-N-EtFOSE	20	14	72	20-150		01/11/2022 00:26
d3-N-MeFOSA	20	12	61	20-150		01/11/2022 00:26
d5-N-EtFOSA	20	11	55	20-150		01/11/2022 00:26

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKBJ	Extraction Date	01/07/2022 10:07
Lab Sample ID	BLANK-95476	Total Amount Extracted	255mL
Lab File ID	Q220110A_048	Ical ID	220106A01
Matrix	Water	CCal File	Q220110A_043
Collected	01/04/2022 12:57	Ending CCal File	Q220110A_054
Received	01/04/2022 12:57	Blank File	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.49	6.48	14		01/11/2022 00:26
13C4 PFOA	N/A	N/A	7.77	7.76	15		01/11/2022 00:26
13C2 PFDA	N/A	N/A	9.08	9.07	61		01/11/2022 00:26
13C4 PFOS	N/A	N/A	9.55	9.55	12		01/11/2022 00:26

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.97	4.98	20		01/11/2022 00:26
13C5 PFPeA	N/A	N/A	5.83	5.81	18		01/11/2022 00:26
13C3 PFBS	N/A	N/A	6.74	6.74	13		01/11/2022 00:26
13C2 4:2FTS	N/A	N/A	6.22	6.21	15		01/11/2022 00:26
13C5 PFHxA	N/A	N/A	6.49	6.49	11		01/11/2022 00:26
13C4 PFHpA	N/A	N/A	7.14	7.14	99		01/11/2022 00:26
13C3 PFHxS	N/A	N/A	8.18	8.19	11		01/11/2022 00:26
13C2 6:2FTS	N/A	N/A	7.44	7.45	96		01/11/2022 00:26
13C8 PFOA	N/A	N/A	7.77	7.79	19		01/11/2022 00:26
13C9 PFNA	N/A	N/A	8.42	8.45	94		01/11/2022 00:26
13C8 PFOS	N/A	N/A	9.55	9.58	11		01/11/2022 00:26
13C2 8:2FTS	N/A	N/A	8.70	8.72	10		01/11/2022 00:26
13C6 PFDA	N/A	N/A	9.08	9.10	65		01/11/2022 00:26
d3-MeFOSAA	N/A	N/A	8.96	8.97	87		01/11/2022 00:26
13C8 PFOSA	N/A	N/A	11.47	11.41	14		01/11/2022 00:26
d5-EtFOSAA	N/A	N/A	9.26	9.27	38		01/11/2022 00:26
13C7 PFUdA	N/A	N/A	9.75	9.77	87		01/11/2022 00:26
13C2 PFDoA	N/A	N/A	10.41	10.43	75		01/11/2022 00:26
13C2 PFTeDA	N/A	N/A	11.70	11.73	67		01/11/2022 00:26
13C3 HFPO-DA	N/A	N/A	6.75	6.73	66		01/11/2022 00:26
d7-N-MeFOSE	N/A	N/A	13.26	13.21	12		01/11/2022 00:26
d9-N-EtFOSE	N/A	N/A	13.75	13.70	37		01/11/2022 00:26
d3-N-MeFOSA	N/A	N/A	13.47	13.41	38		01/11/2022 00:26
d5-N-EtFOSA	N/A	N/A	13.91	13.87	58		01/11/2022 00:26

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKBJ	Extraction Date	01/07/2022 10:07
Lab Sample ID	BLANK-95476	Total Amount Extracted	255mL
Lab File ID	Q220110A_048	Ical ID	220106A01
Matrix	Water	CCal File	Q220110A_043
Collected	01/04/2022 12:57	Ending CCal File	Q220110A_054
Received	01/04/2022 12:57	Blank File	

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.98	4.99	ND		01/11/2022 00:26
PFPeA	N/A	N/A	5.83	5.82	ND		01/11/2022 00:26
HFPO-DA	0.00	0.39	0.00	6.77	ND		01/11/2022 00:26
PFBS	0.39	0.30	6.75	6.75	ND		01/11/2022 00:26
PFHxA	0.00	0.09	0.00	6.50	ND		01/11/2022 00:26
4:2 FTS	0.00	1.00	0.00	6.22	ND		01/11/2022 00:26
PFPeS	0.00	0.37	7.58	7.49	ND		01/11/2022 00:26
PFHpA	0.00	0.43	0.00	7.15	ND		01/11/2022 00:26
DONA	0.00	0.39	0.00	7.36	ND		01/11/2022 00:26
PFHxS	0.00	0.31	0.00	8.19	ND		01/11/2022 00:26
PFOA	0.00	0.32	0.00	7.78	ND		01/11/2022 00:26
6:2 FTS	1.30	1.20	7.45	7.43	ND		01/11/2022 00:26
PFHpS	0.00	0.34	0.00	8.89	ND		01/11/2022 00:26
PFNA	0.00	0.25	0.00	8.42	ND		01/11/2022 00:26
PFOSAm	N/A	N/A	11.48	11.40	ND		01/11/2022 00:26
PFOS	0.00	0.22	9.57	9.56	ND		01/11/2022 00:26
MeFOSA	0.00	0.38	0.00	13.44	ND		01/11/2022 00:26
PFDA	0.00	0.21	0.00	9.03	ND		01/11/2022 00:26
EtFOSAm	0.00	0.38	0.00	13.89	ND		01/11/2022 00:26
8:2 FTS	0.00	1.70	0.00	8.64	ND		01/11/2022 00:26
9-Cl-PF3ON	0.00	0.02	0.00	9.99	ND		01/11/2022 00:26
PFNS	0.00	0.22	0.00	10.22	ND		01/11/2022 00:26
PFUnDA	0.00	0.14	0.00	9.75	ND		01/11/2022 00:26
NMeFOSAA	0.00	0.70	0.00	8.97	ND		01/11/2022 00:26
NEtFOSAA	0.00	0.68	0.00	9.28	ND		01/11/2022 00:26
PFDS	0.00	0.24	0.00	10.87	ND		01/11/2022 00:26
PFDOA	0.00	0.17	0.00	10.41	ND		01/11/2022 00:26
MeFOSE	N/A	N/A	0.00	13.26	ND		01/11/2022 00:26
EtFOSE	0.00	0.00	0.00	13.72	ND		01/11/2022 00:26
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/11/2022 00:26
PFTTrDA	0.00	0.19	0.00	11.07	ND		01/11/2022 00:26
PFDoS	0.00	0.23	0.00	12.08	ND		01/11/2022 00:26
PFTDA	0.00	0.15	0.00	11.70	ND		01/11/2022 00:26

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKCH	Extraction Date	01/10/2022 10:41
Lab Sample ID	BLANK-95550	Total Amount Extracted	263mL
Lab File ID	Q220113A_010	Ical ID	220111B01
Matrix	Water	CCal File	Q220113A_007
Collected	01/07/2022 13:32	Ending CCal File	Q220113A_011
Received	01/07/2022 13:32	Blank File	

Compound	Concentration (ng/L)	QL (ng/L)	RL (ng/L)	DL (ng/L)	Dil.	CAS No.	Qual.	Analyzed
PFBA	ND	1.9	0.42	0.42	1	375-22-4		01/13/2022 10:43
PFPeA	ND	1.9	0.42	0.42	1	2706-90-3		01/13/2022 10:43
HFPO-DA	ND	1.9	0.50	0.50	1	13252-13-6		01/13/2022 10:43
PFBS	ND	1.7	0.45	0.45	1	375-73-5		01/13/2022 10:43
PFHxA	ND	1.9	0.42	0.42	1	307-24-4		01/13/2022 10:43
4:2 FTS	ND	1.8	0.53	0.53	1	757124-72-4		01/13/2022 10:43
PFPeS	ND	1.8	0.45	0.45	1	2706-91-4		01/13/2022 10:43
PFHpA	ND	1.9	0.52	0.52	1	375-85-9		01/13/2022 10:43
DONA	ND	1.8	0.49	0.49	1	919005-14-4		01/13/2022 10:43
PFHxS	ND	1.7	0.48	0.48	1	355-46-4		01/13/2022 10:43
PFOA	ND	1.9	0.56	0.56	1	335-67-1		01/13/2022 10:43
6:2 FTS	ND	1.8	0.61	0.61	1	27619-97-2		01/13/2022 10:43
PFHpS	ND	1.8	0.39	0.39	1	375-92-8		01/13/2022 10:43
PFNA	ND	1.9	0.70	0.70	1	375-95-1		01/13/2022 10:43
PFOSAm	ND	1.9	0.78	0.78	1	754-91-6		01/13/2022 10:43
PFOS	ND	1.8	0.52	0.52	1	1763-23-1		01/13/2022 10:43
MeFOSA	ND	1.9	0.49	0.49	1	31506-32-8		01/13/2022 10:43
PFDA	ND	1.9	0.54	0.54	1	335-76-2		01/13/2022 10:43
EtFOSAm	ND	1.9	0.58	0.58	1	4151-50-2		01/13/2022 10:43
8:2 FTS	ND	1.8	0.62	0.62	1	39108-34-4		01/13/2022 10:43
9-CI-PF3ON	ND	1.8	0.29	0.29	1	756426-58-1		01/13/2022 10:43
PFNS	ND	1.8	0.42	0.42	1	68259-12-1		01/13/2022 10:43
PFUnDA	ND	1.9	0.51	0.51	1	2058-94-8		01/13/2022 10:43
NMeFOSAA	ND	1.9	0.41	0.41	1	2355-31-9		01/13/2022 10:43
NEtFOSAA	ND	1.9	0.53	0.53	1	2991-50-6		01/13/2022 10:43
PFDS	ND	1.8	0.43	0.43	1	335-77-3		01/13/2022 10:43
PFDOA	ND	1.9	0.46	0.46	1	307-55-1		01/13/2022 10:43
MeFOSE	ND	1.9	0.31	0.31	1	24448-09-7		01/13/2022 10:43
EtFOSE	ND	1.9	0.47	0.47	1	1691-99-2		01/13/2022 10:43
11-CI-PF3OUdS	ND	1.8	0.41	0.41	1	763051-92-9		01/13/2022 10:43
PFTTrDA	ND	1.9	0.59	0.59	1	72629-94-8		01/13/2022 10:43
PFDoS	ND	1.8	0.44	0.44	1	79780-39-5		01/13/2022 10:43
PFTDA	ND	1.9	0.45	0.45	1	376-06-7		01/13/2022 10:43

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKCH	Extraction Date	01/10/2022 10:41
Lab Sample ID	BLANK-95550	Total Amount Extracted	263mL
Lab File ID	Q220113A_010	Ical ID	220111B01
Matrix	Water	CCal File	Q220113A_007
Collected	01/07/2022 13:32	Ending CCal File	Q220113A_011
Received	01/07/2022 13:32	Blank File	

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C2 PFHxA	19	20	103	50-150		01/13/2022 10:43
13C4 PFOA	19	20	104	50-150		01/13/2022 10:43
13C2 PFDA	19	22	117	50-150		01/13/2022 10:43
13C4 PFOS	18	21	115	50-150		01/13/2022 10:43

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	Analyzed
13C4 PFBA	19	22	116	50-150		01/13/2022 10:43
13C5 PFPeA	19	23	119	50-150		01/13/2022 10:43
13C3 PFBS	18	18	105	50-150		01/13/2022 10:43
13C2 4:2FTS	18	21	119	50-150		01/13/2022 10:43
13C5 PFHxA	19	22	116	50-150		01/13/2022 10:43
13C4 PFHpA	19	23	121	50-150		01/13/2022 10:43
13C3 PFHxS	18	23	125	50-150		01/13/2022 10:43
13C2 6:2FTS	18	21	117	50-150		01/13/2022 10:43
13C8 PFOA	19	21	111	50-150		01/13/2022 10:43
13C9 PFNA	19	20	107	50-150		01/13/2022 10:43
13C8 PFOS	18	20	108	50-150		01/13/2022 10:43
13C2 8:2FTS	18	18	102	50-150		01/13/2022 10:43
13C6 PFDA	19	22	116	50-150		01/13/2022 10:43
d3-MeFOSAA	19	17	91	50-150		01/13/2022 10:43
13C8 PFOSA	19	10	53	50-150		01/13/2022 10:43
d5-EtFOSAA	19	16	85	50-150		01/13/2022 10:43
13C7 PFUdA	19	15	81	50-150		01/13/2022 10:43
13C2 PFDoA	19	17	89	50-150		01/13/2022 10:43
13C2 PFTeDA	19	17	91	50-150		01/13/2022 10:43
13C3 HFPO-DA	19	18	94	50-150		01/13/2022 10:43
d7-N-MeFOSE	19	3.7	20	20-150		01/13/2022 10:43
d9-N-EtFOSE	19	2.6	13	20-150	R	01/13/2022 10:43
d3-N-MeFOSA	19	0.11	1	20-150	R	01/13/2022 10:43
d5-N-EtFOSA	19	0.11	1	20-150	R	01/13/2022 10:43

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKCH	Extraction Date	01/10/2022 10:41
Lab Sample ID	BLANK-95550	Total Amount Extracted	263mL
Lab File ID	Q220113A_010	Ical ID	220111B01
Matrix	Water	CCal File	Q220113A_007
Collected	01/07/2022 13:32	Ending CCal File	Q220113A_011
Received	01/07/2022 13:32	Blank File	

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C2 PFHxA	N/A	N/A	6.50	6.48	16		01/13/2022 10:43
13C4 PFOA	N/A	N/A	7.77	7.76	10		01/13/2022 10:43
13C2 PFDA	N/A	N/A	9.08	9.07	57		01/13/2022 10:43
13C4 PFOS	N/A	N/A	9.55	9.55	94		01/13/2022 10:43

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
13C4 PFBA	N/A	N/A	4.98	4.98	21		01/13/2022 10:43
13C5 PFPeA	N/A	N/A	5.83	5.81	14		01/13/2022 10:43
13C3 PFBS	N/A	N/A	6.75	6.74	16		01/13/2022 10:43
13C2 4:2FTS	N/A	N/A	6.23	6.21	98		01/13/2022 10:43
13C5 PFHxA	N/A	N/A	6.50	6.49	20		01/13/2022 10:43
13C4 PFHpA	N/A	N/A	7.14	7.14	71		01/13/2022 10:43
13C3 PFHxS	N/A	N/A	8.18	8.19	14		01/13/2022 10:43
13C2 6:2FTS	N/A	N/A	7.44	7.45	87		01/13/2022 10:43
13C8 PFOA	N/A	N/A	7.77	7.79	21		01/13/2022 10:43
13C9 PFNA	N/A	N/A	8.42	8.45	10		01/13/2022 10:43
13C8 PFOS	N/A	N/A	9.55	9.58	13		01/13/2022 10:43
13C2 8:2FTS	N/A	N/A	8.70	8.72	13		01/13/2022 10:43
13C6 PFDA	N/A	N/A	9.08	9.10	97		01/13/2022 10:43
d3-MeFOSAA	N/A	N/A	8.96	8.97	47		01/13/2022 10:43
13C8 PFOSA	N/A	N/A	11.49	11.41	12		01/13/2022 10:43
d5-EtFOSAA	N/A	N/A	9.27	9.27	50		01/13/2022 10:43
13C7 PFUdA	N/A	N/A	9.75	9.77	14		01/13/2022 10:43
13C2 PFDaA	N/A	N/A	10.43	10.43	64		01/13/2022 10:43
13C2 PFTeDA	N/A	N/A	11.73	11.73	55		01/13/2022 10:43
13C3 HFPO-DA	N/A	N/A	6.76	6.73	51		01/13/2022 10:43
d7-N-MeFOSE	N/A	N/A	13.30	13.30	98		01/13/2022 10:43
d9-N-EtFOSE	N/A	N/A	13.79	13.70	24	R	01/13/2022 10:43
d3-N-MeFOSA	N/A	N/A	13.50	13.49	76	R	01/13/2022 10:43
d5-N-EtFOSA	N/A	N/A	13.94	13.87	52	R	01/13/2022 10:43

REPORT OF LABORATORY ANALYSIS

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Method Blank Analysis Summary
 PFAS by Isotope Dilution

Client Sample ID	BLKCH	Extraction Date	01/10/2022 10:41
Lab Sample ID	BLANK-95550	Total Amount Extracted	263mL
Lab File ID	Q220113A_010	Ical ID	220111B01
Matrix	Water	CCal File	Q220113A_007
Collected	01/07/2022 13:32	Ending CCal File	Q220113A_011
Received	01/07/2022 13:32	Blank File	

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Signal to Noise	Qualifiers	Analyzed
PFBA	N/A	N/A	4.98	4.99	ND		01/13/2022 10:43
PFPeA	N/A	N/A	0.00	5.82	ND		01/13/2022 10:43
HFPO-DA	0.00	0.54	0.00	6.77	ND		01/13/2022 10:43
PFBS	0.47	0.35	6.74	6.75	ND		01/13/2022 10:43
PFHxA	0.00	0.06	0.00	6.50	ND		01/13/2022 10:43
4:2 FTS	0.00	1.10	0.00	6.22	ND		01/13/2022 10:43
PFPeS	0.00	0.30	0.00	7.49	ND		01/13/2022 10:43
PFHpA	0.00	0.43	7.14	7.15	ND		01/13/2022 10:43
DONA	0.00	0.40	0.00	7.36	ND		01/13/2022 10:43
PFHxS	0.00	0.34	0.00	8.18	ND		01/13/2022 10:43
PFOA	0.00	0.30	0.00	7.78	ND		01/13/2022 10:43
6:2 FTS	0.80	1.30	7.45	7.43	ND		01/13/2022 10:43
PFHpS	0.00	0.41	0.00	8.89	ND		01/13/2022 10:43
PFNA	0.13	0.25	8.43	8.42	ND		01/13/2022 10:43
PFOSAm	N/A	N/A	11.50	11.40	ND		01/13/2022 10:43
PFOS	0.00	0.19	9.57	9.56	ND		01/13/2022 10:43
MeFOSA	0.00	0.33	0.00	13.44	ND		01/13/2022 10:43
PFDA	0.00	0.18	0.00	9.03	ND		01/13/2022 10:43
EtFOSAm	0.00	0.37	0.00	13.89	ND		01/13/2022 10:43
8:2 FTS	0.00	1.50	0.00	8.71	ND		01/13/2022 10:43
9-Cl-PF3ON	0.00	0.03	0.00	10.05	ND		01/13/2022 10:43
PFNS	0.00	0.22	0.00	10.22	ND		01/13/2022 10:43
PFUnDA	0.00	0.13	9.75	9.75	ND		01/13/2022 10:43
NMeFOSAA	0.00	0.79	0.00	8.97	ND		01/13/2022 10:43
NEtFOSAA	0.00	0.43	0.00	9.28	ND		01/13/2022 10:43
PFDS	0.00	0.26	0.00	10.87	ND		01/13/2022 10:43
PFDOA	0.00	0.16	0.00	10.41	ND		01/13/2022 10:43
MeFOSE	N/A	N/A	0.00	13.26	ND		01/13/2022 10:43
EtFOSE	0.00	0.00	0.00	13.72	ND		01/13/2022 10:43
11-Cl-PF3OUdS	0.00	0.02	0.00	11.34	ND		01/13/2022 10:43
PFTTrDA	0.00	0.17	0.00	11.07	ND		01/13/2022 10:43
PFDoS	0.00	0.22	0.00	12.08	ND		01/13/2022 10:43
PFTDA	0.00	0.12	0.00	11.70	ND		01/13/2022 10:43

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-95477	Instrument ID	10LCMS01
Run File Name	Q220111C_004	Column ID	118AB10133
Analyzed	01/11/2022 18:43	Ical ID	220111B01
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	112	50-150	
13C4_PFOA	19	21	112	50-150	
13C2_PFDA	19	22	119	50-150	
13C4_PFOS	18	19	107	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBFA	19	20	107	50-150	
13C5_PFPeA	19	20	108	50-150	
13C3_PFBFS	18	18	105	50-150	
13C2_4:2FTS	18	18	104	50-150	
13C5_PFHxA	19	20	104	50-150	
13C4_PFHpA	19	20	106	50-150	
13C3_PFHxS	18	19	108	50-150	
13C2_6:2FTS	18	18	101	50-150	
13C8_PFOA	19	18	97	50-150	
13C9_PFNA	19	19	102	50-150	
13C8_PFOS	18	19	103	50-150	
13C2_8:2FTS	18	19	104	50-150	
13C6_PFDA	19	20	108	50-150	
d3-MeFOSAA	19	16	86	50-150	
13C8_PFOA	19	19	100	50-150	
d5-EtFOSAA	19	18	96	50-150	
13C7_PFUdA	19	21	112	50-150	
13C2_PFDaA	19	18	95	50-150	
13C2_PFTeDA	19	16	86	50-150	
13C3_HFPO-DA	19	19	102	50-150	
d7-N-MeFOSE	19	17	88	20-150	
d9-N-EtFOSE	19	18	96	20-150	
d3-N-MeFOSA	19	16	86	20-150	
d5-N-EtFOSA	19	17	91	20-150	

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95477
 Run File Name Q220111C_004
 Analyzed 01/11/2022 18:43
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Native Analytes

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.8	4.6	122	50-150		375-22-4
PFPeA	3.8	4.6	121	50-150		2706-90-3
HFPO-DA	3.8	4.1	108	50-150		13252-13-6
PFBS	3.3	4.1	122	50-150		375-73-5
PFHxA	3.8	4.4	116	50-150		307-24-4
4:2 FTS	3.5	4.1	115	50-150		757124-72-4
PFPeS	3.6	4.0	114	50-150		2706-91-4
PFHpA	3.8	4.3	114	50-150		375-85-9
DONA	3.6	4.8	134	50-150		919005-14-4
PFHxS	3.4	4.2	123	50-150		355-46-4
PFOA	3.8	4.9	129	50-150		335-67-1
6:2 FTS	3.6	4.6	128	50-150		27619-97-2
PFHpS	3.6	4.3	119	50-150		375-92-8
PFNA	3.8	4.4	118	50-150		375-95-1
PFOSAm	3.8	4.1	108	50-150		754-91-6
PFOS	3.5	4.3	124	50-150		1763-23-1
MeFOSA	3.8	3.7	99	50-150		31506-32-8
PFDA	3.8	4.8	126	50-150		335-76-2
EtFOSAm	3.8	3.9	102	50-150		4151-50-2
8:2 FTS	3.6	3.5	97	50-150		39108-34-4
9-CI-PF3ON	3.5	3.9	110	50-150		756426-58-1
PFNS	3.6	4.0	110	50-150		68259-12-1
PFUnDA	3.8	3.8	100	50-150		2058-94-8
NMeFOSAA	3.8	4.6	121	50-150		2355-31-9
NEtFOSAA	3.8	4.6	122	50-150		2991-50-6
PFDS	3.6	4.1	112	50-150		335-77-3
PFDOA	3.8	3.9	104	50-150		307-55-1
MeFOSE	3.8	4.3	115	50-150		24448-09-7
EtFOSE	3.8	4.0	107	50-150		1691-99-2
11-CI-PF3OUdS	3.6	3.6	102	50-150		763051-92-9
PFTrDA	3.8	3.7	99	50-150		72629-94-8
PFDoS	3.7	3.9	107	50-150		79780-39-5
PFTDA	3.8	4.6	121	50-150		376-06-7

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95477
 Run File Name Q220111C_004
 Analyzed 01/11/2022 18:43
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.49	6.48	
13C4 PFOA	N/A	N/A	7.78	7.76	
13C2 PFDA	N/A	N/A	9.08	9.07	
13C4 PFOS	N/A	N/A	9.55	9.55	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.97	4.98	
13C5 PFPeA	N/A	N/A	5.83	5.81	
13C3 PFBS	N/A	N/A	6.74	6.74	
13C2 4:2FTS	N/A	N/A	6.22	6.21	
13C5 PFHxA	N/A	N/A	6.50	6.49	
13C4 PFHpA	N/A	N/A	7.14	7.14	
13C3 PFHxS	N/A	N/A	8.18	8.19	
13C2 6:2FTS	N/A	N/A	7.45	7.45	
13C8 PFOA	N/A	N/A	7.78	7.79	
13C9 PFNA	N/A	N/A	8.43	8.45	
13C8 PFOS	N/A	N/A	9.55	9.58	
13C2 8:2FTS	N/A	N/A	8.71	8.72	
13C6 PFDA	N/A	N/A	9.08	9.10	
d3-MeFOSAA	N/A	N/A	8.97	8.97	
13C8 PFOSA	N/A	N/A	11.47	11.41	
d5-EtFOSAA	N/A	N/A	9.27	9.27	
13C7 PFUdA	N/A	N/A	9.75	9.77	
13C2 PFDoA	N/A	N/A	10.41	10.43	
13C2 PFTeDA	N/A	N/A	11.71	11.73	
13C3 HFPO-DA	N/A	N/A	6.76	6.73	
d7-N-MeFOSE	N/A	N/A	13.27	13.28	
d9-N-EtFOSE	N/A	N/A	13.76	13.70	
d3-N-MeFOSA	N/A	N/A	13.48	13.41	
d5-N-EtFOSA	N/A	N/A	13.92	13.87	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95477
 Run File Name Q220111C_004
 Analyzed 01/11/2022 18:43
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.98	4.99	
PFPeA	N/A	N/A	5.84	5.83	
HFPO-DA	0.56	0.38	6.78	6.77	
PFBS	0.33	0.34	6.75	6.75	
PFHxA	0.08	0.09	6.50	6.50	
4:2 FTS	0.90	0.72	6.23	6.22	
PFPeS	0.42	0.43	7.49	7.49	
PFHpA	0.45	0.40	7.15	7.15	
DONA	0.34	0.41	7.38	7.36	
PFHxS	0.28	0.34	8.19	8.18	
PFOA	0.30	0.29	7.79	7.78	
6:2 FTS	1.20	1.40	7.45	7.43	
PFHpS	0.34	0.33	8.88	8.89	
PFNA	0.23	0.23	8.43	8.42	
PFOSAm	N/A	N/A	11.48	11.40	
PFOS	0.17	0.18	9.57	9.56	
MeFOSA	0.48	0.40	13.50	13.44	
PFDA	0.16	0.17	9.09	9.03	
EtFOSAm	0.35	0.40	13.94	13.89	
8:2 FTS	1.60	1.50	8.71	8.71	
9-CI-PF3ON	0.03	0.03	10.05	10.05	
PFNS	0.23	0.26	10.23	10.22	
PFUnDA	0.18	0.17	9.76	9.75	
NMeFOSAA	0.77	0.68	8.98	8.97	
NEtFOSAA	0.51	0.51	9.29	9.28	
PFDS	0.26	0.23	10.89	10.87	
PFDOA	0.20	0.15	10.42	10.41	
MeFOSE	N/A	N/A	13.32	13.26	
EtFOSE	0.00	0.00	13.80	13.72	
11-CI-PF3OUdS	0.02	0.01	11.35	11.34	
PFTrDA	0.20	0.15	11.08	11.07	
PFDoS	0.22	0.24	12.09	12.08	
PFTDA	0.11	0.15	11.71	11.70	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID	LCS-95551	Instrument ID	10LCMS01
Run File Name	Q220113C_004	Column ID	118AB10133
Analyzed	01/13/2022 16:05	Ical ID	220113B01
Injected By	NH	Level	L

Injection Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C2_PFHxA	19	19	102	50-150	
13C4_PFOA	19	18	95	50-150	
13C2_PFDA	19	23	123	50-150	
13C4_PFOS	18	19	108	50-150	

Extracted Internal Standards

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers
13C4_PFBA	19	24	128	50-150	
13C5_PFPeA	19	23	123	50-150	
13C3_PFBFS	17	21	119	50-150	
13C2_4:2FTS	17	20	115	50-150	
13C5_PFHxA	19	25	135	50-150	
13C4_PFHpA	19	27	142	50-150	
13C3_PFHxS	18	22	125	50-150	
13C2_6:2FTS	18	20	113	50-150	
13C8_PFOA	19	26	137	50-150	
13C9_PFNA	19	22	115	50-150	
13C8_PFOS	18	18	101	50-150	
13C2_8:2FTS	18	17	94	50-150	
13C6_PFDA	19	19	103	50-150	
d3-MeFOSAA	19	19	100	50-150	
13C8_PFOA	19	20	107	50-150	
d5-EtFOSAA	19	16	85	50-150	
13C7_PFUdA	19	17	90	50-150	
13C2_PFDaA	19	16	85	50-150	
13C2_PFTeDA	19	15	80	50-150	
13C3_HFPO-DA	19	25	132	50-150	
d7-N-MeFOSE	19	15	82	20-150	
d9-N-EtFOSE	19	15	78	20-150	
d3-N-MeFOSA	19	10	55	20-150	
d5-N-EtFOSA	19	9.3	50	20-150	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95551
 Run File Name Q220113C_004
 Analyzed 01/13/2022 16:05
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220113B01
 Level L

Native Analytes

Compound	Known Conc.	Conc. Found	%Recovery	Recovery Limits	Qualifiers	CAS No.
PFBA	3.7	4.6	124	50-150		375-22-4
PFPeA	3.7	4.5	120	50-150		2706-90-3
HFPO-DA	3.7	3.7	99	50-150	I	13252-13-6
PFBS	3.3	4.0	121	50-150		375-73-5
PFHxA	3.7	4.1	109	50-150		307-24-4
4:2 FTS	3.5	3.8	109	50-150		757124-72-4
PFPeS	3.5	3.9	111	50-150		2706-91-4
PFHpA	3.7	4.1	111	50-150		375-85-9
DONA	3.5	4.0	114	50-150		919005-14-4
PFHxS	3.4	3.9	116	50-150		355-46-4
PFOA	3.7	4.0	108	50-150		335-67-1
6:2 FTS	3.5	5.2	147	50-150		27619-97-2
PFHpS	3.5	4.7	131	50-150		375-92-8
PFNA	3.7	4.5	119	50-150		375-95-1
PFOSAm	3.7	4.2	113	50-150		754-91-6
PFOS	3.5	3.9	112	50-150		1763-23-1
MeFOSA	3.7	3.1	82	50-150		31506-32-8
PFDA	3.7	4.3	114	50-150		335-76-2
EtFOSAm	3.7	3.1	83	50-150		4151-50-2
8:2 FTS	3.6	3.6	102	50-150		39108-34-4
9-CI-PF3ON	3.5	3.2	93	50-150		756426-58-1
PFNS	3.6	3.4	94	50-150		68259-12-1
PFUnDA	3.7	3.4	90	50-150		2058-94-8
NMeFOSAA	3.7	4.1	111	50-150		2355-31-9
NEtFOSAA	3.7	3.3	89	50-150	I	2991-50-6
PFDS	3.6	2.8	76	50-150		335-77-3
PFDOA	3.7	3.7	98	50-150		307-55-1
MeFOSE	3.7	3.7	99	50-150		24448-09-7
EtFOSE	3.7	3.4	91	50-150		1691-99-2
11-CI-PF3OUdS	3.5	2.7	77	50-150		763051-92-9
PFTrDA	3.7	3.6	96	50-150		72629-94-8
PFDoS	3.6	2.7	74	50-150		79780-39-5
PFTDA	3.7	3.6	96	50-150		376-06-7

REPORT OF LABORATORY ANALYSIS

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95551
 Run File Name Q220113C_004
 Analyzed 01/13/2022 16:05
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220113B01
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.50	6.48	
13C4 PFOA	N/A	N/A	7.77	7.76	
13C2 PFDA	N/A	N/A	9.07	9.07	
13C4 PFOS	N/A	N/A	9.55	9.55	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.98	4.98	
13C5 PFPeA	N/A	N/A	5.83	5.81	
13C3 PFBS	N/A	N/A	6.75	6.74	
13C2 4:2FTS	N/A	N/A	6.23	6.21	
13C5 PFHxA	N/A	N/A	6.50	6.49	
13C4 PFHpA	N/A	N/A	7.14	7.14	
13C3 PFHxS	N/A	N/A	8.17	8.19	
13C2 6:2FTS	N/A	N/A	7.44	7.45	
13C8 PFOA	N/A	N/A	7.76	7.79	
13C9 PFNA	N/A	N/A	8.41	8.45	
13C8 PFOS	N/A	N/A	9.55	9.58	
13C2 8:2FTS	N/A	N/A	8.70	8.72	
13C6 PFDA	N/A	N/A	9.08	9.10	
d3-MeFOSAA	N/A	N/A	8.96	8.97	
13C8 PFOSA	N/A	N/A	11.49	11.41	
d5-EtFOSAA	N/A	N/A	9.26	9.27	
13C7 PFUdA	N/A	N/A	9.75	9.77	
13C2 PFDoA	N/A	N/A	10.43	10.43	
13C2 PFTeDA	N/A	N/A	11.73	11.73	
13C3 HFPO-DA	N/A	N/A	6.75	6.73	
d7-N-MeFOSE	N/A	N/A	13.30	13.21	
d9-N-EtFOSE	N/A	N/A	13.79	13.77	
d3-N-MeFOSA	N/A	N/A	13.50	13.49	
d5-N-EtFOSA	N/A	N/A	13.95	13.93	

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LCS Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCS-95551
 Run File Name Q220113C_004
 Analyzed 01/13/2022 16:05
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220113B01
 Level L

Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.99	4.99	
PFPeA	N/A	N/A	5.84	5.82	
HFPO-DA	0.58	0.38	6.77	6.77	I
PFBS	0.28	0.35	6.76	6.75	
PFHxA	0.08	0.08	6.51	6.50	
4:2 FTS	1.00	0.96	6.23	6.22	
PFPeS	0.44	0.37	7.48	7.49	
PFHpA	0.39	0.42	7.14	7.15	
DONA	0.38	0.40	7.37	7.36	
PFHxS	0.32	0.26	8.18	8.18	
PFOA	0.29	0.27	7.77	7.78	
6:2 FTS	1.20	1.30	7.44	7.43	
PFHpS	0.35	0.41	8.87	8.89	
PFNA	0.23	0.20	8.42	8.42	
PFOSAm	N/A	N/A	11.50	11.40	
PFOS	0.20	0.21	9.56	9.56	
MeFOSA	0.41	0.44	13.52	13.53	
PFDA	0.18	0.14	9.09	9.03	
EtFOSAm	0.34	0.34	13.98	13.96	
8:2 FTS	1.80	1.50	8.70	8.71	
9-CI-PF3ON	0.04	0.04	10.05	10.05	
PFNS	0.23	0.25	10.24	10.22	
PFUnDA	0.17	0.16	9.76	9.75	
NMeFOSAA	0.69	0.92	8.97	8.97	
NEtFOSAA	0.58	0.35	9.27	9.28	I
PFDS	0.25	0.24	10.91	10.87	
PFDOA	0.18	0.22	10.44	10.41	
MeFOSE	N/A	N/A	13.35	13.26	
EtFOSE	0.00	0.00	13.83	13.72	
11-CI-PF3OUdS	0.02	0.02	11.37	11.34	
PFTrDA	0.21	0.20	11.10	11.07	
PFDoS	0.22	0.20	12.13	12.08	
PFTDA	0.14	0.11	11.74	11.70	

REPORT OF LABORATORY ANALYSIS

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LCSD Analysis Summary
 PFAS by Isotope Dilution

Lab Sample ID LCSD-95478
 Run File Name Q220111C_005
 Analyzed 01/11/2022 19:02
 Injected By NH

Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Injection Internal Standards

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCSD Conc. Found	LCSD Rec. %	RPD %	Recovery Limits	Qualifiers
13C2_PFHxA	19	21	112	19	102	9.6	50-150	
13C4_PFOA	19	21	112	18	98	13.8	50-150	
13C2_PFDA	19	22	119	19	101	16.6	50-150	
13C4_PFOS	18	19	107	18	98	8.8	50-150	

Extracted Internal Standards

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCSD Conc. Found	LCSD Rec. %	RPD %	Recovery Limits	Qualifiers
13C4_PFBA	19	20	107	19	102	5.4	50-150	
13C5_PFPeA	19	20	108	19	103	4.5	50-150	
13C3_PFBs	17	18	105	18	105	0.5	50-150	
13C2_4:2FTS	18	18	104	18	103	1.3	50-150	
13C5_PFHxA	19	20	104	19	103	0.7	50-150	
13C4_PFHpA	19	20	106	18	93	13.2	50-150	
13C3_PFHxS	18	19	108	18	103	4.6	50-150	
13C2_6:2FTS	18	18	101	17	95	6.1	50-150	
13C8_PFOA	19	18	97	19	103	5.2	50-150	
13C9_PFNA	19	19	102	18	98	3.1	50-150	
13C8_PFOS	18	19	103	17	94	9.7	50-150	
13C2_8:2FTS	18	19	104	17	97	7.3	50-150	
13C6_PFDA	19	20	108	18	94	13.7	50-150	
d3-MeFOSAA	19	16	86	16	87	0.9	50-150	
13C8_PFOSA	19	19	100	18	95	5.4	50-150	
d5-EtFOSAA	19	18	96	18	95	1.4	50-150	
13C7_PFUdA	19	21	112	19	102	10.0	50-150	
13C2_PFDaA	19	18	95	16	87	9.3	50-150	
13C2_PFTeDA	19	16	86	15	82	3.7	50-150	
13C3_HFPO-DA	19	19	102	17	90	13.0	50-150	
d7-N-MeFOSE	19	17	88	16	83	5.3	20-150	
d9-N-EtFOSE	19	18	96	17	92	3.6	20-150	
d3-N-MeFOSA	19	16	86	14	76	11.9	20-150	
d5-N-EtFOSA	19	17	91	15	80	13.0	20-150	

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Instrument ID 10LCMS01
 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Native Analytes

Compound	Known Conc.	LCS Conc. Found	LCS Rec. %	LCSD Conc. Found	LCSD Rec. %	RPD %	Recovery Limits	Qualifiers
PFBA	3.8	4.6	122	4.5	120	1.4	50-150	
PFPeA	3.8	4.6	121	4.3	115	5.5	50-150	
HFPO-DA	3.8	4.1	108	4.1	110	1.6	50-150	
PFBS	3.3	4.1	122	3.9	118	3.7	50-150	
PFHxA	3.8	4.4	116	4.3	114	1.9	50-150	
4:2 FTS	3.5	4.1	115	3.6	104	10.1	50-150	
PFPeS	3.5	4.0	114	4.0	112	1.8	50-150	
PFHpA	3.8	4.3	114	4.4	116	1.8	50-150	
DONA	3.6	4.8	134	4.3	120	11.0	50-150	
PFHxS	3.4	4.2	123	3.8	110	11.1	50-150	
PFOA	3.8	4.9	129	3.9	104	21.6	50-150	
6:2 FTS	3.6	4.6	128	4.1	116	9.9	50-150	
PFHpS	3.6	4.3	119	4.7	131	9.2	50-150	
PFNA	3.8	4.4	118	4.3	113	3.8	50-150	
PFOSAm	3.8	4.1	108	4.2	111	3.2	50-150	
PFOS	3.5	4.3	124	4.2	121	3.1	50-150	
MeFOSA	3.8	3.7	99	4.2	112	12.7	50-150	
PFDA	3.8	4.8	126	4.2	112	12.0	50-150	
EtFOSAm	3.8	3.9	102	4.1	108	5.2	50-150	
8:2 FTS	3.6	3.5	97	3.3	92	5.2	50-150	
9-CI-PF3ON	3.5	3.9	110	3.8	108	1.7	50-150	
PFNS	3.6	4.0	110	4.5	126	13.1	50-150	
PFUnDA	3.8	3.8	100	4.3	114	13.6	50-150	
NMeFOSAA	3.8	4.6	121	4.1	109	9.9	50-150	
NEtFOSAA	3.8	4.6	122	4.2	111	9.2	50-150	
PFDS	3.6	4.1	112	4.2	117	4.2	50-150	
PFDOA	3.8	3.9	104	4.3	115	9.8	50-150	
MeFOSE	3.8	4.3	115	4.5	119	3.5	50-150	
EtFOSE	3.8	4.0	107	4.0	108	0.8	50-150	
11-CI-PF3OUdS	3.5	3.6	102	4.0	112	9.7	50-150	
PFTTrDA	3.8	3.7	99	4.1	110	11.2	50-150	
PFDoS	3.6	3.9	107	4.1	113	5.6	50-150	
PFTDA	3.8	4.6	121	4.5	121	0.4	50-150	

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 Column ID 118AB10133
 Ical ID 220111B01
 Level L

Injection Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C2 PFHxA	N/A	N/A	6.50	6.48	
13C4 PFOA	N/A	N/A	7.78	7.76	
13C2 PFDA	N/A	N/A	9.09	9.07	
13C4 PFOS	N/A	N/A	9.56	9.55	

Extracted Internal Standards

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
13C4 PFBA	N/A	N/A	4.98	4.98	
13C5 PFPeA	N/A	N/A	5.83	5.81	
13C3 PFBS	N/A	N/A	6.75	6.74	
13C2 4:2FTS	N/A	N/A	6.23	6.21	
13C5 PFHxA	N/A	N/A	6.50	6.49	
13C4 PFHpA	N/A	N/A	7.14	7.14	
13C3 PFHxS	N/A	N/A	8.19	8.19	
13C2 6:2FTS	N/A	N/A	7.45	7.45	
13C8 PFOA	N/A	N/A	7.78	7.79	
13C9 PFNA	N/A	N/A	8.43	8.45	
13C8 PFOS	N/A	N/A	9.56	9.58	
13C2 8:2FTS	N/A	N/A	8.71	8.72	
13C6 PFDA	N/A	N/A	9.09	9.10	
d3-MeFOSAA	N/A	N/A	8.98	8.97	
13C8 PFOSA	N/A	N/A	11.47	11.41	
d5-EtFOSAA	N/A	N/A	9.27	9.27	
13C7 PFUdA	N/A	N/A	9.76	9.77	
13C2 PFDoA	N/A	N/A	10.41	10.43	
13C2 PFTeDA	N/A	N/A	11.71	11.73	
13C3 HFPO-DA	N/A	N/A	6.76	6.73	
d7-N-MeFOSE	N/A	N/A	13.27	13.28	
d9-N-EtFOSE	N/A	N/A	13.75	13.70	
d3-N-MeFOSA	N/A	N/A	13.48	13.41	
d5-N-EtFOSA	N/A	N/A	13.92	13.87	

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Native Analytes

Compound	Ion Abund. Ratio	Reference Ratio	Retention Time	Reference Time	Qualifiers
PFBA	N/A	N/A	4.99	4.99	
PFPeA	N/A	N/A	5.84	5.83	
HFPO-DA	0.42	0.38	6.78	6.77	
PFBS	0.33	0.34	6.76	6.75	
PFHxA	0.07	0.09	6.51	6.50	
4:2 FTS	0.99	0.72	6.23	6.22	
PFPeS	0.42	0.43	7.49	7.49	
PFHpA	0.43	0.40	7.16	7.15	
DONA	0.35	0.41	7.38	7.36	
PFHxS	0.32	0.34	8.20	8.18	
PFOA	0.35	0.29	7.79	7.78	
6:2 FTS	1.20	1.40	7.45	7.43	
PFHpS	0.33	0.33	8.89	8.89	
PFNA	0.27	0.23	8.44	8.42	
PFOSAm	N/A	N/A	11.48	11.40	
PFOS	0.22	0.18	9.57	9.56	
MeFOSA	0.39	0.40	13.50	13.44	
PFDA	0.16	0.17	9.10	9.03	
EtFOSAm	0.33	0.40	13.94	13.89	
8:2 FTS	1.70	1.50	8.72	8.71	
9-CI-PF3ON	0.03	0.03	10.05	10.05	
PFNS	0.19	0.26	10.23	10.22	
PFUnDA	0.13	0.17	9.76	9.75	
NMeFOSAA	0.81	0.68	8.99	8.97	
NEtFOSAA	0.51	0.51	9.29	9.28	
PFDS	0.25	0.23	10.88	10.87	
PFDOA	0.19	0.15	10.42	10.41	
MeFOSE	N/A	N/A	13.32	13.26	
EtFOSE	0.00	0.00	13.80	13.72	
11-CI-PF3OUdS	0.02	0.01	11.34	11.34	
PFTrDA	0.20	0.15	11.08	11.07	
PFDoS	0.23	0.24	12.09	12.08	
PFTDA	0.15	0.15	11.71	11.70	

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