ATTACHMENT 7A

November 20, 2024

Mayor Dan O'Leary and City Council
City of Sunfish Lake
Sunfish Lake, MN 55077

Re: 2024 City of Sunfish Lake PFAS Study

Dear Mr. O'Leary:

WSB was contracted by the City of Sunfish Lake to provide information to the community on the concentration of Per- and Polyfluoroalkyl substances (PFAS). PFAS can be found in consumer industrial products dating back as far as 1940. This includes cleaning products, non-stick cookware and water-resistant fabrics. Due to the very slow breakdown of PFAS chemicals in the environment, they are often referred to as "forever chemicals." PFAS exposure has been linked to certain cancers, endocrine disruptions, and immune system suppression.

PFAS Sampling Methodologies

WSB completed PFAS sampling on August 8, 2024 in general accordance with the "2022 MPCA Guidance for Per- and Polyfluoroalkyl substances (PFAS): Sampling" and "Great Lakes Consortium for Fish Consumption Advisories- Best Practice for Perfluorooctane Sulfonate (PFOS) Guidelines".

Two water samples were collected as surface samples from each lake, one sample per half of lake. Water sample locations can be found in the **Figures** portion of this report. Fish were collected via electrofishing methods and edible portions of the fish were tested for PFAS. At Hornbeam Lake, two composite samples consisting of three bluegill sunfish each and one yellow perch were tested. At Sunfish Lake, two composite samples of three bluegill sunfish each and one largemouth bass were tested. At Horseshoe Lake, two composite samples of 3 black bullheads each and one largemouth bass were tested.

PFAS Sampling Results

The PFAS analytical testing results can be found in the **Figures**. The full Pace analytical reports are also attached.

Fish Sampling Results

- 96% percent of tested analytes were below the laboratory's method detection limit.
- Fish species, size structure, and Perfluorooctane sulfonic acid (PFOS) results can be found in **Table 1**.
- Level of PFOS in fish for safe meal frequency per The Great Lakes Consortium for Fish Consumption Advisories can be found in **Table 2**.

701 XENIA AVENUE S | SUITE 300 | MINNEAPOLIS, MN | 55416 | 763.541.4800 | WSBENG.COM

Table1

Lake	Hornbeam			Sunfish			Horseshoe		
Species	Bluegill Composite	Bluegill Composite	Yellow Perch	Bluegill Composite	Bluegill Composite	Largemouth Bass	Black Bullhead Composite	Black Bullhead Composite	Largemouth Bass
Length (inches)	4	4	11	5	5	15	5	4	8
PFOS (ug/kg)	3.2	3.5	4.3	3.6	3.4	8.0	0.3	1.0	3.5

Table 2

PFOS in Fish (ug/kg)	Meal Frequency
>10	Unrestricted
>10-20	2 meals/week
>20-50	1 meal/week
>50-200	1 meal/month
>200	DO NOT EAT

Water Sample Results

- 79% percent of tested analytes were below the laboratory's method detection limit.
- Currently there are no state-wide standards for PFAS for Minnesota waterbodies.
- Between the 3 lakes, Sunfish Lake had the highest concentration of PFOS, which was 1.0 ng/L. For reference, Minnesota Pollution Control Water sampling in 2018 at Bde Maka Ska had a mean PFOS water concentration of 12.0 ng/L and Lake Elmo had a mean water concentration of 44.3 ng/L in 2020.
- PFOS concentrations can be found in **Table 3**.

Table 3

Lake	Hornbeam 1	Hornbeam 2	Sunfish 1	Sunfish 2	Horseshoe 1	Horseshoe 2
PFOS (ng/L)	0.91 J	0.93 J	1.0 J	1.0	<0.18	<0.18

< - Analyte not detected greater than or equal to laboratory reporting limit
J – Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

Sincerely,
Dan O'Neill

Dan O'Neill

WSB

Figures:

- Sample Locations
- Results Spreadsheet
- Pace Reports

WSB						
Sample ID	Hornbeam 1	Hornbeam 2	Sunfish 1	Sunfish 2	Horseshoe 1	Horseshoe 2
Sample Date	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024
PFAS Compound						
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (**11Cl-PF3OUdS**)	<0.78	<0.78	<0.81	<0.78	<0.80	<0.79
4:2 Fluorotelomer sulfonic acid (**4:2 FTS**)	<0.49	<0.48	<0.50	<0.48	<0.50	<0.49
6:2-fluorotelomersulfonic acid (**6:2-FTS**)	<0.98	<0.98	<1.0	<0.98	<1.0	<0.99
8:2 fluorotelomer sulfonic acid (**8:2 FTS**)	<1.1	<1.1	<1.1	<1.0	<1.1	<1.1
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (**9Cl-PF3ONS**)	<0.83	<0.82	<0.85	<0.82	<0.85	<0.84
Hexafluoropropylene oxide dimer acid (**HFPO-DA**)	<0.78	<0.78	<0.81	<0.78	<0.80	<0.79
N-ethyl perfluorooctanesulfonamide **(NEtFOSA**)	<0.26	<0.26	<0.27	<0.26	<0.26	<0.26
N-ethyl perfluorooctanesulfonamidoacetic acid (**NEtFOSAA**)	<0.35	<0.35	<0.36	<0.35	<0.36	<0.35
N-ethyl perfluorooctanesulfonamidoethanol (**NEtFOSE**)	<3.2	<3.2	<3.3	<3.2	<3.3	<3.3
N-methyl perfluorooctanesulfonamide (**NMeFOSA**)	<0.27	<0.27	<0.28	<0.27	<0.27	<0.27
N-methyl perfluorooctanesulfonamidoacetic acid (**NMeFOSAA**)	<0.32	<0.32	<0.33	<0.32	<0.33	<0.32
Perfluorobutanoic acid (**PFBA**)	28.9	27.2	137.0	139.0	60.9	58.9
Perfluorobutanesulfonic acid (**PFBS**)	1.30	1.30	1.50	1.40	1.20	1.10
Perfluorodecanoic acid (**PFDA**)	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Perfluorodecanesulfonic acid (**PFDS**)	<0.27	<0.27	<0.27	<0.26	<0.27	<0.27
Perfluorododecanoic acid (**PFDoA**)	<0.22	<0.22	<0.23	<0.22	<0.23	<0.23
Perfluorododecanesulfonic acid (**PFDoS**)	<0.28	<0.28	<0.29	<0.28	<0.29	<0.28
Perfluoroheptanoic acid (**PFHpA**)	1.30	1.20	2.00	1.90	1.40	1.50
Perfluoroheptanesulfonic acid (**PFHpS**)	<0.24	<0.24	<0.25	<0.24	<0.25	<0.24
Perfluorohexanoic acid (**PFHxA**)	1.70	1.90	8.30	8.30	2.60	2.70
Perfluorohexanesulfonic acid (**PFHxS**)	0.47 J	0.45 J	1.10	1.10	0.36 J	0.30 J
Perfluorononanoic acid (**PFNA**)	0.42 J	0.38 J	0.61 J	0.58 J	0.31 J	0.34 J
Perfluorononanesulfonic acid (**PFNS**)	<0.24	<0.24	<0.25	<0.24	<0.25	<0.25
Perfluorooctanoic acid (**PFOA**)	2.60	2.60	7.00	6.90	2.90	2.70
Perfluorooctane sulfonic acid (**PFOS**)	0.91 J	0.93 J	1.0 J	1.0	<0.18	<0.18
Perfluoropentanoic acid (**PFPeA**)	2.60	2.40	9.30	9.80	5.00	4.50
Perfluoropentansulfonic acid **(PFPeS**)	<0.18	<0.18	<0.19	0.24 J	<0.19	<0.19
Perfluorotetradecanoic acid (**PFTeDA**)	<0.29	<0.29	<0.30	<0.28	<0.29	<0.29
Perfluorotridecanoic acid **(PFTrDA**)	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Perfluoroundecanoic acid (**PFUnA**)	<0.25	<0.25	<0.26	<0.25	<0.26	<0.26

*All units in ng/L

< - Analyte not detected greater than or equal to laboratory reporting limit

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

WSB									
Lake	Hornbeam Lake			Sunfish Lake			Horseshoe Lake		
Fish Specie	Bluegill Composite 1	Bluegill Composite 2	Yellow Perch	Bluegill Composite 1	Bluegill Composite 2	Largemouth Bass	Black Bullhead Composite 1	Black Bullhead Composite 1	Largemouth Bass
Sample Date	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024	8/21/2024
PFAS Compound									
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (**11Cl-PF3OUdS**)	<0.57	<0.56	<0.57	<0.58	<0.57	<0.57	<0.57	<0.58	<0.56
3-Perfluoropropyl Propanoic acid (**3:3 FTCA**)	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
4:2 Fluorotelomer sulfonic acid (**4:2 FTS**)	<0.30	<0.29	<0.29	<0.30	<0.30	<0.30	<0.30	<0.30	<0.29
5:3 Fluorotelomer carboxylic acid (**5:3 FTCA**)	<2.0	<1.9	<1.9	<2.0	<1.9	<1.9	<1.9	<2.0	<1.9
6:2-fluorotelomersulfonic acid (**6:2-FTS**)	<0.35	<0.34	<0.35	<0.36	<0.35	<0.35	<0.35	<0.36	<0.35
7:3 Fluorotelomer carboxylic acid (**7:3 FTCA**)	<2.6	<2.5	<2.5	<2.6	<2.6	<2.5	<2.5	<2.6	<2.5
8:2 fluorotelomer sulfonic acid (**8:2 FTS**)	<0.44	<0.42	<0.43	<0.44	<0.44	<0.44	<0.44	<0.44	<0.43
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate (**9Cl-PF3ONS**)	<0.42	<0.41	<0.41	<0.42	<0.42	<0.42	<0.42	<0.42	<0.41
4,8-dioxa-3H-perfluorononanoic acid (**ADONA**)	<0.38	<0.37	<0.37	<0.38	<0.38	<0.38	<0.38	<0.38	<0.37
Hexafluoropropylene oxide dimer acid (**HFPO-DA**)	<0.40	<0.39	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.39
N-ethyl perfluorooctanesulfonamidoacetic acid (**NEtFOSAA**)	<0.066	<0.064	<0.065	<0.066	<0.065	<0.065	<0.065	<0.066	<0.064
Nonafluoro-3,6-dioxaheptanoic acid (**NFDHA**)	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
N-methyl perfluorooctanesulfonamidoacetic acid (**NMeFOSAA**)	<0.18	<0.17	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17
Perfluorobutanoic acid (**PFBA**)	1.1 J	<0.60	<0.61	<0.63	<0.62	<0.62	<0.62	<0.62	<0.61
Perfluorobutanesulfonic acid (**PFBS**)	<0.057	<0.055	<0.056	<0.057	<0.057	<0.057	<0.057	<0.057	<0.056
Perfluorodecanoic acid (**PFDA**)	0.38 J	0.39 J	1.1	0.43 J	0.45 J	0.96	0.13 J	0.22 J	1.6
Perfluorodecanesulfonic acid (**PFDS**)	<0.11	<0.11	<0.11	<0.11	<0.11	0.12 J	<0.11	<0.11	0.11 J
Perfluorododecanoic acid (**PFDoA**)	0.15 J	0.22 J	0.22 J	0.099 J	0.19 J	0.25 J	<0.078	0.18 J	0.16 J
Perfluoro 2-ethoxyethane sulfonic acid (**PFEESA**)	<0.15	<0.14	<0.14	<0.15	<0.15	<0.14	<0.14	<0.15	<0.14
Perfluoroheptanoic acid (**PFHpA**)	<0.10	<0.098	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.099
Perfluoroheptanesulfonic acid (**PFHpS**)	<0.082	<0.079	<0.081	<0.082	<0.082	<0.081	<0.081	<0.082	<0.080
Perfluorohexanoic acid (**PFHxA**)	<0.061	<0.059	<0.061	<0.062	<0.061	<0.061	<0.061	<0.062	<0.060
Perfluorohexanesulfonic acid (**PFHxS**)	<0.11	<0.10	<0.10	<0.11	<0.11	<0.11	<0.11	<0.11	<0.10
Perfluoro-4-methoxybutanoic acid (**PFMBA**)	<0.16	<0.15	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Perfluoro-3-methoxypropanoic acid (**PFMPA**)	<0.16	<0.15	<0.15	<0.16	<0.16	<0.16	<0.16	<0.16	<0.15
Perfluorononanoic acid (**PFNA**)	<0.089	<0.086	<0.087	<0.089	<0.088	<0.088	<0.088	<0.089	0.56
Perfluorononanesulfonic acid (**PFNS**)	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
Perfluorooctanoic acid (**PFOA**)	<0.065	<0.063	<0.064	<0.065	<0.065	<0.065	<0.065	<0.065	<0.064
Perfluorooctanesulfonic acid (**PFOS**)	3.2	3.5	4.3	3.6	3.4	8.0	0.23 J	1.0	3.5
Perfluorooctanesulfonamide (**PFOSA**)	<0.071	<0.069	<0.070	<0.072	<0.071	<0.071	<0.071	<0.072	<0.070
Perfluoropentanoic Acid (**PFPeA**)	<0.18	<0.17	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.17
Perfluoropentane sulfonic acid (**PFPeS**)	<0.098	<0.095	<0.097	<0.099	<0.098	<0.098	<0.098	<0.099	<0.096
Perfluoro-n-tetradecanoic acid (**PFTeDA**)	<0.074	0.11 J	<0.073	<0.075	<0.074	0.080 J	<0.074	<0.075	<0.073
Perfluorotridecanoic acid (**PFTrDA**)	<0.13	<0.12	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
Perfluoroundecanoic acid (**PFUnA**)	0.34 J	0.30 J	0.76	0.37 J	0.53	0.85	0.14 J	0.20 J	0.92

*all units in ug/kg

< - Analyte not detected greater than or equal to laboratory reporting limit

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Document Path: M:\026096-000\GIS\Maps\026096-000 Sediment Sampling Map\Hornbeam Lake Date Saved: 11/21/2024

Sediment Sample Locations Hornbeam Lake

Sunfish Lake PFAS Study
City of Sunfish Lake

N

0 300 Feet

1 inch = 400 feet

wsb

Sediment Sample Locations Horseshoe Lake

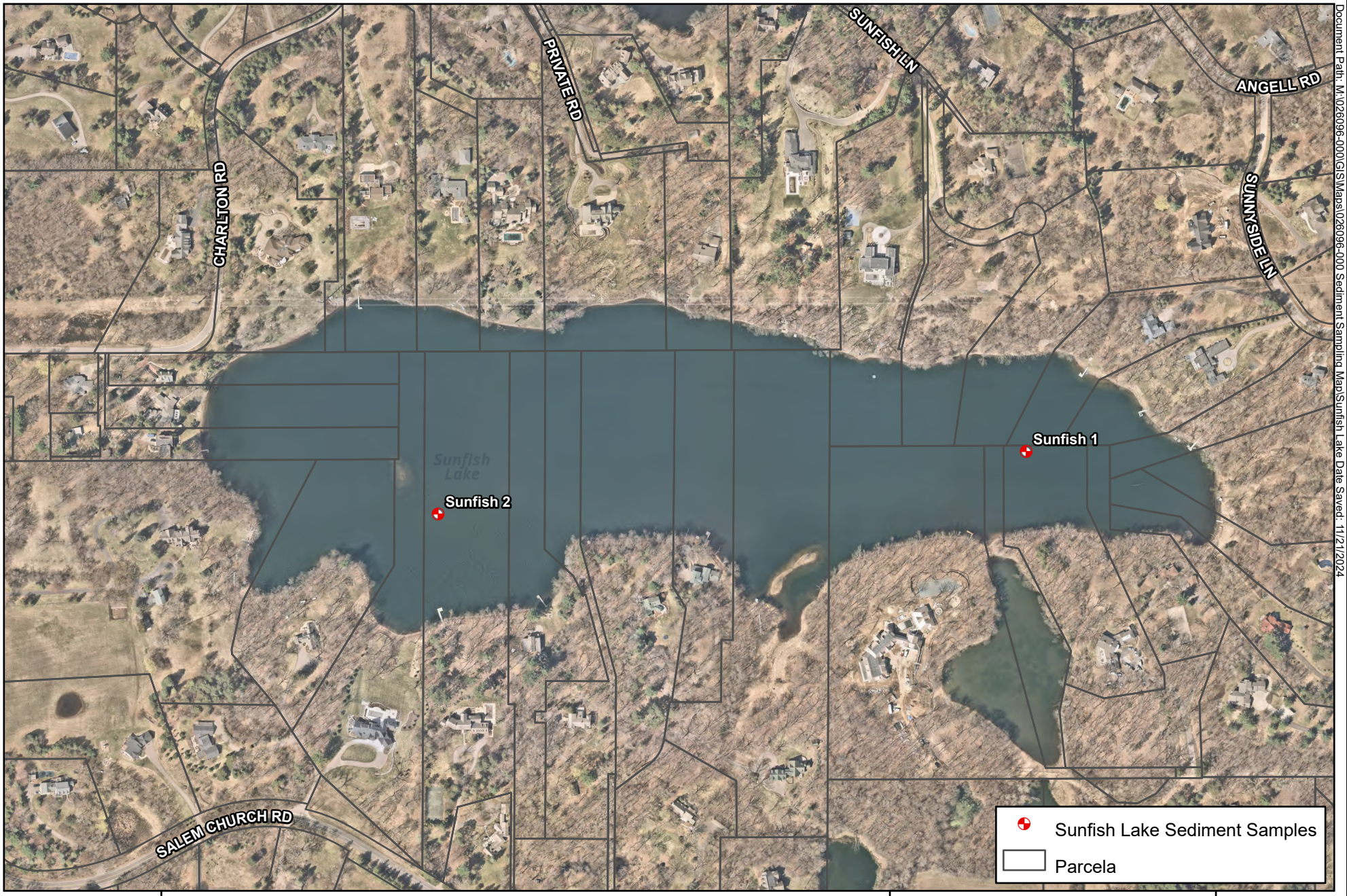
Sunfish Lake PFAS Study
City of Sunfish Lake

N

0 300 Feet

1 inch = 300 feet

wsb



Sediment Sample Locations Sunfish Lake

Sunfish Lake PFAS Study
City of Sunfish Lake

N

0 400 Feet

1 inch = 400 feet

wsb

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 22, 2024

Dan O'Neill
WSB & Associates
178 East 9th St
Suite 200
Saint Paul, MN 55101

RE: Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Dear Dan O'Neill:

Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2024. 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 - Minneapolis

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

Sincerely,

Annika Asp
annika.asp@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
GMP+ Certification #: GMP050884
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10705049001	**HB-2**	Water	08/21/24 11:08	08/21/24 16:15
10705049002	**HB-1**	Water	08/21/24 10:49	08/21/24 16:15
10705049003	**HS-2**	Water	08/21/24 09:49	08/21/24 16:15
10705049004	**SF-2**	Water	08/21/24 14:03	08/21/24 16:15
10705049005	**SF-1**	Water	08/21/24 13:56	08/21/24 16:15
10705049006	**HS-1**	Water	08/21/24 10:01	08/21/24 16:15

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10705049001	**HB-2**	EPA 1633 DRAFT	MJL	54	PASI-M
10705049002	**HB-1**	EPA 1633 DRAFT	MJL	54	PASI-M
10705049003	**HS-2**	EPA 1633 DRAFT	MJL	54	PASI-M
10705049004	**SF-2**	EPA 1633 DRAFT	MJL	54	PASI-M
10705049005	**SF-1**	EPA 1633 DRAFT	MJL	54	PASI-M
10705049006	**HS-1**	EPA 1633 DRAFT	MJL	54	PASI-M

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HB-2 **Lab ID: 10705049001** Collected: 08/21/24 11:08 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	763051-92-9	
4:2 FTS	**<0.48**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	757124-72-4	
6:2 FTS	**<0.98**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	27619-97-2	
8:2 FTS	**<1.1**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	39108-34-4	
9Cl-PF3ONS	**<0.82**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	756426-58-1	
HFPO-DA	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	13252-13-6	
NEtFOSAA	**<0.35**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	2991-50-6	
NEtFOSA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	4151-50-2	
NEtFOSE	**<3.2**	ng/L	10.0	1	09/10/24 06:15	09/11/24 22:59	1691-99-2	
NMeFOSAA	**<0.32**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	2355-31-9	
NMeFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	31506-32-8	
PFBS	**1.3**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	335-76-2	
PFHxA	**1.9**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	307-24-4	
PFBA	**27.2**	ng/L	4.0	1	09/10/24 06:15	09/11/24 22:59	375-22-4	
PFDS	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	335-77-3	
PFDoS	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	79780-39-5	
PFHpS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	375-92-8	
PFNS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	68259-12-1	
PFPeA	**2.4**	ng/L	2.0	1	09/10/24 06:15	09/11/24 22:59	2706-90-3	
PFPeS	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	2706-91-4	
PFDoA	**<0.22**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	307-55-1	
PFHpA	**1.2**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	375-85-9	
PFHxS	**0.45J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	355-46-4	
PFNA	**0.38J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	375-95-1	
PFOS	**0.93J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	1763-23-1	
PFOA	**2.6**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	335-67-1	
PFTeDA	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	72629-94-8	
PFUnA	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/11/24 22:59	2058-94-8	
Surrogates								
13C2-PFDoA (S)	75	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		
13C3HFPO-DA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C3-PFBS (S)	99	%.	40-135	1	09/10/24 06:15	09/11/24 22:59		
13C3-PFHxS (S)	101	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C4-PFBA (S)	16	%.	5-130	1	09/10/24 06:15	09/11/24 22:59		
13C4-PFHpA (S)	94	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C5-PFHxA (S)	95	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C5-PFPeA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C6-PFDA (S)	96	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C8-PFOA (S)	97	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C8-PFOS (S)	99	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C8-PFOSA (S)	90	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
13C9-PFNA (S)	95	%.	40-130	1	09/10/24 06:15	09/11/24 22:59		
d3-MeFOSAA (S)	88	%.	40-170	1	09/10/24 06:15	09/11/24 22:59		
d3-NMeFOSA (S)	88	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HB-2 **Lab ID: 10705049001** Collected: 08/21/24 11:08 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	94	%.	25-135	1	09/10/24 06:15	09/11/24 22:59		
d5-NEtFOSA (S)	87	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		
d7-NMeFOSE (S)	71	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		
d9-NEtFOSE (S)	73	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		
13C2-PFTA (S)	41	%.	10-130	1	09/10/24 06:15	09/11/24 22:59		
13C7-PFUdA (S)	90	%.	30-130	1	09/10/24 06:15	09/11/24 22:59		
13C24:2FTS (S)	153	%.	40-200	1	09/10/24 06:15	09/11/24 22:59		
13C26:2FTS (S)	135	%.	40-200	1	09/10/24 06:15	09/11/24 22:59		
13C28:2FTS (S)	109	%.	40-300	1	09/10/24 06:15	09/11/24 22:59		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HB-1 **Lab ID: 10705049002** Collected: 08/21/24 10:49 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	763051-92-9	
4:2 FTS	**<0.49**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	757124-72-4	
6:2 FTS	**<0.98**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	27619-97-2	
8:2 FTS	**<1.1**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	39108-34-4	
9Cl-PF3ONS	**<0.83**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	756426-58-1	
HFPO-DA	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	13252-13-6	
NEtFOSAA	**<0.35**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	2991-50-6	
NEtFOSA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	4151-50-2	
NEtFOSE	**<3.2**	ng/L	10.1	1	09/10/24 06:15	09/11/24 23:15	1691-99-2	
NMeFOSAA	**<0.32**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	2355-31-9	
NMeFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	31506-32-8	
PFBS	**1.3**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	335-76-2	
PFHxA	**1.7**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	307-24-4	
PFBA	**28.9**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:15	375-22-4	
PFDS	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	335-77-3	
PFDoS	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	79780-39-5	
PFHpS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	375-92-8	
PFNS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	68259-12-1	
PFPeA	**2.6**	ng/L	2.0	1	09/10/24 06:15	09/11/24 23:15	2706-90-3	
PFPeS	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	2706-91-4	
PFDoA	**<0.22**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	307-55-1	
PFHpA	**1.3**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	375-85-9	
PFHxS	**0.47J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	355-46-4	
PFNA	**0.42J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	375-95-1	
PFOS	**0.91J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	1763-23-1	
PFOA	**2.6**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	335-67-1	
PFTeDA	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	72629-94-8	
PFUnA	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:15	2058-94-8	
Surrogates								
13C2-PFDoA (S)	71	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		
13C3HFPO-DA (S)	90	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C3-PFBS (S)	93	%.	40-135	1	09/10/24 06:15	09/11/24 23:15		
13C3-PFHxS (S)	95	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C4-PFBA (S)	26	%.	5-130	1	09/10/24 06:15	09/11/24 23:15		
13C4-PFHpA (S)	93	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C5-PFHxA (S)	91	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C5-PFPeA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C6-PFDA (S)	91	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C8-PFOA (S)	91	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C8-PFOS (S)	93	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C8-PFOSA (S)	85	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
13C9-PFNA (S)	93	%.	40-130	1	09/10/24 06:15	09/11/24 23:15		
d3-MeFOSAA (S)	84	%.	40-170	1	09/10/24 06:15	09/11/24 23:15		
d3-NMeFOSA (S)	77	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HB-1 **Lab ID: 10705049002** Collected: 08/21/24 10:49 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	89	%.	25-135	1	09/10/24 06:15	09/11/24 23:15		
d5-NEtFOSA (S)	74	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		
d7-NMeFOSE (S)	66	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		
d9-NEtFOSE (S)	68	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		
13C2-PFTA (S)	39	%.	10-130	1	09/10/24 06:15	09/11/24 23:15		
13C7-PFUdA (S)	89	%.	30-130	1	09/10/24 06:15	09/11/24 23:15		
13C24:2FTS (S)	143	%.	40-200	1	09/10/24 06:15	09/11/24 23:15		
13C26:2FTS (S)	128	%.	40-200	1	09/10/24 06:15	09/11/24 23:15		
13C28:2FTS (S)	105	%.	40-300	1	09/10/24 06:15	09/11/24 23:15		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HS-2 **Lab ID: 10705049003** Collected: 08/21/24 09:49 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.79**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	763051-92-9	
4:2 FTS	**<0.49**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	757124-72-4	
6:2 FTS	**<0.99**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	27619-97-2	
8:2 FTS	**<1.1**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	39108-34-4	
9Cl-PF3ONS	**<0.84**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	756426-58-1	
HFPO-DA	**<0.79**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	13252-13-6	
NEtFOSAA	**<0.35**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	2991-50-6	
NEtFOSA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	4151-50-2	
NEtFOSE	**<3.3**	ng/L	10.2	1	09/10/24 06:15	09/11/24 23:31	1691-99-2	
NMeFOSAA	**<0.32**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	2355-31-9	
NMeFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	31506-32-8	
PFBS	**1.1**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	335-76-2	
PFHxA	**2.7**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	307-24-4	
PFBA	**58.9**	ng/L	4.1	1	09/10/24 06:15	09/11/24 23:31	375-22-4	
PFDS	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	335-77-3	
PFDoS	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	79780-39-5	
PFHpS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	375-92-8	
PFNS	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	68259-12-1	
PFPeA	**4.5**	ng/L	2.0	1	09/10/24 06:15	09/11/24 23:31	2706-90-3	
PFPeS	**<0.19**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	2706-91-4	
PFDoA	**<0.23**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	307-55-1	
PFHpA	**1.5**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	375-85-9	
PFHxS	**0.30J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	355-46-4	
PFNA	**0.34J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	375-95-1	
PFOS	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	1763-23-1	
PFOA	**2.7**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	335-67-1	
PFTeDA	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	72629-94-8	
PFUnA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:31	2058-94-8	
Surrogates								
13C2-PFDoA (S)	65	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		
13C3HFPO-DA (S)	89	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C3-PFBS (S)	99	%.	40-135	1	09/10/24 06:15	09/11/24 23:31		
13C3-PFHxS (S)	100	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C4-PFBA (S)	14	%.	5-130	1	09/10/24 06:15	09/11/24 23:31		
13C4-PFHpA (S)	90	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C5-PFHxA (S)	89	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C5-PFPeA (S)	86	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C6-PFDA (S)	91	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C8-PFOA (S)	96	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C8-PFOS (S)	98	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C8-PFOSA (S)	89	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
13C9-PFNA (S)	90	%.	40-130	1	09/10/24 06:15	09/11/24 23:31		
d3-MeFOSAA (S)	84	%.	40-170	1	09/10/24 06:15	09/11/24 23:31		
d3-NMeFOSA (S)	87	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HS-2 **Lab ID: 10705049003** Collected: 08/21/24 09:49 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	86	%.	25-135	1	09/10/24 06:15	09/11/24 23:31		
d5-NEtFOSA (S)	86	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		
d7-NMeFOSE (S)	67	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		
d9-NEtFOSE (S)	69	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		
13C2-PFTA (S)	44	%.	10-130	1	09/10/24 06:15	09/11/24 23:31		
13C7-PFUdA (S)	83	%.	30-130	1	09/10/24 06:15	09/11/24 23:31		
13C24:2FTS (S)	131	%.	40-200	1	09/10/24 06:15	09/11/24 23:31		
13C26:2FTS (S)	121	%.	40-200	1	09/10/24 06:15	09/11/24 23:31		
13C28:2FTS (S)	103	%.	40-300	1	09/10/24 06:15	09/11/24 23:31		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: SF-2 **Lab ID: 10705049004** Collected: 08/21/24 14:03 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	763051-92-9	
4:2 FTS	**<0.48**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	757124-72-4	
6:2 FTS	**<0.98**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	27619-97-2	
8:2 FTS	**<1.0**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	39108-34-4	
9Cl-PF3ONS	**<0.82**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	756426-58-1	
HFPO-DA	**<0.78**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	13252-13-6	
NEtFOSAA	**<0.35**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	2991-50-6	
NEtFOSA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	4151-50-2	
NEtFOSE	**<3.2**	ng/L	10	1	09/10/24 06:15	09/11/24 23:46	1691-99-2	
NMeFOSAA	**<0.32**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	2355-31-9	
NMeFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	31506-32-8	
PFBS	**1.4**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	335-76-2	
PFHxA	**8.3**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	307-24-4	
PFBA	**139**	ng/L	4.0	1	09/10/24 06:15	09/11/24 23:46	375-22-4	
PFDS	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	335-77-3	
PFDoS	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	79780-39-5	
PFHpS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	375-92-8	
PFNS	**<0.24**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	68259-12-1	
PFPeA	**9.8**	ng/L	2.0	1	09/10/24 06:15	09/11/24 23:46	2706-90-3	
PFPeS	**0.24J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	2706-91-4	
PFDoA	**<0.22**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	307-55-1	
PFHpA	**1.9**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	375-85-9	
PFHxS	**1.1**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	355-46-4	
PFNA	**0.58J**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	375-95-1	
PFOS	**1.0**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	1763-23-1	
PFOA	**6.9**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	335-67-1	
PFTeDA	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	72629-94-8	
PFUnA	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/11/24 23:46	2058-94-8	
Surrogates								
13C2-PFDoA (S)	66	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		
13C3HFPO-DA (S)	91	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C3-PFBS (S)	98	%.	40-135	1	09/10/24 06:15	09/11/24 23:46		
13C3-PFHxS (S)	97	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C4-PFBA (S)	54	%.	5-130	1	09/10/24 06:15	09/11/24 23:46		
13C4-PFHpA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C5-PFHxA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C5-PFPeA (S)	93	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C6-PFDA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C8-PFOA (S)	93	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C8-PFOS (S)	97	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C8-PFOSA (S)	88	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
13C9-PFNA (S)	92	%.	40-130	1	09/10/24 06:15	09/11/24 23:46		
d3-MeFOSAA (S)	85	%.	40-170	1	09/10/24 06:15	09/11/24 23:46		
d3-NMeFOSA (S)	75	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: SF-2 **Lab ID: 10705049004** Collected: 08/21/24 14:03 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	87	%.	25-135	1	09/10/24 06:15	09/11/24 23:46		
d5-NEtFOSA (S)	72	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		
d7-NMeFOSE (S)	64	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		
d9-NEtFOSE (S)	67	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		
13C2-PFTA (S)	38	%.	10-130	1	09/10/24 06:15	09/11/24 23:46		
13C7-PFUdA (S)	85	%.	30-130	1	09/10/24 06:15	09/11/24 23:46		
13C24:2FTS (S)	134	%.	40-200	1	09/10/24 06:15	09/11/24 23:46		
13C26:2FTS (S)	120	%.	40-200	1	09/10/24 06:15	09/11/24 23:46		
13C28:2FTS (S)	104	%.	40-300	1	09/10/24 06:15	09/11/24 23:46		

Pace Analytical Services, LLC
1700 Elm Street
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ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: SF-1 **Lab ID: 10705049005** Collected: 08/21/24 13:56 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.81**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	763051-92-9	
4:2 FTS	**<0.50**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	757124-72-4	
6:2 FTS	**<1.0**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	27619-97-2	
8:2 FTS	**<1.1**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	39108-34-4	
9Cl-PF3ONS	**<0.85**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	756426-58-1	
HFPO-DA	**<0.81**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	13252-13-6	
NEtFOSAA	**<0.36**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	2991-50-6	
NEtFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	4151-50-2	
NEtFOSE	**<3.3**	ng/L	10.4	1	09/10/24 06:15	09/12/24 00:02	1691-99-2	
NMeFOSAA	**<0.33**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	2355-31-9	
NMeFOSA	**<0.28**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	31506-32-8	
PFBS	**1.5**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	335-76-2	
PFHxA	**8.3**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	307-24-4	
PFBA	**137**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:02	375-22-4	
PFDS	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	335-77-3	
PFDoS	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	79780-39-5	
PFHpS	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	375-92-8	
PFNS	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	68259-12-1	
PFPeA	**9.3**	ng/L	2.1	1	09/10/24 06:15	09/12/24 00:02	2706-90-3	
PFPeS	**<0.19**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	2706-91-4	
PFDoA	**<0.23**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	307-55-1	
PFHpA	**2.0**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	375-85-9	
PFHxS	**1.1**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	355-46-4	
PFNA	**0.61J**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	375-95-1	
PFOS	**1.0J**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	1763-23-1	
PFOA	**7.0**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	335-67-1	
PFTeDA	**<0.30**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	72629-94-8	
PFUnA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:02	2058-94-8	
Surrogates								
13C2-PFDoA (S)	74	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		
13C3HFPO-DA (S)	92	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C3-PFBS (S)	97	%.	40-135	1	09/10/24 06:15	09/12/24 00:02		
13C3-PFHxS (S)	98	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C4-PFBA (S)	60	%.	5-130	1	09/10/24 06:15	09/12/24 00:02		
13C4-PFHpA (S)	93	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C5-PFHxA (S)	92	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C5-PFPeA (S)	94	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C6-PFDA (S)	89	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C8-PFOA (S)	91	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C8-PFOS (S)	95	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C8-PFOSA (S)	88	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
13C9-PFNA (S)	91	%.	40-130	1	09/10/24 06:15	09/12/24 00:02		
d3-MeFOSAA (S)	87	%.	40-170	1	09/10/24 06:15	09/12/24 00:02		
d3-NMeFOSA (S)	78	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: SF-1 **Lab ID: 10705049005** Collected: 08/21/24 13:56 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	92	%.	25-135	1	09/10/24 06:15	09/12/24 00:02		
d5-NEtFOSA (S)	74	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		
d7-NMeFOSE (S)	71	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		
d9-NEtFOSE (S)	74	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		
13C2-PFTA (S)	50	%.	10-130	1	09/10/24 06:15	09/12/24 00:02		
13C7-PFUdA (S)	84	%.	30-130	1	09/10/24 06:15	09/12/24 00:02		
13C24:2FTS (S)	135	%.	40-200	1	09/10/24 06:15	09/12/24 00:02		
13C26:2FTS (S)	120	%.	40-200	1	09/10/24 06:15	09/12/24 00:02		
13C28:2FTS (S)	105	%.	40-300	1	09/10/24 06:15	09/12/24 00:02		

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HS-1 **Lab ID: 10705049006** Collected: 08/21/24 10:01 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.80**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	763051-92-9	
4:2 FTS	**<0.50**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	757124-72-4	
6:2 FTS	**<1.0**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	27619-97-2	
8:2 FTS	**<1.1**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	39108-34-4	
9Cl-PF3ONS	**<0.85**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	756426-58-1	
HFPO-DA	**<0.80**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	13252-13-6	
NEtFOSAA	**<0.36**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	2991-50-6	
NEtFOSA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	4151-50-2	
NEtFOSE	**<3.3**	ng/L	10.3	1	09/10/24 06:15	09/12/24 00:17	1691-99-2	
NMeFOSAA	**<0.33**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	2355-31-9	
NMeFOSA	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	31506-32-8	
PFBS	**1.2**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	375-73-5	
PFDA	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	335-76-2	
PFHxA	**2.6**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	307-24-4	
PFBA	**60.9**	ng/L	4.1	1	09/10/24 06:15	09/12/24 00:17	375-22-4	
PFDS	**<0.27**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	335-77-3	
PFDoS	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	79780-39-5	
PFHpS	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	375-92-8	
PFNS	**<0.25**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	68259-12-1	
PFPeA	**5.0**	ng/L	2.1	1	09/10/24 06:15	09/12/24 00:17	2706-90-3	
PFPeS	**<0.19**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	2706-91-4	
PFDoA	**<0.23**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	307-55-1	
PFHpA	**1.4**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	375-85-9	
PFHxS	**0.36J**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	355-46-4	
PFNA	**0.31J**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	375-95-1	
PFOS	**<0.18**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	1763-23-1	
PFOA	**2.9**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	335-67-1	
PFTeDA	**<0.29**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	376-06-7	
PFTrDA	**<0.20**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	72629-94-8	
PFUnA	**<0.26**	ng/L	1.0	1	09/10/24 06:15	09/12/24 00:17	2058-94-8	
Surrogates								
13C2-PFDoA (S)	72	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		
13C3HFPO-DA (S)	89	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C3-PFBS (S)	94	%.	40-135	1	09/10/24 06:15	09/12/24 00:17		
13C3-PFHxS (S)	93	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C4-PFBA (S)	29	%.	5-130	1	09/10/24 06:15	09/12/24 00:17		
13C4-PFHpA (S)	88	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C5-PFHxA (S)	89	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C5-PFPeA (S)	89	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C6-PFDA (S)	87	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C8-PFOA (S)	86	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C8-PFOS (S)	91	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C8-PFOSA (S)	83	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
13C9-PFNA (S)	89	%.	40-130	1	09/10/24 06:15	09/12/24 00:17		
d3-MeFOSAA (S)	81	%.	40-170	1	09/10/24 06:15	09/12/24 00:17		
d3-NMeFOSA (S)	77	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Sample: HS-1 **Lab ID: 10705049006** Collected: 08/21/24 10:01 Received: 08/21/24 16:15 Matrix: Water

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Water	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
d5-EtFOSAA (S)	85	%.	25-135	1	09/10/24 06:15	09/12/24 00:17		
d5-NEtFOSA (S)	76	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		
d7-NMeFOSE (S)	71	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		
d9-NEtFOSE (S)	72	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		
13C2-PFTA (S)	51	%.	10-130	1	09/10/24 06:15	09/12/24 00:17		
13C7-PFUdA (S)	84	%.	30-130	1	09/10/24 06:15	09/12/24 00:17		
13C24:2FTS (S)	125	%.	40-200	1	09/10/24 06:15	09/12/24 00:17		
13C26:2FTS (S)	113	%.	40-200	1	09/10/24 06:15	09/12/24 00:17		
13C28:2FTS (S)	95	%.	40-300	1	09/10/24 06:15	09/12/24 00:17		

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QUALITY CONTROL DATA

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

QC Batch: 966675
QC Batch Method: EPA 1633 DRAFT
Analysis Method: EPA 1633 DRAFT
Analysis Description: 1633 W
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10705049001, 10705049002, 10705049003, 10705049004, 10705049005, 10705049006

METHOD BLANK: 5051546 Matrix: Water
Associated Lab Samples: 10705049001, 10705049002, 10705049003, 10705049004, 10705049005, 10705049006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ng/L	<0.76	3.9	09/11/24 21:25	
4:2 FTS	ng/L	<0.47	3.9	09/11/24 21:25	
6:2 FTS	ng/L	<0.96	3.9	09/11/24 21:25	
8:2 FTS	ng/L	<1.0	3.9	09/11/24 21:25	
9Cl-PF3ONS	ng/L	<0.81	3.9	09/11/24 21:25	
HFPO-DA	ng/L	<0.76	3.9	09/11/24 21:25	
NEtFOSA	ng/L	<0.25	0.98	09/11/24 21:25	
NEtFOSAA	ng/L	<0.34	0.98	09/11/24 21:25	
NEtFOSE	ng/L	<3.1	9.8	09/11/24 21:25	
NMeFOSA	ng/L	<0.26	0.98	09/11/24 21:25	
NMeFOSAA	ng/L	<0.31	0.98	09/11/24 21:25	
PFBA	ng/L	<0.60	3.9	09/11/24 21:25	
PFBS	ng/L	<0.31	0.98	09/11/24 21:25	
PFDA	ng/L	<0.17	0.98	09/11/24 21:25	
PFDoA	ng/L	<0.22	0.98	09/11/24 21:25	
PFDoS	ng/L	<0.27	0.98	09/11/24 21:25	
PFDS	ng/L	<0.26	0.98	09/11/24 21:25	
PFHpA	ng/L	<0.21	0.98	09/11/24 21:25	
PFHpS	ng/L	<0.23	0.98	09/11/24 21:25	
PFHxA	ng/L	<0.15	0.98	09/11/24 21:25	
PFHxS	ng/L	<0.25	0.98	09/11/24 21:25	
PFNA	ng/L	<0.23	0.98	09/11/24 21:25	
PFNS	ng/L	<0.24	0.98	09/11/24 21:25	
PFOA	ng/L	<0.34	0.98	09/11/24 21:25	
PFOS	ng/L	<0.17	0.98	09/11/24 21:25	
PFPeA	ng/L	<0.29	2.0	09/11/24 21:25	
PFPeS	ng/L	<0.18	0.98	09/11/24 21:25	
PFTeDA	ng/L	<0.28	0.98	09/11/24 21:25	
PFTrDA	ng/L	<0.19	0.98	09/11/24 21:25	
PFUnA	ng/L	<0.25	0.98	09/11/24 21:25	
13C2-PFDoA (S)	%.	76	10-130	09/11/24 21:25	
13C2-PFTA (S)	%.	77	10-130	09/11/24 21:25	
13C24:2FTS (S)	%.	104	40-200	09/11/24 21:25	
13C26:2FTS (S)	%.	102	40-200	09/11/24 21:25	
13C28:2FTS (S)	%.	83	40-300	09/11/24 21:25	
13C3-PFBS (S)	%.	91	40-135	09/11/24 21:25	
13C3-PFHxS (S)	%.	92	40-130	09/11/24 21:25	
13C3HFPO-DA (S)	%.	88	40-130	09/11/24 21:25	
13C4-PFBA (S)	%.	86	5-130	09/11/24 21:25	
13C4-PFHpA (S)	%.	87	40-130	09/11/24 21:25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

METHOD BLANK: 5051546 Matrix: Water
Associated Lab Samples: 10705049001, 10705049002, 10705049003, 10705049004, 10705049005, 10705049006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C5-PFHxA (S)	%.	86	40-130	09/11/24 21:25	
13C5-PFPeA (S)	%.	89	40-130	09/11/24 21:25	
13C6-PFDA (S)	%.	85	40-130	09/11/24 21:25	
13C7-PFUdA (S)	%.	82	30-130	09/11/24 21:25	
13C8-PFOA (S)	%.	89	40-130	09/11/24 21:25	
13C8-PFOS (S)	%.	85	40-130	09/11/24 21:25	
13C8-PFOSA (S)	%.	80	40-130	09/11/24 21:25	
13C9-PFNA (S)	%.	83	40-130	09/11/24 21:25	
d3-MeFOSAA (S)	%.	80	40-170	09/11/24 21:25	
d3-NMeFOSA (S)	%.	69	10-130	09/11/24 21:25	
d5-EtFOSAA (S)	%.	84	25-135	09/11/24 21:25	
d5-NEtFOSA (S)	%.	76	10-130	09/11/24 21:25	
d7-NMeFOSE (S)	%.	82	10-130	09/11/24 21:25	
d9-NEtFOSE (S)	%.	85	10-130	09/11/24 21:25	

LABORATORY CONTROL SAMPLE & LCSD: 5051547 5051548

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11Cl-PF3OUdS	ng/L	88.7	78.2	82.1	88	92	55-160	5	30	
4:2 FTS	ng/L	88.1	82.2	83.2	93	93	70-145	1	30	
6:2 FTS	ng/L	89.3	88.0	90.6	99	100	65-155	3	30	
8:2 FTS	ng/L	90.5	91.6	92.9	101	102	60-150	1	30	
9Cl-PF3ONS	ng/L	88.1	84.9	87.6	96	98	70-155	3	30	
HFPO-DA	ng/L	94	88.1	93.3	94	98	70-140	6	30	
NEtFOSA	ng/L	23.5	18.8	19.7	80	83	65-145	4	30	
NEtFOSAA	ng/L	23.5	19.8	20.6	84	87	70-145	4	30	
NEtFOSE	ng/L	235	220	220	93	93	70-135	0	30	
NMeFOSA	ng/L	23.5	19.8	20.1	84	84	60-150	2	30	
NMeFOSAA	ng/L	23.5	21.9	20.9	93	88	50-140	4	30	
PFBA	ng/L	94	84.4	85.7	90	90	70-140	2	30	
PFBS	ng/L	20.9	18.5	18.4	89	87	60-145	0	30	
PFDA	ng/L	23.5	21.3	21.4	90	90	70-140	1	30	
PFDoA	ng/L	23.5	22.0	21.9	94	92	70-140	1	30	
PFDoS	ng/L	22.8	18.3	18.5	80	80	50-145	1	30	
PFDS	ng/L	22.7	18.8	18.5	83	81	60-145	2	30	
PFHpA	ng/L	23.5	21.2	22.4	90	94	70-150	5	30	
PFHpS	ng/L	22.4	19.3	19.9	86	88	70-150	3	30	
PFHxA	ng/L	23.5	21.7	21.9	92	92	70-145	1	30	
PFHxS	ng/L	21.5	18.0	18.7	84	86	65-145	4	30	
PFNA	ng/L	23.5	20.6	20.9	88	88	70-150	1	30	
PFNS	ng/L	22.6	19.7	19.8	87	86	65-145	0	30	
PFOA	ng/L	23.5	21.3	21.7	91	91	70-150	2	30	
PFOS	ng/L	21.8	19.2	19.0	88	86	55-150	1	30	
PFPeA	ng/L	47	42.9	43.6	91	92	65-135	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

LABORATORY CONTROL SAMPLE & LCSD: 5051547 5051548

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFPeS	ng/L	22.1	19.8	20.5	90	92	65-140	3	30	
PFTeDA	ng/L	23.5	21.8	21.9	93	92	60-140	0	30	
PFTrDA	ng/L	23.5	21.7	21.8	92	92	65-140	0	30	
PFUnA	ng/L	23.5	21.2	21.3	90	90	70-145	1	30	
13C2-PFDoA (S)	%.				80	83	10-130			
13C2-PFTA (S)	%.				81	84	10-130			
13C24:2FTS (S)	%.				102	100	40-200			
13C26:2FTS (S)	%.				99	97	40-200			
13C28:2FTS (S)	%.				88	90	40-300			
13C3-PFBS (S)	%.				94	94	40-135			
13C3-PFHxS (S)	%.				95	92	40-130			
13C3HFPO-DA (S)	%.				89	84	40-130			
13C4-PFBA (S)	%.				91	90	5-130			
13C4-PFHpA (S)	%.				91	87	40-130			
13C5-PFHxA (S)	%.				90	87	40-130			
13C5-PFPeA (S)	%.				91	89	40-130			
13C6-PFDA (S)	%.				90	91	40-130			
13C7-PFUdA (S)	%.				88	89	30-130			
13C8-PFOA (S)	%.				90	87	40-130			
13C8-PFOS (S)	%.				93	93	40-130			
13C8-PFOSA (S)	%.				85	80	40-130			
13C9-PFNA (S)	%.				90	87	40-130			
d3-MeFOSAA (S)	%.				86	86	40-170			
d3-NMeFOSA (S)	%.				78	71	10-130			
d5-EtFOSAA (S)	%.				90	88	25-135			
d5-NEtFOSA (S)	%.				85	76	10-130			
d7-NMeFOSE (S)	%.				90	81	10-130			
d9-NEtFOSE (S)	%.				93	84	10-130			

LABORATORY CONTROL SAMPLE: 5051549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	7.4	5.9	80	55-160	
4:2 FTS	ng/L	7.3	6.1	83	70-145	
6:2 FTS	ng/L	7.4	6.5	87	65-155	
8:2 FTS	ng/L	7.5	6.9	91	60-150	
9Cl-PF3ONS	ng/L	7.3	6.5	88	70-155	
HFPO-DA	ng/L	7.8	6.7	85	70-140	
NEtFOSA	ng/L	2	1.5	78	65-145	
NEtFOSAA	ng/L	2	1.6	82	70-145	
NEtFOSE	ng/L	19.6	16.5	84	70-135	
NMeFOSA	ng/L	2	1.5	77	60-150	
NMeFOSAA	ng/L	2	1.6	84	50-140	
PFBA	ng/L	7.8	6.7	86	70-140	
PFBS	ng/L	1.7	1.6	92	60-145	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

LABORATORY CONTROL SAMPLE: 5051549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFDA	ng/L	2	1.5	79	70-140	
PFDoA	ng/L	2	1.6	82	70-140	
PFDoS	ng/L	1.9	1.4	72	50-145	
PFDS	ng/L	1.9	1.5	77	60-145	
PFHpA	ng/L	2	1.6	84	70-150	
PFHpS	ng/L	1.9	1.4	75	70-150	
PFHxA	ng/L	2	1.7	86	70-145	
PFHxS	ng/L	1.8	1.5	85	65-145	
PFNA	ng/L	2	1.6	81	70-150	
PFNS	ng/L	1.9	1.4	76	65-145	
PFOA	ng/L	2	1.6	83	70-150	
PFOS	ng/L	1.8	1.6	90	55-150	
PFPeA	ng/L	3.9	3.3	83	65-135	
PFPeS	ng/L	1.8	1.6	87	65-140	
PFTeDA	ng/L	2	1.6	81	60-140	
PFTrDA	ng/L	2	1.6	81	65-140	
PFUnA	ng/L	2	1.5	78	70-145	
13C2-PFDoA (S)	%.			83	10-130	
13C2-PFTA (S)	%.			84	10-130	
13C24:2FTS (S)	%.			116	40-200	
13C26:2FTS (S)	%.			114	40-200	
13C28:2FTS (S)	%.			100	40-300	
13C3-PFBS (S)	%.			98	40-135	
13C3-PFHxS (S)	%.			99	40-130	
13C3HFPO-DA (S)	%.			88	40-130	
13C4-PFBA (S)	%.			89	5-130	
13C4-PFHpA (S)	%.			92	40-130	
13C5-PFHxA (S)	%.			90	40-130	
13C5-PFPeA (S)	%.			92	40-130	
13C6-PFDA (S)	%.			93	40-130	
13C7-PFUdA (S)	%.			88	30-130	
13C8-PFOA (S)	%.			93	40-130	
13C8-PFOS (S)	%.			94	40-130	
13C8-PFOSA (S)	%.			80	40-130	
13C9-PFNA (S)	%.			90	40-130	
d3-MeFOSAA (S)	%.			84	40-170	
d3-NMeFOSA (S)	%.			64	10-130	
d5-EtFOSAA (S)	%.			88	25-135	
d5-NEtFOSA (S)	%.			68	10-130	
d7-NMeFOSE (S)	%.			76	10-130	
d9-NEtFOSE (S)	%.			78	10-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 10705049

[1] Samples were received outside of the recommended temperature range of 0-6 degrees Celsius. The samples were received from the field on ice.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 026096 Sunfish Lake PFAS Test
Pace Project No.: 10705049

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10705049001	**HB-2**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875
10705049002	**HB-1**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875
10705049003	**HS-2**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875
10705049004	**SF-2**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875
10705049005	**SF-1**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875
10705049006	**HS-1**	EPA 1633 DRAFT	966675	EPA 1633 DRAFT	967875

Pace® Location Requested (City/State):

CHAIN-OF-CUSTODY Analytical Request Document

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

WO# : 10705049

10705049

Company Name: WSB	Contact/Report To: Dan O'Neill
Street Address: 178 9th St E, STE 200 St. Paul MN, 55101	Phone #: 612-400-5382
	E-Mail: doneill@wsbeng.com
	Cc E-Mail: thavranek@wsbeng.com
Customer Project #: [redacted] 026096	Invoice to: wsbaccounting@wsbeng.com
Project Name: Sunfish Lake PFAS Testing 2024	Invoice E-mail: wsbaccounting@wsbeng.com
Site Collection Info/Facility ID (as applicable):	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s):
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other_____	Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other_____ **Date Results Requested:**
	DW PWSID # or WW Permit # as applicable: 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 (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS (1633)	Sample Comment
HB-2	SW	G			8-21-24	11:08	1			X	01
HB-1	SW	G			8-21-24	10:49	1			X	02
HS-2	SW	G			8-21-24	9:49	1			X	03
SF-2	SW	G			8-21-24	14:03	1			X	04
SF-1	SW	G			8-21-24	13:56	1			X	05
HS-1	SW	G			8-21-24	10:01	1			X	06

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: | AcctNum / Client ID: | Table #: | Profile / Template: | Prelog / Bottle Ord. ID:

Preservation non-conformance identified for sample.

Additional Instructions from Pace® :

Collected By: Printed Name: Dan O'Neill Signature:

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: 1 | Thermometer ID: T3 | Correction Factor (°C): -0.2 | Obs. Temp. (°C): | Corrected Temp. (°C): 14.5 | [ ] On Ice Wet

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Dan O'Neill / WSB	8-21-24 16:15	Michael PACE	8/21/24 1615	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: of

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

ENV-FRM-CORQ-0019_v02_110123 ©

ENV-FRM-MIN4-0150 v17_Sample Condition Upon Receipt

CLIENT NAME: WSB **PROJECT #:**

WO#: 10705049
PM: AKA Due Date: 09/20/24
CLIENT: WSB

COURIER: ☑ Client ☐ Commercial ☐ FedEx ☐ Pace ☐ SpeeDee ☐ UPS ☐ USPS

TRACKING NUMBER: _____ ☐ See Exceptions form 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 Bags ☐ Bubble Wrap ☑ None ☐ Other **Temp Blank:** ☐ YES ☑ NO **Type of Ice:** ☐ Blue ☐ Dry ☑ Wet ☐ Melted ☐ None

Thermometer: ☐ T1 (0461) ☐ T2 (0436) ☑ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252 (1710)

Did Samples Originate in West Virginia: ☐ YES ☑ NO	**Were All Container Temps taken:** ☐ YES ☐ NO ☑ N/A
Correction Factor: -0.2 **Cooler Temp Read w/Temp Blank:** _____ °C **Cooler Temp Corrected w/Temp Blank:** _____ °C	**Average Corrected Temp (no Temp Blank Only):** 1.5 °C
***NOTE:** Temp should be above freezing to 6°C.*	☐ See Exceptions Form ENV-FRM-MIN4-0142 ☐ 1 Container
USDA Regulated Soil: ☑ N/A ☐ Water Sample/Other (describe): _____	**Initials & Date of Person Examining Contents:** EC 8-21-24
Did Samples originate from one of the following states (check maps) – AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: ☐ YES ☐ NO	Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.	

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out?	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☑	☐	☐	3.
Samples Arrived within Hold Time?	☑	☐		4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Other: _____
Rush Turn Around Time Requested?	☐	☑		6.
Sufficient Sample Volume?	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8.
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
Is sufficient information available to reconcile the samples to the COC? **NOTE:** If ID/Date/Time don't match fill out section 11. Matrix: ☐ Oil ☐ Soil ☑ Water ☐ Other	☑	☐		11. **If NO, write ID/Date/Time of container below:** ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐	☐	☑	12. Sample #:
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☐	☐	☑	☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	☐	☐	☑	Positive for Residual Chlorine: ☐ YES ☐ NO
NOTE: If adding preservation to the container, **verify with the PM first.** Clients may require adding preservative to the field and equipment blanks when this occurs.				**pH Paper Lot #**
				Residual Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
				☐ See Exceptions form ENV-FRM-MIN4-0142
Headspace in Methyl Mercury Container?	☐	☐	☑	13.
Extra labels present on soil VOA or WIDRO containers?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION **FIELD DATA REQUIRED:** ☐ YES ☐ NO

Person Contacted: _____ Date & Time: _____

Comments / Resolution: _____

Project Manager Review: Anna Osp **Date:** 8/22/2024

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

Labeled By: CC **Line:** 2

Workorder #: _____

No Temp Blank		
Read Temp	**Corrected Temp**	**Average temp**
16.8	16.6	14.5
13.3	13.1	
14.1	13.9	
14.4	14.2	

PM Notified of Out of Temp Cooler? ☐ YES ☐ NO

If yes, indicate who was contacted, date and time.
If no, indicate reason why.

_____

Multiple Cooler Project? ☐ YES ☐ NO

If anything is OVER 6.0°C, you MUST document containers in this section HERE

Tracking Number	Temperature

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples

Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								YES	NO	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	

Comments:

_____

_____

_____

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

October 22, 2024

Dan O'Neill
WSB & Associates
178 East 9th St
Suite 200
Saint Paul, MN 55101

RE: Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Dear Dan O'Neill:

Enclosed are the analytical results for sample(s) received by the laboratory on August 27, 2024. 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
- Pace Analytical Services - Minneapolis

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

Sincerely,

Annika Asp
annika.asp@pacelabs.com
(612)607-1700
Project Manager

Enclosures

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Pace Analytical Services, LLC - Minneapolis MN
1700 Elm Street SE, Minneapolis, MN 55414
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
DoD Certification via A2LA #: 2926.01
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
GMP+ Certification #: GMP050884
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
ISO/IEC 17025 Certification via A2LA #: 2926.01
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240
Mississippi Certification #: MN00064
Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Oklahoma Certification #: 9507
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Vermont Certification #: VT-027053137
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification via A2LA #: 2926.01
USDA Permit #: P330-19-00208

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
South Carolina Certification #: 83006001
Texas Certification #: T104704529-21-8
Virginia VELAP Certification ID: 11873
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-21-00008
Federal Fish & Wildlife Permit #: 51774A

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10705584001	**SF-LMB**	Tissue	08/21/24 13:35	08/27/24 08:10
10705584002	**SF-SF-2**	Tissue	08/21/24 14:02	08/27/24 08:10
10705584003	**HB-YP**	Tissue	08/21/24 11:07	08/27/24 08:10
10705584004	**HB-SF-2**	Tissue	08/21/24 11:31	08/27/24 08:10
10705584005	**HB-SF-1**	Tissue	08/21/24 11:24	08/27/24 08:10
10705584006	**HS-BB-1**	Tissue	08/21/24 08:49	08/27/24 08:10
10705584007	**HS-BB-2**	Tissue	08/21/24 09:31	08/27/24 08:10
10705584008	**HS-LMB**	Tissue	08/21/24 09:01	08/27/24 08:10
10705584009	**SF-SF-1**	Tissue	08/21/24 13:21	08/27/24 08:10

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10705584001	**SF-LMB**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584002	**SF-SF-2**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584003	**HB-YP**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584004	**HB-SF-2**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584005	**HB-SF-1**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584006	**HS-BB-1**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584007	**HS-BB-2**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584008	**HS-LMB**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	NBH	56	PASI-M
10705584009	**SF-SF-1**	ASTM D2974	NJ1	1	PASI-M
		Pace SOP	CWN	1	PASI-G
		EPA 1633 DRAFT	MJL	56	PASI-M

PASI-G = Pace Analytical Services - Green Bay
PASI-M = Pace Analytical Services - Minneapolis

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-LMB **Lab ID: 10705584001** Collected: 08/21/24 13:35 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**79.4**	%	0.10	1		09/25/24 14:11		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.57**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/02/24 19:18	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.3	1	10/01/24 13:38	10/02/24 19:18	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	27619-97-2	
7:3 FTCA	**<2.5**	ug/kg	12.3	1	10/01/24 13:38	10/02/24 19:18	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	13252-13-6	
NEtFOSAA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:18	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	2355-31-9	
PFBS	**<0.057**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	375-73-5	
PFDA	**0.96**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	335-76-2	B
PFHxA	**<0.061**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	307-24-4	
PFBA	**<0.62**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:18	375-22-4	
PFDS	**0.12J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	335-77-3	
PFEESA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:18	113507-82-7	
PFHpS	**<0.081**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	375-92-8	
PFMBA	**<0.16**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:18	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:18	377-73-1	
PFNS	**<0.12**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	68259-12-1	
PFOSA	**<0.071**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	754-91-6	
PFPeA	**<0.18**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:18	2706-90-3	
PFPeS	**<0.098**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	2706-91-4	
PFDoA	**0.25J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	307-55-1	
PFHpA	**<0.10**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	375-85-9	
PFHxS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	355-46-4	
PFNA	**<0.088**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	375-95-1	
PFOS	**8.0**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	1763-23-1	
PFOA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	335-67-1	
PFTeDA	**0.080J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	72629-94-8	
PFUnA	**0.85**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:18	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-LMB **Lab ID: 10705584001** Collected: 08/21/24 13:35 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	63	%.	35-180	1	10/01/24 13:38	10/02/24 19:18		
13C3HFPO-DA (S)	89	%.	20-185	1	10/01/24 13:38	10/02/24 19:18		
13C3-PFBS (S)	89	%.	25-190	1	10/01/24 13:38	10/02/24 19:18		
13C3-PFHxS (S)	105	%.	35-175	1	10/01/24 13:38	10/02/24 19:18		
13C4-PFBA (S)	91	%.	5-130	1	10/01/24 13:38	10/02/24 19:18		
13C4-PFHpA (S)	93	%.	25-150	1	10/01/24 13:38	10/02/24 19:18		
13C5-PFHxA (S)	94	%.	25-170	1	10/01/24 13:38	10/02/24 19:18		
13C5-PFPeA (S)	94	%.	10-185	1	10/01/24 13:38	10/02/24 19:18		
13C6-PFDA (S)	89	%.	30-150	1	10/01/24 13:38	10/02/24 19:18		
13C8-PFOA (S)	95	%.	25-150	1	10/01/24 13:38	10/02/24 19:18		
13C8-PFOS (S)	98	%.	40-160	1	10/01/24 13:38	10/02/24 19:18		
13C8-PFOSA (S)	84	%.	25-180	1	10/01/24 13:38	10/02/24 19:18		
13C9-PFNA (S)	93	%.	35-185	1	10/01/24 13:38	10/02/24 19:18		
d3-MeFOSAA (S)	93	%.	30-250	1	10/01/24 13:38	10/02/24 19:18		
d5-EtFOSAA (S)	93	%.	30-235	1	10/01/24 13:38	10/02/24 19:18		
d7-NMeFOSE (S)	29	%.	5-160	1	10/01/24 13:38	10/02/24 19:18		
13C2-PFTA (S)	22	%.	20-160	1	10/01/24 13:38	10/02/24 19:18		
13C7-PFUdA (S)	82	%.	30-180	1	10/01/24 13:38	10/02/24 19:18		
13C24:2FTS (S)	154	%.	30-300	1	10/01/24 13:38	10/02/24 19:18		
13C26:2FTS (S)	206	%.	35-300	1	10/01/24 13:38	10/02/24 19:18		
13C28:2FTS (S)	196	%.	40-365	1	10/01/24 13:38	10/02/24 19:18		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-SF-2 **Lab ID: 10705584002** Collected: 08/21/24 14:02 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**80.9**	%	0.10	1		09/25/24 14:16		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.57**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/02/24 19:34	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 19:34	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	27619-97-2	
7:3 FTCA	**<2.6**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 19:34	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	13252-13-6	
NEtFOSAA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 19:34	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	2355-31-9	
PFBS	**<0.057**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	375-73-5	
PFDA	**0.45J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	335-76-2	
PFHxA	**<0.061**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	307-24-4	
PFBA	**<0.62**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:34	375-22-4	
PFDS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	335-77-3	
PFEESA	**<0.15**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 19:34	113507-82-7	
PFHpS	**<0.082**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	375-92-8	
PFMBA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 19:34	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 19:34	377-73-1	
PFNS	**<0.12**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	68259-12-1	
PFOSA	**<0.071**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	754-91-6	
PFPeA	**<0.18**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 19:34	2706-90-3	
PFPeS	**<0.098**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	2706-91-4	
PFDoA	**0.19J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	307-55-1	
PFHpA	**<0.10**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	375-85-9	
PFHxS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	355-46-4	
PFNA	**<0.088**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	375-95-1	
PFOS	**3.4**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	1763-23-1	
PFOA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	335-67-1	
PFTeDA	**<0.074**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	72629-94-8	
PFUnA	**0.53**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:34	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-SF-2 **Lab ID: 10705584002** Collected: 08/21/24 14:02 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	75	%.	35-180	1	10/01/24 13:38	10/02/24 19:34		
13C3HFPO-DA (S)	51	%.	20-185	1	10/01/24 13:38	10/02/24 19:34		
13C3-PFBS (S)	62	%.	25-190	1	10/01/24 13:38	10/02/24 19:34		
13C3-PFHxS (S)	93	%.	35-175	1	10/01/24 13:38	10/02/24 19:34		
13C4-PFBA (S)	4	%.	5-130	1	10/01/24 13:38	10/02/24 19:34		S0
13C4-PFHpA (S)	73	%.	25-150	1	10/01/24 13:38	10/02/24 19:34		
13C5-PFHxA (S)	53	%.	25-170	1	10/01/24 13:38	10/02/24 19:34		
13C5-PFPeA (S)	27	%.	10-185	1	10/01/24 13:38	10/02/24 19:34		
13C6-PFDA (S)	84	%.	30-150	1	10/01/24 13:38	10/02/24 19:34		
13C8-PFOA (S)	83	%.	25-150	1	10/01/24 13:38	10/02/24 19:34		
13C8-PFOS (S)	96	%.	40-160	1	10/01/24 13:38	10/02/24 19:34		
13C8-PFOSA (S)	96	%.	25-180	1	10/01/24 13:38	10/02/24 19:34		
13C9-PFNA (S)	87	%.	35-185	1	10/01/24 13:38	10/02/24 19:34		
d3-MeFOSAA (S)	95	%.	30-250	1	10/01/24 13:38	10/02/24 19:34		
d5-EtFOSAA (S)	93	%.	30-235	1	10/01/24 13:38	10/02/24 19:34		
d7-NMeFOSE (S)	30	%.	5-160	1	10/01/24 13:38	10/02/24 19:34		
13C2-PFTA (S)	20	%.	20-160	1	10/01/24 13:38	10/02/24 19:34		
13C7-PFUdA (S)	88	%.	30-180	1	10/01/24 13:38	10/02/24 19:34		
13C24:2FTS (S)	47	%.	30-300	1	10/01/24 13:38	10/02/24 19:34		
13C26:2FTS (S)	158	%.	35-300	1	10/01/24 13:38	10/02/24 19:34		
13C28:2FTS (S)	174	%.	40-365	1	10/01/24 13:38	10/02/24 19:34		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-YP **Lab ID: 10705584003** Collected: 08/21/24 11:07 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**80.3**	%	0.10	1		09/25/24 14:17		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.57**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.4	1	10/01/24 13:38	10/02/24 19:50	356-02-5	
4:2 FTS	**<0.29**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.2	1	10/01/24 13:38	10/02/24 19:50	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	27619-97-2	
7:3 FTCA	**<2.5**	ug/kg	12.2	1	10/01/24 13:38	10/02/24 19:50	812-70-4	
8:2 FTS	**<0.43**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	39108-34-4	
9Cl-PF3ONS	**<0.41**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	756426-58-1	
ADONA	**<0.37**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	13252-13-6	
NEtFOSAA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:50	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	2355-31-9	
PFBS	**<0.056**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	375-73-5	
PFDA	**1.1**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	335-76-2	
PFHxA	**<0.061**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	307-24-4	
PFBA	**<0.61**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 19:50	375-22-4	
PFDS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	335-77-3	
PFEESA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:50	113507-82-7	
PFHpS	**<0.081**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	375-92-8	
PFMBA	**<0.16**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:50	863090-89-5	
PFMPA	**<0.15**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:50	377-73-1	
PFNS	**<0.12**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	68259-12-1	
PFOSA	**<0.070**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	754-91-6	
PFPeA	**<0.18**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 19:50	2706-90-3	
PFPeS	**<0.097**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	2706-91-4	
PFDoA	**0.22J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	307-55-1	
PFHpA	**<0.10**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	375-85-9	
PFHxS	**<0.10**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	355-46-4	
PFNA	**<0.087**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	375-95-1	
PFOS	**4.3**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	1763-23-1	
PFOA	**<0.064**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	335-67-1	
PFTeDA	**<0.073**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	72629-94-8	
PFUnA	**0.76**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 19:50	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-YP **Lab ID: 10705584003** Collected: 08/21/24 11:07 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	72	%.	35-180	1	10/01/24 13:38	10/02/24 19:50		
13C3HFPO-DA (S)	82	%.	20-185	1	10/01/24 13:38	10/02/24 19:50		
13C3-PFBS (S)	98	%.	25-190	1	10/01/24 13:38	10/02/24 19:50		
13C3-PFHxS (S)	102	%.	35-175	1	10/01/24 13:38	10/02/24 19:50		
13C4-PFBA (S)	12	%.	5-130	1	10/01/24 13:38	10/02/24 19:50		
13C4-PFHpA (S)	88	%.	25-150	1	10/01/24 13:38	10/02/24 19:50		
13C5-PFHxA (S)	88	%.	25-170	1	10/01/24 13:38	10/02/24 19:50		
13C5-PFPeA (S)	70	%.	10-185	1	10/01/24 13:38	10/02/24 19:50		
13C6-PFDA (S)	89	%.	30-150	1	10/01/24 13:38	10/02/24 19:50		
13C8-PFOA (S)	92	%.	25-150	1	10/01/24 13:38	10/02/24 19:50		
13C8-PFOS (S)	97	%.	40-160	1	10/01/24 13:38	10/02/24 19:50		
13C8-PFOSA (S)	95	%.	25-180	1	10/01/24 13:38	10/02/24 19:50		
13C9-PFNA (S)	90	%.	35-185	1	10/01/24 13:38	10/02/24 19:50		
d3-MeFOSAA (S)	97	%.	30-250	1	10/01/24 13:38	10/02/24 19:50		
d5-EtFOSAA (S)	99	%.	30-235	1	10/01/24 13:38	10/02/24 19:50		
d7-NMeFOSE (S)	24	%.	5-160	1	10/01/24 13:38	10/02/24 19:50		
13C2-PFTA (S)	15	%.	20-160	1	10/01/24 13:38	10/02/24 19:50		S0
13C7-PFUdA (S)	89	%.	30-180	1	10/01/24 13:38	10/02/24 19:50		
13C24:2FTS (S)	122	%.	30-300	1	10/01/24 13:38	10/02/24 19:50		
13C26:2FTS (S)	150	%.	35-300	1	10/01/24 13:38	10/02/24 19:50		
13C28:2FTS (S)	185	%.	40-365	1	10/01/24 13:38	10/02/24 19:50		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-SF-2 **Lab ID: 10705584004** Collected: 08/21/24 11:31 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**82.4**	%	0.10	1		09/25/24 14:18		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.56**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.4	1	10/01/24 13:38	10/02/24 20:05	356-02-5	
4:2 FTS	**<0.29**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.0	1	10/01/24 13:38	10/02/24 20:05	914637-49-3	
6:2 FTS	**<0.34**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	27619-97-2	
7:3 FTCA	**<2.5**	ug/kg	12.0	1	10/01/24 13:38	10/02/24 20:05	812-70-4	
8:2 FTS	**<0.42**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	39108-34-4	
9Cl-PF3ONS	**<0.41**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	756426-58-1	
ADONA	**<0.37**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	919005-14-4	
HFPO-DA	**<0.39**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	13252-13-6	
NEtFOSAA	**<0.064**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.96	1	10/01/24 13:38	10/02/24 20:05	151772-58-6	
NMeFOSAA	**<0.17**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	2355-31-9	
PFBS	**<0.055**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	375-73-5	
PFDA	**0.39J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	335-76-2	B
PFHxA	**<0.059**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	307-24-4	
PFBA	**<0.60**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 20:05	375-22-4	
PFDS	**<0.11**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	335-77-3	
PFEESA	**<0.14**	ug/kg	0.96	1	10/01/24 13:38	10/02/24 20:05	113507-82-7	
PFHpS	**<0.079**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	375-92-8	
PFMBA	**<0.15**	ug/kg	0.96	1	10/01/24 13:38	10/02/24 20:05	863090-89-5	
PFMPA	**<0.15**	ug/kg	0.96	1	10/01/24 13:38	10/02/24 20:05	377-73-1	
PFNS	**<0.12**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	68259-12-1	
PFOSA	**<0.069**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	754-91-6	
PFPeA	**<0.17**	ug/kg	0.96	1	10/01/24 13:38	10/02/24 20:05	2706-90-3	
PFPeS	**<0.095**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	2706-91-4	
PFDoA	**0.22J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	307-55-1	
PFHpA	**<0.098**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	375-85-9	
PFHxS	**<0.10**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	355-46-4	
PFNA	**<0.086**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	375-95-1	
PFOS	**3.5**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	1763-23-1	
PFOA	**<0.063**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	335-67-1	
PFTeDA	**0.11J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	376-06-7	
PFTrDA	**<0.12**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	72629-94-8	
PFUnA	**0.30J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 20:05	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-SF-2 **Lab ID: 10705584004** Collected: 08/21/24 11:31 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	61	%.	35-180	1	10/01/24 13:38	10/02/24 20:05		
13C3HFPO-DA (S)	49	%.	20-185	1	10/01/24 13:38	10/02/24 20:05		
13C3-PFBS (S)	59	%.	25-190	1	10/01/24 13:38	10/02/24 20:05		
13C3-PFHxS (S)	80	%.	35-175	1	10/01/24 13:38	10/02/24 20:05		
13C4-PFBA (S)	13	%.	5-130	1	10/01/24 13:38	10/02/24 20:05		
13C4-PFHpA (S)	65	%.	25-150	1	10/01/24 13:38	10/02/24 20:05		
13C5-PFHxA (S)	53	%.	25-170	1	10/01/24 13:38	10/02/24 20:05		
13C5-PFPeA (S)	36	%.	10-185	1	10/01/24 13:38	10/02/24 20:05		
13C6-PFDA (S)	74	%.	30-150	1	10/01/24 13:38	10/02/24 20:05		
13C8-PFOA (S)	68	%.	25-150	1	10/01/24 13:38	10/02/24 20:05		
13C8-PFOS (S)	82	%.	40-160	1	10/01/24 13:38	10/02/24 20:05		
13C8-PFOSA (S)	76	%.	25-180	1	10/01/24 13:38	10/02/24 20:05		
13C9-PFNA (S)	69	%.	35-185	1	10/01/24 13:38	10/02/24 20:05		
d3-MeFOSAA (S)	81	%.	30-250	1	10/01/24 13:38	10/02/24 20:05		
d5-EtFOSAA (S)	81	%.	30-235	1	10/01/24 13:38	10/02/24 20:05		
d7-NMeFOSE (S)	21	%.	5-160	1	10/01/24 13:38	10/02/24 20:05		
13C2-PFTA (S)	14	%.	20-160	1	10/01/24 13:38	10/02/24 20:05		S0
13C7-PFUdA (S)	74	%.	30-180	1	10/01/24 13:38	10/02/24 20:05		
13C24:2FTS (S)	56	%.	30-300	1	10/01/24 13:38	10/02/24 20:05		
13C26:2FTS (S)	168	%.	35-300	1	10/01/24 13:38	10/02/24 20:05		
13C28:2FTS (S)	191	%.	40-365	1	10/01/24 13:38	10/02/24 20:05		

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ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-SF-1 **Lab ID: 10705584005** Collected: 08/21/24 11:24 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**83.6**	%	0.10	1		09/25/24 14:19		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.57**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/02/24 20:21	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	757124-72-4	
5:3 FTCA	**<2.0**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 20:21	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	27619-97-2	
7:3 FTCA	**<2.6**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 20:21	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	13252-13-6	
NEtFOSAA	**<0.066**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:21	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	2355-31-9	
PFBS	**<0.057**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	375-73-5	
PFDA	**0.38J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	335-76-2	
PFHxA	**<0.061**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	307-24-4	
PFBA	**1.1J**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:21	375-22-4	
PFDS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	335-77-3	
PFEESA	**<0.15**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:21	113507-82-7	
PFHpS	**<0.082**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	375-92-8	
PFMBA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:21	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:21	377-73-1	
PFNS	**<0.12**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	68259-12-1	
PFOSA	**<0.071**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	754-91-6	
PFPeA	**<0.18**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:21	2706-90-3	
PFPeS	**<0.098**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	2706-91-4	
PFDoA	**0.15J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	307-55-1	
PFHpA	**<0.10**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	375-85-9	
PFHxS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	355-46-4	
PFNA	**<0.089**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	375-95-1	
PFOS	**3.2**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	1763-23-1	
PFOA	**<0.065**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	335-67-1	
PFTeDA	**<0.074**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	72629-94-8	
PFUnA	**0.34J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:21	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HB-SF-1 **Lab ID: 10705584005** Collected: 08/21/24 11:24 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	86	%.	35-180	1	10/01/24 13:38	10/02/24 20:21		
13C3HFPO-DA (S)	83	%.	20-185	1	10/01/24 13:38	10/02/24 20:21		
13C3-PFBS (S)	91	%.	25-190	1	10/01/24 13:38	10/02/24 20:21		
13C3-PFHxS (S)	103	%.	35-175	1	10/01/24 13:38	10/02/24 20:21		
13C4-PFBA (S)	4	%.	5-130	1	10/01/24 13:38	10/02/24 20:21		S0
13C4-PFHpA (S)	99	%.	25-150	1	10/01/24 13:38	10/02/24 20:21		
13C5-PFHxA (S)	86	%.	25-170	1	10/01/24 13:38	10/02/24 20:21		
13C5-PFPeA (S)	42	%.	10-185	1	10/01/24 13:38	10/02/24 20:21		
13C6-PFDA (S)	97	%.	30-150	1	10/01/24 13:38	10/02/24 20:21		
13C8-PFOA (S)	98	%.	25-150	1	10/01/24 13:38	10/02/24 20:21		
13C8-PFOS (S)	98	%.	40-160	1	10/01/24 13:38	10/02/24 20:21		
13C8-PFOSA (S)	105	%.	25-180	1	10/01/24 13:38	10/02/24 20:21		
13C9-PFNA (S)	97	%.	35-185	1	10/01/24 13:38	10/02/24 20:21		
d3-MeFOSAA (S)	98	%.	30-250	1	10/01/24 13:38	10/02/24 20:21		
d5-EtFOSAA (S)	103	%.	30-235	1	10/01/24 13:38	10/02/24 20:21		
d7-NMeFOSE (S)	29	%.	5-160	1	10/01/24 13:38	10/02/24 20:21		
13C2-PFTA (S)	22	%.	20-160	1	10/01/24 13:38	10/02/24 20:21		
13C7-PFUdA (S)	95	%.	30-180	1	10/01/24 13:38	10/02/24 20:21		
13C24:2FTS (S)	94	%.	30-300	1	10/01/24 13:38	10/02/24 20:21		
13C26:2FTS (S)	211	%.	35-300	1	10/01/24 13:38	10/02/24 20:21		
13C28:2FTS (S)	207	%.	40-365	1	10/01/24 13:38	10/02/24 20:21		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-BB-1 **Lab ID: 10705584006** Collected: 08/21/24 08:49 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**85.3**	%	0.10	1		09/25/24 14:20		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.57**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/02/24 20:37	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.3	1	10/01/24 13:38	10/02/24 20:37	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	27619-97-2	
7:3 FTCA	**<2.5**	ug/kg	12.3	1	10/01/24 13:38	10/02/24 20:37	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	13252-13-6	
NEtFOSAA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 20:37	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	2355-31-9	
PFBS	**<0.057**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	375-73-5	
PFDA	**0.13J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	335-76-2	B
PFHxA	**<0.061**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	307-24-4	
PFBA	**<0.62**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:37	375-22-4	
PFDS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	335-77-3	
PFEESA	**<0.14**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 20:37	113507-82-7	
PFHpS	**<0.081**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	375-92-8	
PFMBA	**<0.16**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 20:37	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 20:37	377-73-1	
PFNS	**<0.12**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	68259-12-1	
PFOSA	**<0.071**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	754-91-6	
PFPeA	**<0.18**	ug/kg	0.98	1	10/01/24 13:38	10/02/24 20:37	2706-90-3	
PFPeS	**<0.098**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	2706-91-4	
PFDoA	**<0.078**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	307-55-1	
PFHpA	**<0.10**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	375-85-9	
PFHxS	**<0.11**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	355-46-4	
PFNA	**<0.088**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	375-95-1	
PFOS	**0.23J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	1763-23-1	
PFOA	**<0.065**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	335-67-1	
PFTeDA	**<0.074**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	72629-94-8	
PFUnA	**0.14J**	ug/kg	0.49	1	10/01/24 13:38	10/02/24 20:37	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-BB-1 **Lab ID: 10705584006** Collected: 08/21/24 08:49 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	72	%.	35-180	1	10/01/24 13:38	10/02/24 20:37		
13C3HFPO-DA (S)	84	%.	20-185	1	10/01/24 13:38	10/02/24 20:37		
13C3-PFBS (S)	93	%.	25-190	1	10/01/24 13:38	10/02/24 20:37		
13C3-PFHxS (S)	98	%.	35-175	1	10/01/24 13:38	10/02/24 20:37		
13C4-PFBA (S)	59	%.	5-130	1	10/01/24 13:38	10/02/24 20:37		
13C4-PFHpA (S)	92	%.	25-150	1	10/01/24 13:38	10/02/24 20:37		
13C5-PFHxA (S)	91	%.	25-170	1	10/01/24 13:38	10/02/24 20:37		
13C5-PFPeA (S)	89	%.	10-185	1	10/01/24 13:38	10/02/24 20:37		
13C6-PFDA (S)	92	%.	30-150	1	10/01/24 13:38	10/02/24 20:37		
13C8-PFOA (S)	90	%.	25-150	1	10/01/24 13:38	10/02/24 20:37		
13C8-PFOS (S)	93	%.	40-160	1	10/01/24 13:38	10/02/24 20:37		
13C8-PFOSA (S)	90	%.	25-180	1	10/01/24 13:38	10/02/24 20:37		
13C9-PFNA (S)	93	%.	35-185	1	10/01/24 13:38	10/02/24 20:37		
d3-MeFOSAA (S)	88	%.	30-250	1	10/01/24 13:38	10/02/24 20:37		
d5-EtFOSAA (S)	93	%.	30-235	1	10/01/24 13:38	10/02/24 20:37		
d7-NMeFOSE (S)	27	%.	5-160	1	10/01/24 13:38	10/02/24 20:37		
13C2-PFTA (S)	18	%.	20-160	1	10/01/24 13:38	10/02/24 20:37		S0
13C7-PFUdA (S)	91	%.	30-180	1	10/01/24 13:38	10/02/24 20:37		
13C24:2FTS (S)	122	%.	30-300	1	10/01/24 13:38	10/02/24 20:37		
13C26:2FTS (S)	163	%.	35-300	1	10/01/24 13:38	10/02/24 20:37		
13C28:2FTS (S)	159	%.	40-365	1	10/01/24 13:38	10/02/24 20:37		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-BB-2 **Lab ID: 10705584007** Collected: 08/21/24 09:31 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**82.3**	%	0.10	1		09/25/24 14:22		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.58**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/02/24 20:52	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	757124-72-4	
5:3 FTCA	**<2.0**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 20:52	914637-49-3	
6:2 FTS	**<0.36**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	27619-97-2	
7:3 FTCA	**<2.6**	ug/kg	12.4	1	10/01/24 13:38	10/02/24 20:52	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	13252-13-6	
NEtFOSAA	**<0.066**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:52	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	2355-31-9	
PFBS	**<0.057**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	375-73-5	
PFDA	**0.22J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	335-76-2	
PFHxA	**<0.062**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	307-24-4	
PFBA	**<0.62**	ug/kg	2.0	1	10/01/24 13:38	10/02/24 20:52	375-22-4	
PFDS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	335-77-3	
PFEESA	**<0.15**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:52	113507-82-7	
PFHpS	**<0.082**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	375-92-8	
PFMBA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:52	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:52	377-73-1	
PFNS	**<0.12**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	68259-12-1	
PFOSA	**<0.072**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	754-91-6	
PFPeA	**<0.18**	ug/kg	0.99	1	10/01/24 13:38	10/02/24 20:52	2706-90-3	
PFPeS	**<0.099**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	2706-91-4	
PFDoA	**0.18J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	307-55-1	
PFHpA	**<0.10**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	375-85-9	
PFHxS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	355-46-4	
PFNA	**<0.089**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	375-95-1	
PFOS	**0.95**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	1763-23-1	
PFOA	**<0.065**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	335-67-1	
PFTeDA	**<0.075**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	72629-94-8	
PFUnA	**0.20J**	ug/kg	0.50	1	10/01/24 13:38	10/02/24 20:52	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-BB-2 **Lab ID: 10705584007** Collected: 08/21/24 09:31 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	81	%.	35-180	1	10/01/24 13:38	10/02/24 20:52		
13C3HFPO-DA (S)	58	%.	20-185	1	10/01/24 13:38	10/02/24 20:52		
13C3-PFBS (S)	77	%.	25-190	1	10/01/24 13:38	10/02/24 20:52		
13C3-PFHxS (S)	95	%.	35-175	1	10/01/24 13:38	10/02/24 20:52		
13C4-PFBA (S)	20	%.	5-130	1	10/01/24 13:38	10/02/24 20:52		
13C4-PFHpA (S)	79	%.	25-150	1	10/01/24 13:38	10/02/24 20:52		
13C5-PFHxA (S)	65	%.	25-170	1	10/01/24 13:38	10/02/24 20:52		
13C5-PFPeA (S)	46	%.	10-185	1	10/01/24 13:38	10/02/24 20:52		
13C6-PFDA (S)	91	%.	30-150	1	10/01/24 13:38	10/02/24 20:52		
13C8-PFOA (S)	80	%.	25-150	1	10/01/24 13:38	10/02/24 20:52		
13C8-PFOS (S)	98	%.	40-160	1	10/01/24 13:38	10/02/24 20:52		
13C8-PFOSA (S)	89	%.	25-180	1	10/01/24 13:38	10/02/24 20:52		
13C9-PFNA (S)	87	%.	35-185	1	10/01/24 13:38	10/02/24 20:52		
d3-MeFOSAA (S)	90	%.	30-250	1	10/01/24 13:38	10/02/24 20:52		
d5-EtFOSAA (S)	106	%.	30-235	1	10/01/24 13:38	10/02/24 20:52		
d7-NMeFOSE (S)	26	%.	5-160	1	10/01/24 13:38	10/02/24 20:52		
13C2-PFTA (S)	23	%.	20-160	1	10/01/24 13:38	10/02/24 20:52		
13C7-PFUdA (S)	91	%.	30-180	1	10/01/24 13:38	10/02/24 20:52		
13C24:2FTS (S)	66	%.	30-300	1	10/01/24 13:38	10/02/24 20:52		
13C26:2FTS (S)	145	%.	35-300	1	10/01/24 13:38	10/02/24 20:52		
13C28:2FTS (S)	176	%.	40-365	1	10/01/24 13:38	10/02/24 20:52		

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-LMB **Lab ID: 10705584008** Collected: 08/21/24 09:01 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**81.7**	%	0.10	1		09/25/24 14:23		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.56**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.4	1	10/01/24 13:38	10/02/24 21:08	356-02-5	
4:2 FTS	**<0.29**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	757124-72-4	
5:3 FTCA	**<1.9**	ug/kg	12.1	1	10/01/24 13:38	10/02/24 21:08	914637-49-3	
6:2 FTS	**<0.35**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	27619-97-2	
7:3 FTCA	**<2.5**	ug/kg	12.1	1	10/01/24 13:38	10/02/24 21:08	812-70-4	
8:2 FTS	**<0.43**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	39108-34-4	
9Cl-PF3ONS	**<0.41**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	756426-58-1	
ADONA	**<0.37**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	919005-14-4	
HFPO-DA	**<0.39**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	13252-13-6	
NEtFOSAA	**<0.064**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.97	1	10/01/24 13:38	10/02/24 21:08	151772-58-6	
NMeFOSAA	**<0.17**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	2355-31-9	
PFBS	**<0.056**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	375-73-5	
PFDA	**1.6**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	335-76-2	
PFHxA	**<0.060**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	307-24-4	
PFBA	**<0.61**	ug/kg	1.9	1	10/01/24 13:38	10/02/24 21:08	375-22-4	
PFDS	**0.11J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	335-77-3	
PFEESA	**<0.14**	ug/kg	0.97	1	10/01/24 13:38	10/02/24 21:08	113507-82-7	
PFHpS	**<0.080**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	375-92-8	
PFMBA	**<0.16**	ug/kg	0.97	1	10/01/24 13:38	10/02/24 21:08	863090-89-5	
PFMPA	**<0.15**	ug/kg	0.97	1	10/01/24 13:38	10/02/24 21:08	377-73-1	
PFNS	**<0.12**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	68259-12-1	
PFOSA	**<0.070**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	754-91-6	
PFPeA	**<0.17**	ug/kg	0.97	1	10/01/24 13:38	10/02/24 21:08	2706-90-3	
PFPeS	**<0.096**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	2706-91-4	
PFDoA	**0.16J**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	307-55-1	
PFHpA	**<0.099**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	375-85-9	
PFHxS	**<0.10**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	355-46-4	
PFNA	**0.56**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	375-95-1	B
PFOS	**3.5**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	1763-23-1	
PFOA	**<0.064**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	335-67-1	
PFTeDA	**<0.073**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	72629-94-8	
PFUnA	**0.92**	ug/kg	0.48	1	10/01/24 13:38	10/02/24 21:08	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: HS-LMB **Lab ID: 10705584008** Collected: 08/21/24 09:01 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	70	%.	35-180	1	10/01/24 13:38	10/02/24 21:08		
13C3HFPO-DA (S)	80	%.	20-185	1	10/01/24 13:38	10/02/24 21:08		
13C3-PFBS (S)	92	%.	25-190	1	10/01/24 13:38	10/02/24 21:08		
13C3-PFHxS (S)	102	%.	35-175	1	10/01/24 13:38	10/02/24 21:08		
13C4-PFBA (S)	49	%.	5-130	1	10/01/24 13:38	10/02/24 21:08		
13C4-PFHpA (S)	93	%.	25-150	1	10/01/24 13:38	10/02/24 21:08		
13C5-PFHxA (S)	90	%.	25-170	1	10/01/24 13:38	10/02/24 21:08		
13C5-PFPeA (S)	87	%.	10-185	1	10/01/24 13:38	10/02/24 21:08		
13C6-PFDA (S)	89	%.	30-150	1	10/01/24 13:38	10/02/24 21:08		
13C8-PFOA (S)	87	%.	25-150	1	10/01/24 13:38	10/02/24 21:08		
13C8-PFOS (S)	102	%.	40-160	1	10/01/24 13:38	10/02/24 21:08		
13C8-PFOSA (S)	93	%.	25-180	1	10/01/24 13:38	10/02/24 21:08		
13C9-PFNA (S)	91	%.	35-185	1	10/01/24 13:38	10/02/24 21:08		
d3-MeFOSAA (S)	101	%.	30-250	1	10/01/24 13:38	10/02/24 21:08		
d5-EtFOSAA (S)	104	%.	30-235	1	10/01/24 13:38	10/02/24 21:08		
d7-NMeFOSE (S)	24	%.	5-160	1	10/01/24 13:38	10/02/24 21:08		
13C2-PFTA (S)	17	%.	20-160	1	10/01/24 13:38	10/02/24 21:08		S0
13C7-PFUdA (S)	85	%.	30-180	1	10/01/24 13:38	10/02/24 21:08		
13C24:2FTS (S)	146	%.	30-300	1	10/01/24 13:38	10/02/24 21:08		
13C26:2FTS (S)	226	%.	35-300	1	10/01/24 13:38	10/02/24 21:08		
13C28:2FTS (S)	200	%.	40-365	1	10/01/24 13:38	10/02/24 21:08		

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ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-SF-1 **Lab ID: 10705584009** Collected: 08/21/24 13:21 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
Dry Weight / %M by ASTM D2974	Analytical Method: ASTM D2974 Pace Analytical Services - Minneapolis							
Percent Moisture	**82.7**	%	0.10	1		09/25/24 14:24		N2
Grinding	Analytical Method: Pace SOP Pace Analytical Services - Green Bay							
Grind Date	**08/28/2024 11:04**			1		08/28/24 11:04		
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
11Cl-PF3OUdS	**<0.58**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	763051-92-9	
3:3 FTCA	**<1.1**	ug/kg	2.5	1	10/01/24 13:38	10/03/24 13:52	356-02-5	
4:2 FTS	**<0.30**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	757124-72-4	
5:3 FTCA	**<2.0**	ug/kg	12.4	1	10/01/24 13:38	10/03/24 13:52	914637-49-3	
6:2 FTS	**<0.36**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	27619-97-2	
7:3 FTCA	**<2.6**	ug/kg	12.4	1	10/01/24 13:38	10/03/24 13:52	812-70-4	
8:2 FTS	**<0.44**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	39108-34-4	
9Cl-PF3ONS	**<0.42**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	756426-58-1	
ADONA	**<0.38**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	919005-14-4	
HFPO-DA	**<0.40**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	13252-13-6	
NEtFOSAA	**<0.066**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	2991-50-6	
NFDHA	**<0.14**	ug/kg	0.99	1	10/01/24 13:38	10/03/24 13:52	151772-58-6	
NMeFOSAA	**<0.18**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	2355-31-9	
PFBS	**<0.057**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	375-73-5	
PFDA	**0.43J**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	335-76-2	
PFHxA	**<0.062**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	307-24-4	
PFBA	**<0.63**	ug/kg	2.0	1	10/01/24 13:38	10/03/24 13:52	375-22-4	
PFDS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	335-77-3	
PFEESA	**<0.15**	ug/kg	0.99	1	10/01/24 13:38	10/03/24 13:52	113507-82-7	
PFHpS	**<0.082**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	375-92-8	
PFMBA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/03/24 13:52	863090-89-5	
PFMPA	**<0.16**	ug/kg	0.99	1	10/01/24 13:38	10/03/24 13:52	377-73-1	
PFNS	**<0.12**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	68259-12-1	
PFOSA	**<0.072**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	754-91-6	
PFPeA	**<0.18**	ug/kg	0.99	1	10/01/24 13:38	10/03/24 13:52	2706-90-3	
PFPeS	**<0.099**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	2706-91-4	
PFDoA	**0.099J**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	307-55-1	
PFHpA	**<0.10**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	375-85-9	
PFHxS	**<0.11**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	355-46-4	
PFNA	**<0.089**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	375-95-1	
PFOS	**3.6**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	1763-23-1	
PFOA	**<0.065**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	335-67-1	
PFTeDA	**<0.075**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	376-06-7	
PFTrDA	**<0.13**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	72629-94-8	
PFUnA	**0.37J**	ug/kg	0.50	1	10/01/24 13:38	10/03/24 13:52	2058-94-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Sample: SF-SF-1 **Lab ID: 10705584009** Collected: 08/21/24 13:21 Received: 08/27/24 08:10 Matrix: Tissue

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

Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qual
EPA 1633 DRAFT Tissue	Analytical Method: EPA 1633 DRAFT Preparation Method: EPA 1633 DRAFT Pace Analytical Services - Minneapolis							
Surrogates								
13C2-PFDoA (S)	71	%.	35-180	1	10/01/24 13:38	10/03/24 13:52		
13C3HFPO-DA (S)	113	%.	20-185	1	10/01/24 13:38	10/03/24 13:52		
13C3-PFBS (S)	88	%.	25-190	1	10/01/24 13:38	10/03/24 13:52		
13C3-PFHxS (S)	96	%.	35-175	1	10/01/24 13:38	10/03/24 13:52		
13C4-PFBA (S)	68	%.	5-130	1	10/01/24 13:38	10/03/24 13:52		
13C4-PFHpA (S)	114	%.	25-150	1	10/01/24 13:38	10/03/24 13:52		
13C5-PFHxA (S)	88	%.	25-170	1	10/01/24 13:38	10/03/24 13:52		
13C5-PFPeA (S)	107	%.	10-185	1	10/01/24 13:38	10/03/24 13:52		
13C6-PFDA (S)	87	%.	30-150	1	10/01/24 13:38	10/03/24 13:52		
13C8-PFOA (S)	91	%.	25-150	1	10/01/24 13:38	10/03/24 13:52		
13C8-PFOS (S)	99	%.	40-160	1	10/01/24 13:38	10/03/24 13:52		
13C8-PFOSA (S)	120	%.	25-180	1	10/01/24 13:38	10/03/24 13:52		
13C9-PFNA (S)	94	%.	35-185	1	10/01/24 13:38	10/03/24 13:52		
d3-MeFOSAA (S)	94	%.	30-250	1	10/01/24 13:38	10/03/24 13:52		
d5-EtFOSAA (S)	91	%.	30-235	1	10/01/24 13:38	10/03/24 13:52		
d7-NMeFOSE (S)	4	%.	5-160	1	10/01/24 13:38	10/03/24 13:52		S0
13C2-PFTA (S)	13	%.	20-160	1	10/01/24 13:38	10/03/24 13:52		S0
13C7-PFUdA (S)	85	%.	30-180	1	10/01/24 13:38	10/03/24 13:52		
13C24:2FTS (S)	110	%.	30-300	1	10/01/24 13:38	10/03/24 13:52		
13C26:2FTS (S)	171	%.	35-300	1	10/01/24 13:38	10/03/24 13:52		
13C28:2FTS (S)	152	%.	40-365	1	10/01/24 13:38	10/03/24 13:52		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
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QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

QC Batch: 970123
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight / %M by ASTM D2974
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10705584001, 10705584002, 10705584003, 10705584004, 10705584005, 10705584006, 10705584007, 10705584008, 10705584009

SAMPLE DUPLICATE: 5069577

Parameter	Units	10705584001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	79.4	79.8	1	30	N2

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

QC Batch: 971075
QC Batch Method: EPA 1633 DRAFT
Analysis Method: EPA 1633 DRAFT
Analysis Description: EPA 1633 DRAFT Tissue
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 10705584001, 10705584002, 10705584003, 10705584004, 10705584005, 10705584006, 10705584007, 10705584008, 10705584009

METHOD BLANK: 5074710
Matrix: Tissue
Associated Lab Samples: 10705584001, 10705584002, 10705584003, 10705584004, 10705584005, 10705584006, 10705584007, 10705584008, 10705584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
11Cl-PF3OUdS	ug/kg	<0.58	2.0	10/02/24 18:16	
3:3 FTCA	ug/kg	<1.1	2.5	10/02/24 18:16	
4:2 FTS	ug/kg	<0.30	2.0	10/02/24 18:16	
5:3 FTCA	ug/kg	<2.0	12.5	10/02/24 18:16	
6:2 FTS	ug/kg	<0.36	2.0	10/02/24 18:16	
7:3 FTCA	ug/kg	<2.6	12.5	10/02/24 18:16	
8:2 FTS	ug/kg	<0.44	2.0	10/02/24 18:16	
9Cl-PF3ONS	ug/kg	<0.42	2.0	10/02/24 18:16	
ADONA	ug/kg	<0.38	2.0	10/02/24 18:16	
HFPO-DA	ug/kg	<0.41	2.0	10/02/24 18:16	
NEtFOSAA	ug/kg	<0.066	0.50	10/02/24 18:16	
NFDHA	ug/kg	<0.14	1.0	10/02/24 18:16	
NMeFOSAA	ug/kg	<0.18	0.50	10/02/24 18:16	
PFBA	ug/kg	<0.63	2.0	10/02/24 18:16	
PFBS	ug/kg	<0.058	0.50	10/02/24 18:16	
PFDA	ug/kg	<0.099	0.50	10/02/24 18:16	
PFDoA	ug/kg	<0.079	0.50	10/02/24 18:16	
PFDS	ug/kg	<0.11	0.50	10/02/24 18:16	
PFEESA	ug/kg	<0.15	1.0	10/02/24 18:16	
PFHpA	ug/kg	<0.10	0.50	10/02/24 18:16	
PFHpS	ug/kg	<0.083	0.50	10/02/24 18:16	
PFHxA	ug/kg	<0.062	0.50	10/02/24 18:16	
PFHxS	ug/kg	<0.11	0.50	10/02/24 18:16	
PFMBA	ug/kg	<0.16	1.0	10/02/24 18:16	
PFMPA	ug/kg	<0.16	1.0	10/02/24 18:16	
PFNA	ug/kg	0.092J	0.50	10/02/24 18:16	
PFNS	ug/kg	<0.12	0.50	10/02/24 18:16	
PFOA	ug/kg	<0.066	0.50	10/02/24 18:16	
PFOS	ug/kg	<0.11	0.50	10/02/24 18:16	
PFOSA	ug/kg	<0.072	0.50	10/02/24 18:16	
PFPeA	ug/kg	<0.18	1.0	10/02/24 18:16	
PFPeS	ug/kg	<0.099	0.50	10/02/24 18:16	
PFTeDA	ug/kg	<0.075	0.50	10/02/24 18:16	
PFTrDA	ug/kg	<0.13	0.50	10/02/24 18:16	
PFUnA	ug/kg	<0.091	0.50	10/02/24 18:16	
13C2-PFDoA (S)	%.	85	35-180	10/02/24 18:16	
13C2-PFTA (S)	%.	29	20-160	10/02/24 18:16	
13C24:2FTS (S)	%.	31	30-300	10/02/24 18:16	
13C26:2FTS (S)	%.	99	35-300	10/02/24 18:16	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

METHOD BLANK: 5074710 Matrix: Tissue
Associated Lab Samples: 10705584001, 10705584002, 10705584003, 10705584004, 10705584005, 10705584006, 10705584007, 10705584008, 10705584009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
13C28:2FTS (S)	%.	152	40-365	10/02/24 18:16	
13C3-PFBS (S)	%.	48	25-190	10/02/24 18:16	
13C3-PFHxS (S)	%.	81	35-175	10/02/24 18:16	
13C3HFPO-DA (S)	%.	39	20-185	10/02/24 18:16	
13C4-PFBA (S)	%.	3	5-130	10/02/24 18:16	S0
13C4-PFHpA (S)	%.	59	25-150	10/02/24 18:16	
13C5-PFHxA (S)	%.	40	25-170	10/02/24 18:16	
13C5-PFPeA (S)	%.	15	10-185	10/02/24 18:16	
13C6-PFDA (S)	%.	83	30-150	10/02/24 18:16	
13C7-PFUdA (S)	%.	85	30-180	10/02/24 18:16	
13C8-PFOA (S)	%.	71	25-150	10/02/24 18:16	
13C8-PFOS (S)	%.	94	40-160	10/02/24 18:16	
13C8-PFOSA (S)	%.	81	25-180	10/02/24 18:16	
13C9-PFNA (S)	%.	79	35-185	10/02/24 18:16	
d3-MeFOSAA (S)	%.	93	30-250	10/02/24 18:16	
d5-EtFOSAA (S)	%.	109	30-235	10/02/24 18:16	
d7-NMeFOSE (S)	%.	40	5-160	10/02/24 18:16	

LABORATORY CONTROL SAMPLE & LCSD: 5074711 5074712

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
11Cl-PF3OUdS	ug/kg	22.6	30.3	24.4	134	108	50-170	22	30	
3:3 FTCA	ug/kg	30	9.1	24.0	30	80	30-140	90	30	R1
4:2 FTS	ug/kg	22.5	23.9	22.5	106	100	55-150	6	30	
5:3 FTCA	ug/kg	150	144	143	96	95	60-160	0	30	
6:2 FTS	ug/kg	22.8	23.9	22.3	105	98	60-150	7	30	
7:3 FTCA	ug/kg	150	185	151	123	101	60-200	20	30	
8:2 FTS	ug/kg	23.1	25.8	22.8	112	99	60-170	12	30	
9Cl-PF3ONS	ug/kg	22.5	32.1	26.4	143	117	60-170	20	30	
ADONA	ug/kg	22.6	26.1	23.0	115	102	55-165	12	30	
HFPO-DA	ug/kg	24	22.4	22.1	93	92	60-145	1	30	
NEtFOSAA	ug/kg	6	5.8	6.0	97	100	60-145	3	30	
NFDHA	ug/kg	12	11.8	11.7	98	97	60-180	1	30	
NMeFOSAA	ug/kg	6	5.8	5.4	97	91	60-145	7	30	
PFBA	ug/kg	24	24.1	23.7	100	99	60-140	1	30	
PFBS	ug/kg	5.3	5.4	5.1	101	97	60-150	5	30	
PFDA	ug/kg	6	6.4	6.1	106	102	60-150	3	30	
PFDoA	ug/kg	6	6.3	6.0	105	101	60-140	4	30	
PFDS	ug/kg	5.8	5.5	4.9	95	85	50-140	11	30	
PFEESA	ug/kg	10.7	12.5	10.6	117	99	50-150	17	30	
PFHpA	ug/kg	6	6.1	6.3	102	105	60-145	3	30	
PFHpS	ug/kg	5.7	5.8	5.3	102	93	60-140	9	30	
PFHxA	ug/kg	6	6.1	6.0	101	100	60-160	2	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

LABORATORY CONTROL SAMPLE & LCSD: 5074711 5074712

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PFHxS	ug/kg	5.5	5.4	5.4	99	98	60-155	1	30	
PFMBA	ug/kg	12	13.6	11.7	113	97	60-150	15	30	
PFMPA	ug/kg	12	5.8	10.1	49	84	25-145	53	30	R1
PFNA	ug/kg	6	6.1	6.0	101	99	60-145	2	30	
PFNS	ug/kg	5.8	5.7	5.6	100	98	45-140	2	30	
PFOA	ug/kg	6	6.1	5.8	102	97	60-150	4	30	
PFOS	ug/kg	5.6	5.5	5.5	99	98	60-160	1	30	
PFOSA	ug/kg	6	6.2	6.2	103	103	60-150	0	30	
PFPeA	ug/kg	12	12.2	11.6	102	97	60-145	5	30	
PFPeS	ug/kg	5.6	5.5	5.4	98	95	60-145	3	30	
PFTeDA	ug/kg	6	6.4	6.1	107	102	60-140	4	30	
PFTrDA	ug/kg	6	4.0	4.5	66	75	60-150	12	30	
PFUnA	ug/kg	6	6.2	6.0	104	99	60-155	4	30	
13C2-PFDoA (S)	%.				89	86	35-180			
13C2-PFTA (S)	%.				25	32	20-160			
13C24:2FTS (S)	%.				61	133	30-300			
13C26:2FTS (S)	%.				115	162	35-300			
13C28:2FTS (S)	%.				126	177	40-365			
13C3-PFBS (S)	%.				78	94	25-190			
13C3-PFHxS (S)	%.				93	97	35-175			
13C3HFPO-DA (S)	%.				74	92	20-185			
13C4-PFBA (S)	%.				13	66	5-130			
13C4-PFHpA (S)	%.				82	93	25-150			
13C5-PFHxA (S)	%.				70	95	25-170			
13C5-PFPeA (S)	%.				48	93	10-185			
13C6-PFDA (S)	%.				90	90	30-150			
13C7-PFUdA (S)	%.				92	94	30-180			
13C8-PFOA (S)	%.				84	90	25-150			
13C8-PFOS (S)	%.				93	95	40-160			
13C8-PFOSA (S)	%.				118	92	25-180			
13C9-PFNA (S)	%.				94	95	35-185			
d3-MeFOSAA (S)	%.				87	98	30-250			
d5-EtFOSAA (S)	%.				98	113	30-235			
d7-NMeFOSE (S)	%.				5	40	5-160			

LABORATORY CONTROL SAMPLE: 5074713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ug/kg	3.8	4.1	107	50-170	
3:3 FTCA	ug/kg	5	5.0	99	30-140	
4:2 FTS	ug/kg	3.8	3.4	90	55-150	
5:3 FTCA	ug/kg	25	23.5	94	60-160	
6:2 FTS	ug/kg	3.8	3.5	93	60-150	
7:3 FTCA	ug/kg	25	25.9	103	60-200	
8:2 FTS	ug/kg	3.8	3.5	91	60-170	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

LABORATORY CONTROL SAMPLE: 5074713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
9Cl-PF3ONS	ug/kg	3.8	4.1	110	60-170	
ADONA	ug/kg	3.8	3.8	101	55-165	
HFPO-DA	ug/kg	4	3.7	92	60-145	
NEtFOSAA	ug/kg	1	0.87	87	60-145	
NFDHA	ug/kg	2	1.7	87	60-180	
NMeFOSAA	ug/kg	1	0.95	95	60-145	
PFBA	ug/kg	4	3.8	94	60-140	
PFBS	ug/kg	0.89	0.76	86	60-150	
PFDA	ug/kg	1	0.99	99	60-150	
PFDoA	ug/kg	1	0.94	94	60-140	
PFDS	ug/kg	0.96	0.73	76	50-140	
PFEESA	ug/kg	1.8	1.6	88	50-150	
PFHpA	ug/kg	1	0.92	92	60-145	
PFHpS	ug/kg	0.95	0.77	80	60-140	
PFHxA	ug/kg	1	0.93	93	60-160	
PFHxS	ug/kg	0.92	0.85	93	60-155	
PFMBA	ug/kg	2	1.8	88	60-150	
PFMPA	ug/kg	2	1.8	91	25-145	
PFNA	ug/kg	1	0.98	98	60-145	
PFNS	ug/kg	0.96	0.88	91	45-140	
PFOA	ug/kg	1	0.87	87	60-150	
PFOS	ug/kg	0.93	0.86	93	60-160	
PFOSA	ug/kg	1	0.94	94	60-150	
PFPeA	ug/kg	2	1.8	89	60-145	
PFPeS	ug/kg	0.94	0.84	89	60-145	
PFTeDA	ug/kg	1	0.93	93	60-140	
PFTrDA	ug/kg	1	0.64	64	60-150	
PFUnA	ug/kg	1	0.92	92	60-155	
13C2-PFDoA (S)	%.			85	35-180	
13C2-PFTA (S)	%.			34	20-160	
13C24:2FTS (S)	%.			134	30-300	
13C26:2FTS (S)	%.			164	35-300	
13C28:2FTS (S)	%.			178	40-365	
13C3-PFBS (S)	%.			95	25-190	
13C3-PFHxS (S)	%.			100	35-175	
13C3HFPO-DA (S)	%.			88	20-185	
13C4-PFBA (S)	%.			91	5-130	
13C4-PFHpA (S)	%.			93	25-150	
13C5-PFHxA (S)	%.			94	25-170	
13C5-PFPeA (S)	%.			96	10-185	
13C6-PFDA (S)	%.			93	30-150	
13C7-PFUdA (S)	%.			93	30-180	
13C8-PFOA (S)	%.			90	25-150	
13C8-PFOS (S)	%.			98	40-160	
13C8-PFOSA (S)	%.			89	25-180	
13C9-PFNA (S)	%.			91	35-185	
d3-MeFOSAA (S)	%.			98	30-250	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

LABORATORY CONTROL SAMPLE: 5074713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
d5-EtFOSAA (S)	%.			112	30-235	
d7-NMeFOSE (S)	%.			33	5-160	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

Pace Analytical Services, LLC
1700 Elm Street
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sunfish Lake PFAS 2024
Pace Project No.: 10705584

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10705584001	**SF-LMB**	ASTM D2974	970123		
10705584002	**SF-SF-2**	ASTM D2974	970123		
10705584003	**HB-YP**	ASTM D2974	970123		
10705584004	**HB-SF-2**	ASTM D2974	970123		
10705584005	**HB-SF-1**	ASTM D2974	970123		
10705584006	**HS-BB-1**	ASTM D2974	970123		
10705584007	**HS-BB-2**	ASTM D2974	970123		
10705584008	**HS-LMB**	ASTM D2974	970123		
10705584009	**SF-SF-1**	ASTM D2974	970123		
10705584001	**SF-LMB**	Pace SOP	483080		
10705584002	**SF-SF-2**	Pace SOP	483080		
10705584003	**HB-YP**	Pace SOP	483080		
10705584004	**HB-SF-2**	Pace SOP	483080		
10705584005	**HB-SF-1**	Pace SOP	483080		
10705584006	**HS-BB-1**	Pace SOP	483080		
10705584007	**HS-BB-2**	Pace SOP	483080		
10705584008	**HS-LMB**	Pace SOP	483080		
10705584009	**SF-SF-1**	Pace SOP	483080		
10705584001	**SF-LMB**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584002	**SF-SF-2**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584003	**HB-YP**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584004	**HB-SF-2**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584005	**HB-SF-1**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584006	**HS-BB-1**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584007	**HS-BB-2**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584008	**HS-LMB**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568
10705584009	**SF-SF-1**	EPA 1633 DRAFT	971075	EPA 1633 DRAFT	971568

Pace® Location Requested (City/State):

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

Scan QR Code for Instructions

Company Name: WSN	Contact/Report To: Dan O'Neill
Street Address: 178 9th St E STE200 St. Paul, MN 55101	Phone #: 612-400-5382
	E-Mail: doneill@wsbeng.com
	Cc E-Mail: thavranek@wsbeng.com
Customer Project #: 026096	Invoice to: WSB
Project Name: Sunfish Lake PFAS 2024	Invoice E-mail: wsbaccounting@wsbeng.com
Site Collection Info/Facility ID (as applicable)	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET	County / State origin of sample(s)
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other	Regulatory Program (DW, RCRA, etc) as applicable — Reportable [ ] Yes [ ] No
	Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other ____
	Date Results Requested:
	DW PWSID # or WW Permit # as applicable
	Field Filtered (if applicable). [ ] Yes [ ] No
	Analysis

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj Mgr; AcctNum / Client ID; Table #; Profile / Template; Prelog / Bottle Ord ID

Preservation non-conformance identified for sample

* Matrix Codes (Insert in Matrix box below) Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS (1633)	Sample Comment
SF-LMB	TS	G			8-21-24	13:35				X	001
SF-SF-2	TS	C			8-21-24	14:02				X	002
HB-YP	TS	G			8-21-24	11:07				X	003
HB-SF-2	TS	C			8-21-24	11:31				X	004
HB-SF-1	TS	C			8-21-24	11:24				X	005
HS-BB-1	TS	C			8-21-24	8:49				X	006
HS-BB-2	TS	C			8-21-24	9:31				X	007
HS-LMB	TS	G			8-21-24	9:01				X	008
SF-SF-1	TS	C			8-21-24	13:21				X	009

Additional Instructions from Pace® :

Collected By
Printed Name
Signature

Customer Remarks / Special Conditions / Possible Hazards: (-0.2) EL 8-26-24

# Coolers	Thermometer ID	Correction Factor (°C):	Obs. Temp. (°C):	Corrected Temp (°C):	[ ] On Ice
1	TG	TK	-0.4	-0.6	Y

Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	Lab ID Number
		alyssa Pace	8-26-24 9:30	34803 63-1
Relinquished by/Company (Signature) Waltco	Date/Time 08/27/2024 08:10	Received by/Company (Signature) Matt Vonsomeren/Pace	Date/Time 08/27/2024 08:10	Delivered by [ ] In-Person [ ] Courier [ ] FedEX [ ] UPS [✓] Other waltco
Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	Page: of
Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

ENV-FRM-CORQ-0019_v02_110123 ©

Sample Preservation Receipt Form

Client Name: WSN

Project # ✓

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

Initial when completed MR Date/Time:

Lab Lot# of pH paper:

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

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	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001																																		2.5 / 5
002																																		2.5 / 5
003																																		2.5 / 5
004																																		2.5 / 5
005																																		2.5 / 5
006																																		2.5 / 5
007																																		2.5 / 5
008																																		2.5 / 5
009																																		2.5 / 5
010																																		2.5 / 5
011																																		2.5 / 5
012																																		2.5 / 5
013																																		2.5 / 5
014																																		2.5 / 5
015																																		2.5 / 5
016																																		2.5 / 5
017																																		2.5 / 5
018																																		2.5 / 5
019																																		2.5 / 5
020																																		2.5 / 5

MR

08/27/2024

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	VG9C	40 mL clear ascorbic w/ HCl	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
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

Sample Condition Upon Receipt Form (SCUR)

Project #:

AFFIX WORKORDER LABEL HERE

Client Name: WSN

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

Tracking #: 3980363-1

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 - 140 **Type of Ice:** Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.0 /Corr: 0.0

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

Person examining contents:
Date: 08/27/2024 Initials: MVS

Labeled By Initials:

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:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	MVS 08/27/2024 ☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☐No ☑N/A	4. Pace IR, WO MVS 08/27/2024
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- DI VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A		8.
Correct Containers Used:	☑Yes ☐No	9.
Correct Type: Pace Green Bay, Pace IR, (Non-Pace)		
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: Biota	☑Yes ☐No ☐N/A	12.
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

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

Internal Transfer Chain of Custody

40283211

Pace

☐ Rush Multiplier_____X
☒ Samples Pre-Logged into eCOC

State Of Origin: MN
Cert. Needed: ☒ Yes ☐ No

Workorder: 10705584 **Workorder Name:** Sunfish Lake PFAS 2024 **Owner Received Date:** 8/27/2024 **Results Requested By:** 9/11/2024

Report To	Subcontract To
Annika Asp Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700	Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Fish Tissue Homogenization (Pace GB)	LAB USE ONLY
1	SF-LMB	PS	8/21/2024 13:35	10705584001	Solid	1	X	001
2	SF-SF-2	PS	8/21/2024 14:02	10705584002	Solid	1	X	002
3	HB-YP	PS	8/21/2024 11:07	10705584003	Solid	1	X	003
4	HB-SF-2	PS	8/21/2024 11:31	10705584004	Solid	1	X	004
5	HB-SF-1	PS	8/21/2024 11:24	10705584005	Solid	1	X	005
6	HS-BB-1	PS	8/21/2024 08:49	10705584006	Solid	1	X	006
7	HS-BB-2	PS	8/21/2024 09:31	10705584007	Solid	1	X	007
8	HS-LMB	PS	8/21/2024 09:01	10705584008	Solid	1	X	008
9	SF-SF-1	PS	8/21/2024 13:21	10705584009	Solid	1	X	009

Transfers	Released By	Date/Time	Received By	Date/Time
1	Waltco	08/27/2024 08:00	Matt Vonsonnleitner Pace	08/27/2024 08:00
2				
3				

Comments

Please send samples to Pace Minneapolis once homogenized

Cooler Temperature on Receipt _____ °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.

Sample Preservation Receipt Form

Client Name: WSN Project # ✓ 40283211

All containers needing preservation have been checked and noted below: ☐Yes ☐No ☐N/A Initial when completed: MP Date/Time: 08/27/2024

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

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	Vials: VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN 1	GN 2	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																									✓									2.5 / 5
002																									✓									2.5 / 5
003																									✓									2.5 / 5
004																									✓									2.5 / 5
005																									✓									2.5 / 5
006																									✓									2.5 / 5
007																									✓									2.5 / 5
008																									✓									2.5 / 5
009																									✓									2.5 / 5
010																																		2.5 / 5
011																																		2.5 / 5
012																																		2.5 / 5
013																																		2.5 / 5
014																																		2.5 / 5
015																																		2.5 / 5
016																																		2.5 / 5
017																																		2.5 / 5
018																																		2.5 / 5
019																																		2.5 / 5
020																																		2.5 / 5

MP 8

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	VG9C	40 mL clear ascorbic w/ HCl	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
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR
Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO# : 40283211

40283211

Client Name: WSN

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

Tracking #: 3980363-1

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 - 140 **Type of Ice:** Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.0 /Corr: 0.0

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: 08/27/2024 Initials: MRS

Labeled By Initials: GW

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	MRS 08/27/24 ☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☐No ☑N/A	4. Pace IR, WO MRS 08/27/2024
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- DI VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A		8.
Correct Containers Used:	☑Yes ☐No	9.
Correct Type: Pace Green Bay, Pace IR, (Non-Pace)		
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: Biota	☑Yes ☐No ☐N/A	12.
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

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

Internal Transfer Chain of Custody

40283211

Pace

☐ Rush Multiplier____X
☒ Samples Pre-Logged into eCOC

State Of Origin: MN
Cert. Needed: ☒ Yes ☐ No
Owner Received Date: 8/27/2024 **Results Requested By:** 9/11/2024

Workorder: 10705584 **Workorder Name:** Sunfish Lake PFAS 2024

Report To	Subcontract To
Annika Asp Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414 Phone (612)607-1700	Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436

WO# : 10705584

10705584

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	Requested Analysis: Fish Tissue Homogenization (Pace GB)	LAB USE ONLY
1	SF-LMB	PS	8/21/2024 13:35	10705584001	Solid	1	X	001
2	SF-SF-2	PS	8/21/2024 14:02	10705584002	Solid	1	X	002
3	HB-YP	PS	8/21/2024 11:07	10705584003	Solid	1	X	003
4	HB-SF-2	PS	8/21/2024 11:31	10705584004	Solid	1	X	004
5	HB-SF-1	PS	8/21/2024 11:24	10705584005	Solid	1	X	005
6	HS-BB-1	PS	8/21/2024 08:49	10705584006	Solid	1	X	006
7	HS-BB-2	PS	8/21/2024 09:31	10705584007	Solid	1	X	007
8	HS-LMB	PS	8/21/2024 09:01	10705584008	Solid	1	X	008
9	SF-SF-1	PS	8/21/2024 13:21	10705584009	Solid	1	X	009

Transfers	Released By	Date/Time	Received By	Date/Time
1	Waltco	08/27/2024 08:4	Matt VanSchaick/Pace	08/27/2024 08:10
2	[illegible]	9/3/24 [illegible]	Patrick/Pace	9/5/2024 1516
3				

Comments

Please send samples to Pace Minneapolis once homogenized

Cooler Temperature on Receipt -24.5 °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.*

ENV-FRM-MIN4-0150 v17_Sample Condition Upon Receipt

CLIENT NAME: Lee Green bey **PROJECT #:**

WO#: 10705584

PM: AKA **Due Date: 09/11/24**

CLIENT: WSB

COURIER: ☐ Client ☑ Commercial ☐ FedEx ☐ Pace ☐ SpeeDee ☐ UPS ☐ USPS

TRACKING NUMBER: 3965913-1 ☐ See Exceptions form 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 Bags ☐ Bubble Wrap ☐ None ☑ Other **Temp Blank:** ☐ YES ☑ NO **Type of Ice:** ☐ Blue ☑ Dry ☐ Wet ☐ Melted ☐ None

Thermometer: ☑ T1 (0461) ☐ T2 (0436) ☐ T3 (0459) ☐ T4 (0402) ☐ T5 (0178) ☐ T6 (0235) ☐ T7 (0042) ☐ T8 (0775) ☐ T9 (0727) ☐ 01339252 (1710)

Did Samples Originate in West Virginia: ☐ YES ☑ NO	**Were All Container Temps taken:** ☐ YES ☐ NO ☑ N/A
Correction Factor: None **Cooler Temp Read w/Temp Blank:** _____ °C **Cooler Temp Corrected w/Temp Blank:** _____ °C	**Average Corrected Temp (no Temp Blank Only):** ~4.6 °C
***NOTE:** Temp should be above freezing to 6°C.*	☐ See Exceptions Form ENV-FRM-MIN4-0142 ☐ 1 Container
USDA Regulated Soil: ☑ N/A – Water Sample/Other (describe): _____	**Initials & Date of Person Examining Contents:** AKA 9/9/2024
Did Samples originate from one of the following states (check maps) – AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA: ☐ YES ☐ NO	Did samples originate from a foreign source (international, including Hawaii and Puerto Rico): ☐ YES ☐ NO
NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.	

LOCATION (check one): ☐ DULUTH ☑ MINNEAPOLIS ☐ VIRGINIA	YES	NO	N/A	COMMENT(S)
Chain of Custody Present and Filled Out?	☑	☐		1.
Chain of Custody Relinquished?	☑	☐		2.
Sampler Name and/or Signature on COC?	☐	☐	☑	3.
Samples Arrived within Hold Time?	☑	☐		4. If Fecal: ☐ <8 hrs ☐ >8 hr, <24 hr ☐ No
Short Hold Time Analysis (<72 hr)?	☐	☑		5. ☐ BOD / cBOD ☐ Fecal coliform ☐ Hex Chrom ☐ HPC ☐ Nitrate ☐ Nitrite ☐ Ortho Phos ☐ Total coliform/*E. coli* ☐ Other: _____
Rush Turn Around Time Requested?	☑	☐		6. 11 Sep 2024
Sufficient Sample Volume?	☑	☐		7.
Correct Containers Used? – Pace Containers Used?	☑ ☑	☐ ☐	☐	8.
Containers Intact?	☑	☐		9.
Field Filtered Volume Received for Dissolved Tests?	☐	☐	☑	10. Is sediment visible in the dissolved container: ☐ YES ☐ NO
Is sufficient information available to reconcile the samples to the COC? **NOTE:** If ID/Date/Time don't match fill out section 11. Matrix: ☐ Oil ☐ Soil ☐ Water ☑ Other	☑	☐		11. **If NO, write ID/Date/Time of container below:** ☐ See Exceptions form ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐	☐	☑	12. Sample #:
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide)	☐	☐	☑	☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	☐	☐	☑	Positive for Residual Chlorine: ☐ YES ☐ NO
NOTE: If adding preservation to the container, **verify with the PM first.** Clients may require adding preservative to the field and equipment blanks when this occurs.				**pH Paper Lot #**
				Residual Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
				☐ See Exceptions form ENV-FRM-MIN4-0142
Headspace in Methyl Mercury Container?	☐	☐	☑	13.
Extra labels present on soil VOA or WIDRO containers?	☐	☐	☑	14.
Headspace in VOA Vials (greater than 6mm)?	☐	☐	☑	☐ See Exceptions form ENV-FRM-MIN4-0140
Trip Blanks Present?	☐	☐	☑	15.
Trip Blank Custody Seals Present?	☐	☐	☑	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION / RESOLUTION **FIELD DATA REQUIRED:** ☐ YES ☐ NO

Person Contacted: _____ Date & Time: _____

Comments / Resolution: _____

Project Manager Review: Anna Asp **Date:** 9/9/2024

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

Labeled By: PJL **Line:** 5

ENV-FRM-MIN4-0142 v03_Sample Condition Upon Receipt - Exceptions

Workorder #: _____

No Temp Blank		
Read Temp	Corrected Temp	Average temp
-21.1 °C	-21.1 °C	-24.5 °C
-26.1 °C	-26.1 °C	
-21.1 °C	-21.1 °C	
-29.8 °C	-29.8 °C	

PM Notified of Out of Temp Cooler? ☐ YES ☐ NO

If yes, indicate who was contacted, date and time.
If no, indicate reason why.

_____

Multiple Cooler Project? ☐ YES ☐ NO

If anything is OVER 6.0°C, you MUST document containers in this section HERE

Tracking Number	Temperature

Out of Temp Sample ID	Container Type	# of Containers

pH Adjustment Log for Preserved Samples										
Sample ID	Type Of Preserve	pH Upon Receipt	Date Adjusted	Time Adjusted	Amount Added (mL)	Lot # Added	pH After	In Compliance After Addition?		Initials
								YES	NO	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	
								☐	☐	

Comments:

_____

_____

_____

40283211

Pace® Location Requested (City/State):

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

Scan QR Code for Instructions

Company Name: WSN

Street Address: 178 9th St E STE200, St. Paul, MN 55101

Customer Project #: 026096

Project Name: Sunfish Lake PFAS 2024

Site Collection Info/Facility ID (as applicable)

Contact/Report To: Dan O'Neill

Phone #: 612-400-5382

E-Mail: doneill@wsbeng.com

Cc E-Mail: thavranek@wsbeng.com

Invoice to: WSB

Invoice E-mail: wsbaccounting@wsbeng.com

Purchase Order # (if applicable):

Quote #:

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET

County / State origin of sample(s):

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc) as applicable

Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day Other

Date Results Requested:

DW PWSID # or WW Permit # as applicable

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

Analysis:

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj Mgr; AcctNum / Client ID; Table #; Profile / Template; Prelog / Bottle Ord ID

Preservation non-conformance identified for sample.

*Matrix Codes (Insert in Matrix box below) Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Residual Chlorine Result	Residual Chlorine Units	PFAS (1633)	Sample Comment
SF-LMB	TS	G			8-21-24	13:35				X	001
SF-SF-2	TS	C			8-21-24	14:02				X	002
HB-YP	TS	G			8-21-24	11:07				X	003
HB-SF-2	TS	C			8-21-24	11:31				X	004
HB-SF-1	TS	C			8-21-24	11:24				X	005
HS-BB-1	TS	C			8-21-24	8:49				X	006
HS-BB-2	TS	C			8-21-24	9:31				X	007
HS-LMB	TS	G			8-21-24	9:01				X	008
SF-SF-1	TS	C			8-21-24	13:21				X	009

Additional Instructions from Pace®

Collected By: Printed Name / Signature

Customer Remarks / Special Conditions / Possible Hazards

(-0.2) EC 8-26-24

# Coolers	Thermometer ID	Correction Factor (°C)	Obs. Temp (°C)	Corrected Temp (°C)	On Ice
1	IR	TK	-0.4	-0.6	Y

Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	Tracking Number
		augmarum/Pace	8-26-24 9:30	394803631
Waltco	08/27/2024 08:10	Matt VanSomeren/Pace	08/27/2024 08:10	Delivered by: [ ] In-Person [ ] Courier [ ] FedEx [ ] UPS [✓] Other Waltco
Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	
Relinquished by/Company (Signature)	Date/Time	Received by/Company (Signature)	Date/Time	Page: of

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

ENV-FRM-CORQ-0019_v02_110123 ©

Client Name: WSN

Sample Preservation Receipt Form

Project # ✓ 40283211

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: MP Date/ Time:

Pace Lab #	Glass							Plastic						Vials						Jars				General				VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2							
001																									✓								2.5 / 5
002																									✓								2.5 / 5
003																									✓								2.5 / 5
004																									✓								2.5 / 5
005																									✓								2.5 / 5
006																									✓								2.5 / 5
007																									✓								2.5 / 5
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MP 8

08/27/2024

Exceptions to preservation check VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm) . ☐Yes ☐No ☐N/A *If yes look in headspace column

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

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4
BP2Z	500 mL plastic NaOH + Zn

VG9C	40 mL clear ascorbic w/ HCl
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN 1	
GN 2	

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DC#_Title: ENV-FRM-GBAY-0014 v03_SCUR
Effective Date: 8/17/2022

Sample Condition Upon Receipt Form (SCUR)

Project #: WO#: 40283211

Client Name: WSN

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

Tracking #: 3980363-1

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 - 140 **Type of Ice:** Wet Blue Dry None ☐ Meltwater Only

Cooler Temperature Uncorr: 0.0 /Corr: 0.0

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

Person examining contents:
Date: 08/27/2024 Initials: MNS

Labeled By Initials: GW

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:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	MNS 08/27/2024 ☑Yes ☑No ☐N/A	3.
Sampler Name & Signature on COC:	☐Yes ☐No ☑N/A	4. Pace IR WO MNS 08/27/2024
Samples Arrived within Hold Time:	☑Yes ☐No	5.
- DI VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume: For Analysis: ☑Yes ☐No MS/MSD: ☐Yes ☑No ☐N/A		8.
Correct Containers Used:	☑Yes ☐No	9.
Correct Type: Pace Green Bay, Pace IR, (Non-Pace)		
Containers Intact:	☑Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: Biota	☑Yes ☐No ☐N/A	12.
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐
Person Contacted: Date/Time:
Comments/ Resolution:

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

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