



MEMORANDUM

To: Tom Rauth, NAVFAC SE
From: AH Environmental Consultants, Inc.
Subject: NS Mayport, FL., Per- and Polyfluoroalkyl Substances [PFAS] Sampling Support Analytical Results (USEPA Methods 533 and 537.1)
Date: 11 September 2023

On 26 July 2023, AH Environmental Consultants engineer Stephen Harper, Ph.D., visited NS Mayport, FL., following logistics coordination with the facility PM, to collect samples from the potable water system that were subsequently analyzed for the presence of PFAS substances using USEPA methods 537.1 and 533.

Finished water samples were collected from a laboratory sink faucet in the Water Treatment Plant Operations Building. All PFAS sampling protocols were followed during sample collection and there were no anomalies. Samples were prepared for shipping in accordance with the sample collection protocols for PFAS sample collection and hand delivered to Pace Analytical Services located in Ormond Beach Florida. Samples were received in the laboratory on 31 July 2023 in satisfactory condition.

Analytical results show that only one of the 29 PFAS parameters analyzed were detected above the respective Practical Quantification Limits (PQLs). PFPeA was detected at a concentration of 2.3 ng/L, 0.4 ng/L above the PQL of 1.9 ng/L. Refer to the table below (detected parameter is highlighted yellow). Lab QA/QC checks were satisfactory (Field Blank, Method Blank, Matrix Spike/Matrix Spike Duplicates).

Parameter	Method	Results (ng/L)	Practical Quantification Limit (PQL) AKA Method Report Limit (MRL) (ng/L)	Method Detection Limit (MDL) (ng/L)
11CI-PF3OUdS	533	0.43U	1.9	0.43
4:2 FTS	533	0.55U	1.9	0.55
6:2 FTS	533	3.4U	3.8	3.4
8:2 FTS	533	0.47U	1.9	0.47
9CI-PF3ONS	533	0.48U	1.9	0.48
ADONA	533	0.42U	1.9	0.42
HFPO-DA	533	0.71U	1.9	0.71
NFDHA	533	0.28U	1.9	0.28
PFBA	533	1.9 J	1.9	0.60
PFEESA	533	0.34U	1.9	0.34
PFHpS	533	0.39U	1.9	0.39
PFMBA	533	0.26U	1.9	0.26
PFMPA	533	0.32U	1.9	0.32
PFPeA	533	2.3	1.9	0.30
PFPeS	533	0.34U	1.9	0.34
NEtFOSAA	537.1	0.84U	1.8	0.84
NMeFOSAA	537.1	1.4U	1.8	1.4
Perfluorobutanesulfonic acid	533	0.42U	1.9	0.42
Perfluorodecanoic acid	533	0.30U	1.9	0.30
Perfluorododecanoic acid	533	0.52U	1.9	0.52
Perfluoroheptanoic acid	533	0.43U	1.9	0.43
Perfluorohexanesulfonic acid	533	0.36U	1.9	0.36
Perfluorohexanoic acid	533	0.77 J	1.9	0.30
Perfluorononanoic acid	533	0.32U	1.9	0.32
Perfluorooctanesulfonic acid (PFOS)	533	0.34U	1.9	0.34
Perfluorooctanoic acid (PFOA)	533	0.30U	1.9	0.30
Perfluorotetradecanoic acid	537.1	1.7U	1.8	1.7
Perfluorotridecanoic acid	537.1	1.6U	1.8	1.6
Perfluoroundecanoic acid	533	0.41U	1.9	0.41
DoD Policy Health Advisory (HA) for PFOS/PFOA Total = 70 ng/L				
PFOA/PFOS Total: Not Detected				
Notes:				
J – Estimated concentration above the adjusted method detection limit and below the adjusted method reporting limit				
U – Indicates the compound was analyzed for, but not detected.				
HA - health advisory value				

Attachment 1 provides the subject Pace Analytical Laboratory Report (USEPA Method 533 and 537.1), with the respective chain of custody forms.

Should you have any questions please let us know.

Attachment 1
Analytical Results Report



August 18, 2023

Anthony Gruber
AH Environmental

RE: Project: NSA Mayport
Pace Project No.: 35816698

Dear Anthony Gruber:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2023. 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 - Ormond Beach

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

Sincerely,

Bo Garcia
bo.garcia@pacelabs.com
(386)672-5668
Project Manager

Enclosures

cc: Faysal Bekdash, AH Environmental Consultants, Inc.



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NSA Mayport

Pace Project No.: 35816698

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

Colorado Certification: FL NELAC Reciprocity

Connecticut Certification #: PH-0216

Delaware Certification: FL NELAC Reciprocity

DoD-ANAB #: ADE-3199

Florida Certification #: E83079

Georgia Certification #: 955

Guam Certification: FL NELAC Reciprocity

Hawaii Certification: FL NELAC Reciprocity

Illinois Certification #: 200068

Indiana Certification: FL NELAC Reciprocity

Kansas Certification #: E-10383

Kentucky Certification #: 90050

Louisiana Certification #: FL NELAC Reciprocity

Louisiana Environmental Certificate #: 05007

Maine Certification #: FL01264

Maryland Certification: #346

Massachusetts Certification #: M-FL1264

Michigan Certification #: 9911

Mississippi Certification: FL NELAC Reciprocity

Missouri Certification #: 236

Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14

New Hampshire Certification #: 2958

New Jersey Certification #: FL022

New York Certification #: 11608

North Carolina Environmental Certificate #: 667

North Carolina Certification #: 12710

North Dakota Certification #: R-216

Ohio DEP 87780

Oklahoma Certification #: D9947

Pennsylvania Certification #: 68-00547

Puerto Rico Certification #: FL01264

South Carolina Certification: #96042001

Tennessee Certification #: TN02974

Texas Certification: FL NELAC Reciprocity

US Virgin Islands Certification: FL NELAC Reciprocity

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: NSA Mayport

Pace Project No.: 35816698

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35816698001	NS MAYPORT	Drinking Water	07/26/23 09:05	07/31/23 11:23
35816698002	NS MAYPORT FB	Drinking Water	07/26/23 09:05	07/31/23 11:23
35816698003	NS MAYPORT	Drinking Water	07/26/23 09:05	07/31/23 11:23
35816698004	NS MAYPORT FB	Drinking Water	07/26/23 09:05	07/31/23 11:23

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SAMPLE ANALYTE COUNT

Project: NSA Mayport
Pace Project No.: 35816698

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35816698001	NS MAYPORT	EPA 533	JSF	41	PASI-O
35816698002	NS MAYPORT FB	EPA 533	JSF	41	PASI-O
35816698003	NS MAYPORT	EPA 537.1	JSF	22	PASI-O
35816698004	NS MAYPORT FB	EPA 537.1	JSF	22	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NSA Mayport

Pace Project No.: 35816698

Sample: NS MAYPORT Lab ID: 35816698001 Collected: 07/26/23 09:05 Received: 07/31/23 11:23 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, Water									
Analytical Method: EPA 533 Preparation Method: EPA 533									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	0.43U	ng/L	1.9	0.43	1	07/31/23 18:31	08/03/23 01:46	763051-92-9	
4:2 FTS	0.55U	ng/L	1.9	0.55	1	07/31/23 18:31	08/03/23 01:46	757124-72-4	
6:2 FTS	3.4U	ng/L	3.8	3.4	1	07/31/23 18:31	08/03/23 01:46	27619-97-2	
8:2 FTS	0.47U	ng/L	1.9	0.47	1	07/31/23 18:31	08/03/23 01:46	39108-34-4	
9CI-PF3ONS	0.48U	ng/L	1.9	0.48	1	07/31/23 18:31	08/03/23 01:46	756426-58-1	
ADONA	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 01:46	919005-14-4	
HFPO-DA	0.71U	ng/L	1.9	0.71	1	07/31/23 18:31	08/03/23 01:46	13252-13-6	
NFDHA	0.28U	ng/L	1.9	0.28	1	07/31/23 18:31	08/03/23 01:46	151772-58-6	
Perfluorobutanesulfonic acid	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 01:46	375-73-5	
Perfluorodecanoic acid	0.30U	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 01:46	335-76-2	
Perfluorohexanoic acid	0.77J	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 01:46	307-24-4	
PFBA	1.9J	ng/L	1.9	0.60	1	07/31/23 18:31	08/03/23 01:46	375-22-4	
PFEESA	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 01:46	113507-82-7	
PFHpS	0.39U	ng/L	1.9	0.39	1	07/31/23 18:31	08/03/23 01:46	375-92-8	
PFMBA	0.26U	ng/L	1.9	0.26	1	07/31/23 18:31	08/03/23 01:46	863090-89-5	
PFMPA	0.32U	ng/L	1.9	0.32	1	07/31/23 18:31	08/03/23 01:46	377-73-1	
PFPeA	2.3	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 01:46	2706-90-3	
PFPeS	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 01:46	2706-91-4	
Perfluorododecanoic acid	0.52U	ng/L	1.9	0.52	1	07/31/23 18:31	08/03/23 01:46	307-55-1	
Perfluoroheptanoic acid	0.43U	ng/L	1.9	0.43	1	07/31/23 18:31	08/03/23 01:46	375-85-9	
Perfluorohexanesulfonic acid	0.36U	ng/L	1.9	0.36	1	07/31/23 18:31	08/03/23 01:46	355-46-4	
Perfluorononanoic acid	0.32U	ng/L	1.9	0.32	1	07/31/23 18:31	08/03/23 01:46	375-95-1	
Perfluorooctanesulfonic acid	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 01:46	1763-23-1	
Perfluorooctanoic acid	0.30U	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 01:46	335-67-1	
Perfluoroundecanoic acid	0.41U	ng/L	1.9	0.41	1	07/31/23 18:31	08/03/23 01:46	2058-94-8	
Surrogates									
13C24:2FTS (S)	170	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C26:2FTS (S)	146	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C28:2FTS (S)	130	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C2-PFDoA (S)	114	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C3HFPO-DA(S)	96	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C3-PFBS (S)	122	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C3-PFHxS (S)	122	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C4-PFBA (S)	113	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C4-PFHpA (S)	110	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C5-PFHxA (S)	109	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C5-PFPeA (S)	102	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C6-PFDA (S)	109	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C7-PFUdA (S)	108	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C8-PFOA (S)	110	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C8-PFOS (S)	121	%	50-200		1	07/31/23 18:31	08/03/23 01:46		
13C9-PFNA (S)	112	%	50-200		1	07/31/23 18:31	08/03/23 01:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NSA Mayport

Pace Project No.: 35816698

Sample: NS MAYPORT FB Lab ID: 35816698002 Collected: 07/26/23 09:05 Received: 07/31/23 11:23 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
533 PFAS Compounds, Water									
Analytical Method: EPA 533 Preparation Method: EPA 533									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 02:03	763051-92-9	
4:2 FTS	0.55U	ng/L	1.9	0.55	1	07/31/23 18:31	08/03/23 02:03	757124-72-4	
6:2 FTS	3.4U	ng/L	3.8	3.4	1	07/31/23 18:31	08/03/23 02:03	27619-97-2	
8:2 FTS	0.46U	ng/L	1.9	0.46	1	07/31/23 18:31	08/03/23 02:03	39108-34-4	
9CI-PF3ONS	0.48U	ng/L	1.9	0.48	1	07/31/23 18:31	08/03/23 02:03	756426-58-1	
ADONA	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 02:03	919005-14-4	
HFPO-DA	0.71U	ng/L	1.9	0.71	1	07/31/23 18:31	08/03/23 02:03	13252-13-6	
NFDHA	0.28U	ng/L	1.9	0.28	1	07/31/23 18:31	08/03/23 02:03	151772-58-6	
Perfluorobutanesulfonic acid	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 02:03	375-73-5	
Perfluorodecanoic acid	0.30U	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 02:03	335-76-2	
Perfluorohexanoic acid	0.78J	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 02:03	307-24-4	
PFBA	2.3	ng/L	1.9	0.59	1	07/31/23 18:31	08/03/23 02:03	375-22-4	
PFEESA	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 02:03	113507-82-7	
PFHpS	0.39U	ng/L	1.9	0.39	1	07/31/23 18:31	08/03/23 02:03	375-92-8	
PFMBA	0.25U	ng/L	1.9	0.25	1	07/31/23 18:31	08/03/23 02:03	863090-89-5	
PFMPA	0.32U	ng/L	1.9	0.32	1	07/31/23 18:31	08/03/23 02:03	377-73-1	
PFPeA	0.30U	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 02:03	2706-90-3	
PFPeS	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 02:03	2706-91-4	
Perfluorododecanoic acid	0.52U	ng/L	1.9	0.52	1	07/31/23 18:31	08/03/23 02:03	307-55-1	
Perfluoroheptanoic acid	0.42U	ng/L	1.9	0.42	1	07/31/23 18:31	08/03/23 02:03	375-85-9	
Perfluorohexanesulfonic acid	0.36U	ng/L	1.9	0.36	1	07/31/23 18:31	08/03/23 02:03	355-46-4	
Perfluorononanoic acid	0.32U	ng/L	1.9	0.32	1	07/31/23 18:31	08/03/23 02:03	375-95-1	
Perfluorooctanesulfonic acid	0.34U	ng/L	1.9	0.34	1	07/31/23 18:31	08/03/23 02:03	1763-23-1	
Perfluorooctanoic acid	0.30U	ng/L	1.9	0.30	1	07/31/23 18:31	08/03/23 02:03	335-67-1	
Perfluoroundecanoic acid	0.41U	ng/L	1.9	0.41	1	07/31/23 18:31	08/03/23 02:03	2058-94-8	
Surrogates									
13C24:2FTS (S)	164	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C26:2FTS (S)	143	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C28:2FTS (S)	134	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C2-PFDoA (S)	106	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C3HFPO-DA(S)	85	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C3-PFBS (S)	115	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C3-PFHxS (S)	117	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C4-PFBA (S)	107	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C4-PFHpA (S)	99	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C5-PFHxA (S)	100	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C5-PFPeA (S)	94	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C6-PFDA (S)	103	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C7-PFUdA (S)	101	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C8-PFOA (S)	103	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C8-PFOS (S)	115	%	50-200		1	07/31/23 18:31	08/03/23 02:03		
13C9-PFNA (S)	100	%	50-200		1	07/31/23 18:31	08/03/23 02:03		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NSA Mayport

Pace Project No.: 35816698

Sample: NS MAYPORT Lab ID: 35816698003 Collected: 07/26/23 09:05 Received: 07/31/23 11:23 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	1.4U	ng/L	1.8	1.4	1	08/01/23 10:06	08/03/23 02:55	763051-92-9	
9CI-PF3ONS	1.0U	ng/L	1.8	1.0	1	08/01/23 10:06	08/03/23 02:55	756426-58-1	
ADONA	0.65U	ng/L	1.8	0.65	1	08/01/23 10:06	08/03/23 02:55	919005-14-4	
HFPO-DA	1.5U	ng/L	1.8	1.5	1	08/01/23 10:06	08/03/23 02:55	13252-13-6	
NEtFOSAA	0.84U	ng/L	1.8	0.84	1	08/01/23 10:06	08/03/23 02:55	2991-50-6	
NMeFOSAA	1.4U	ng/L	1.8	1.4	1	08/01/23 10:06	08/03/23 02:55	2355-31-9	
Perfluorobutanesulfonic acid	0.60U	ng/L	1.8	0.60	1	08/01/23 10:06	08/03/23 02:55	375-73-5	
Perfluorodecanoic acid	0.87U	ng/L	1.8	0.87	1	08/01/23 10:06	08/03/23 02:55	335-76-2	
Perfluorohexanoic acid	1.1U	ng/L	1.8	1.1	1	08/01/23 10:06	08/03/23 02:55	307-24-4	
Perfluorododecanoic acid	1.3U	ng/L	1.8	1.3	1	08/01/23 10:06	08/03/23 02:55	307-55-1	
Perfluoroheptanoic acid	0.91U	ng/L	1.8	0.91	1	08/01/23 10:06	08/03/23 02:55	375-85-9	
Perfluorohexanesulfonic acid	0.66U	ng/L	1.8	0.66	1	08/01/23 10:06	08/03/23 02:55	355-46-4	
Perfluorononanoic acid	1.8U	ng/L	1.8	1.8	1	08/01/23 10:06	08/03/23 02:55	375-95-1	
Perfluorooctanesulfonic acid	1.1U	ng/L	1.8	1.1	1	08/01/23 10:06	08/03/23 02:55	1763-23-1	
Perfluorooctanoic acid	0.79U	ng/L	1.8	0.79	1	08/01/23 10:06	08/03/23 02:55	335-67-1	
Perfluorotetradecanoic acid	1.7U	ng/L	1.8	1.7	1	08/01/23 10:06	08/03/23 02:55	376-06-7	
Perfluorotridecanoic acid	1.6U	ng/L	1.8	1.6	1	08/01/23 10:06	08/03/23 02:55	72629-94-8	
Perfluoroundecanoic acid	1.8U	ng/L	1.8	1.8	1	08/01/23 10:06	08/03/23 02:55	2058-94-8	
Surrogates									
13C2-PFDA (S)	113	%	70-130		1	08/01/23 10:06	08/03/23 02:55		
13C2-PFHxA (S)	116	%	70-130		1	08/01/23 10:06	08/03/23 02:55		
NEtFOSAA-d5 (S)	113	%	70-130		1	08/01/23 10:06	08/03/23 02:55		
HFPO-DAS (S)	116	%	70-130		1	08/01/23 10:06	08/03/23 02:55		

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ANALYTICAL RESULTS

Project: NSA Mayport

Pace Project No.: 35816698

Sample: NS MAYPORT FB Lab ID: 35816698004 Collected: 07/26/23 09:05 Received: 07/31/23 11:23 Matrix: Drinking Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
537.1 PFAS Compounds, Water									
Analytical Method: EPA 537.1 Preparation Method: EPA 537.1									
Pace Analytical Services - Ormond Beach									
11CI-PF3OUdS	1.5U	ng/L	1.8	1.5	1	08/01/23 10:06	08/03/23 03:11	763051-92-9	
9CI-PF3ONS	1.1U	ng/L	1.8	1.1	1	08/01/23 10:06	08/03/23 03:11	756426-58-1	
ADONA	0.68U	ng/L	1.8	0.68	1	08/01/23 10:06	08/03/23 03:11	919005-14-4	
HFPO-DA	1.5U	ng/L	1.8	1.5	1	08/01/23 10:06	08/03/23 03:11	13252-13-6	
NEtFOSAA	0.87U	ng/L	1.8	0.87	1	08/01/23 10:06	08/03/23 03:11	2991-50-6	
NMeFOSAA	1.5U	ng/L	1.8	1.5	1	08/01/23 10:06	08/03/23 03:11	2355-31-9	
Perfluorobutanesulfonic acid	0.63U	ng/L	1.8	0.63	1	08/01/23 10:06	08/03/23 03:11	375-73-5	
Perfluorodecanoic acid	0.91U	ng/L	1.8	0.91	1	08/01/23 10:06	08/03/23 03:11	335-76-2	
Perfluorohexanoic acid	1.2U	ng/L	1.8	1.2	1	08/01/23 10:06	08/03/23 03:11	307-24-4	
Perfluorododecanoic acid	1.4U	ng/L	1.8	1.4	1	08/01/23 10:06	08/03/23 03:11	307-55-1	
Perfluoroheptanoic acid	0.95U	ng/L	1.8	0.95	1	08/01/23 10:06	08/03/23 03:11	375-85-9	
Perfluorohexanesulfonic acid	0.69U	ng/L	1.8	0.69	1	08/01/23 10:06	08/03/23 03:11	355-46-4	
Perfluorononanoic acid	1.8U	ng/L	1.8	1.8	1	08/01/23 10:06	08/03/23 03:11	375-95-1	
Perfluorooctanesulfonic acid	1.1U	ng/L	1.8	1.1	1	08/01/23 10:06	08/03/23 03:11	1763-23-1	
Perfluorooctanoic acid	0.82U	ng/L	1.8	0.82	1	08/01/23 10:06	08/03/23 03:11	335-67-1	
Perfluorotetradecanoic acid	1.8U	ng/L	1.8	1.8	1	08/01/23 10:06	08/03/23 03:11	376-06-7	
Perfluorotridecanoic acid	1.6U	ng/L	1.8	1.6	1	08/01/23 10:06	08/03/23 03:11	72629-94-8	
Perfluoroundecanoic acid	1.8U	ng/L	1.8	1.8	1	08/01/23 10:06	08/03/23 03:11	2058-94-8	
Surrogates									
13C2-PFDA (S)	115	%	70-130		1	08/01/23 10:06	08/03/23 03:11		
13C2-PFHxA (S)	118	%	70-130		1	08/01/23 10:06	08/03/23 03:11		
NEtFOSAA-d5 (S)	116	%	70-130		1	08/01/23 10:06	08/03/23 03:11		
HFPO-DAS (S)	120	%	70-130		1	08/01/23 10:06	08/03/23 03:11		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

QC Batch: 938102

Analysis Method: EPA 533

QC Batch Method: EPA 533

Analysis Description: 533 PFAS Compounds, Water

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35816698001, 35816698002

METHOD BLANK: 5155314

Matrix: Drinking Water

Associated Lab Samples: 35816698001, 35816698002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	0.45U	2.0	0.45	08/02/23 21:29	
4:2 FTS	ng/L	0.58U	2.0	0.58	08/02/23 21:29	
6:2 FTS	ng/L	3.6U	4.0	3.6	08/02/23 21:29	
8:2 FTS	ng/L	0.49U	2.0	0.49	08/02/23 21:29	
9CI-PF3ONS	ng/L	0.51U	2.0	0.51	08/02/23 21:29	
ADONA	ng/L	0.44U	2.0	0.44	08/02/23 21:29	
HFPO-DA	ng/L	0.75U	2.0	0.75	08/02/23 21:29	
NFDHA	ng/L	0.30U	2.0	0.30	08/02/23 21:29	
Perfluorobutanesulfonic acid	ng/L	0.44U	2.0	0.44	08/02/23 21:29	
Perfluorodecanoic acid	ng/L	0.32U	2.0	0.32	08/02/23 21:29	
Perfluorododecanoic acid	ng/L	0.55U	2.0	0.55	08/02/23 21:29	
Perfluoroheptanoic acid	ng/L	0.45U	2.0	0.45	08/02/23 21:29	
Perfluorohexanesulfonic acid	ng/L	0.38U	2.0	0.38	08/02/23 21:29	
Perfluorohexanoic acid	ng/L	0.32U	2.0	0.32	08/02/23 21:29	
Perfluorononanoic acid	ng/L	0.34U	2.0	0.34	08/02/23 21:29	
Perfluorooctanesulfonic acid	ng/L	0.36U	2.0	0.36	08/02/23 21:29	
Perfluorooctanoic acid	ng/L	0.32U	2.0	0.32	08/02/23 21:29	
Perfluoroundecanoic acid	ng/L	0.43U	2.0	0.43	08/02/23 21:29	
PFBA	ng/L	0.63U	2.0	0.63	08/02/23 21:29	
PFEESA	ng/L	0.36U	2.0	0.36	08/02/23 21:29	
PFHpS	ng/L	0.41U	2.0	0.41	08/02/23 21:29	
PFMBA	ng/L	0.27U	2.0	0.27	08/02/23 21:29	
PFMPA	ng/L	0.34U	2.0	0.34	08/02/23 21:29	
PFPeA	ng/L	0.32U	2.0	0.32	08/02/23 21:29	
PFPeS	ng/L	0.36U	2.0	0.36	08/02/23 21:29	
13C2-PFDoA (S)	%	111	50-200		08/02/23 21:29	
13C24:2FTS (S)	%	124	50-200		08/02/23 21:29	
13C26:2FTS (S)	%	127	50-200		08/02/23 21:29	
13C28:2FTS (S)	%	119	50-200		08/02/23 21:29	
13C3-PFBS (S)	%	122	50-200		08/02/23 21:29	
13C3-PFHxS (S)	%	117	50-200		08/02/23 21:29	
13C3HFPO-DA(S)	%	104	50-200		08/02/23 21:29	
13C4-PFBA (S)	%	116	50-200		08/02/23 21:29	
13C4-PFHpA (S)	%	107	50-200		08/02/23 21:29	
13C5-PFHxA (S)	%	117	50-200		08/02/23 21:29	
13C5-PFPeA (S)	%	112	50-200		08/02/23 21:29	
13C6-PFDA (S)	%	108	50-200		08/02/23 21:29	
13C7-PFUdA (S)	%	114	50-200		08/02/23 21:29	
13C8-PFOA (S)	%	112	50-200		08/02/23 21:29	
13C8-PFOS (S)	%	118	50-200		08/02/23 21:29	

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

METHOD BLANK: 5155314

Matrix: Drinking Water

Associated Lab Samples: 35816698001, 35816698002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	110	50-200		08/02/23 21:29	

LABORATORY CONTROL SAMPLE: 5155315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	38	38.5	101	70-130	
4:2 FTS	ng/L	38	41.1	108	70-130	
6:2 FTS	ng/L	38	36.5	96	70-130	
8:2 FTS	ng/L	38	39.1	103	70-130	
9CI-PF3ONS	ng/L	38	38.1	100	70-130	
ADONA	ng/L	38	36.5	96	70-130	
HFPO-DA	ng/L	40	41.7	104	70-130	
NFDHA	ng/L	40	40.1	100	70-130	
Perfluorobutanesulfonic acid	ng/L	36	35.9	100	70-130	
Perfluorodecanoic acid	ng/L	40	42.5	106	70-130	
Perfluorododecanoic acid	ng/L	40	40.0	100	70-130	
Perfluoroheptanoic acid	ng/L	40	42.6	106	70-130	
Perfluorohexanesulfonic acid	ng/L	36	38.8	108	70-130	
Perfluorohexanoic acid	ng/L	40	40.3	101	70-130	
Perfluorononanoic acid	ng/L	40	39.1	98	70-130	
Perfluorooctanesulfonic acid	ng/L	38	37.8	99	70-130	
Perfluorooctanoic acid	ng/L	40	39.1	98	70-130	
Perfluoroundecanoic acid	ng/L	40	42.6	107	70-130	
PFBA	ng/L	40	39.9	100	70-130	
PFEESA	ng/L	36	36.1	100	70-130	
PFHpS	ng/L	38	38.0	100	70-130	
PFMBA	ng/L	40	41.4	103	70-130	
PFMPA	ng/L	40	40.4	101	70-130	
PFPeA	ng/L	40	41.9	105	70-130	
PFPeS	ng/L	38	38.9	102	70-130	
13C2-PFDoA (S)	%			107	50-200	
13C24:2FTS (S)	%			122	50-200	
13C26:2FTS (S)	%			125	50-200	
13C28:2FTS (S)	%			116	50-200	
13C3-PFBS (S)	%			121	50-200	
13C3-PFHxS (S)	%			115	50-200	
13C3HFPO-DA(S)	%			102	50-200	
13C4-PFBA (S)	%			109	50-200	
13C4-PFHpA (S)	%			102	50-200	
13C5-PFHxA (S)	%			108	50-200	
13C5-PFPeA (S)	%			104	50-200	
13C6-PFDA (S)	%			103	50-200	
13C7-PFUdA (S)	%			99	50-200	
13C8-PFOA (S)	%			108	50-200	

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

LABORATORY CONTROL SAMPLE: 5155315

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			114	50-200	
13C9-PFNA (S)	%			106	50-200	

LABORATORY CONTROL SAMPLE: 5155316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	1.9	1.7J	89	50-150	
4:2 FTS	ng/L	1.9	2.0J	104	50-150	
6:2 FTS	ng/L	1.9	3.6U	102	50-150	
8:2 FTS	ng/L	1.9	1.9J	98	50-150	
9CI-PF3ONS	ng/L	1.9	1.7J	90	50-150	
ADONA	ng/L	1.9	1.7J	89	50-150	
HFPO-DA	ng/L	2	1.8J	90	50-150	
NFDHA	ng/L	2	2.0	102	50-150	
Perfluorobutanesulfonic acid	ng/L	1.8	2.0J	111	50-150	
Perfluorodecanoic acid	ng/L	2	1.9J	94	50-150	
Perfluorododecanoic acid	ng/L	2	1.9J	96	50-150	
Perfluoroheptanoic acid	ng/L	2	1.9J	93	50-150	
Perfluorohexanesulfonic acid	ng/L	1.8	1.9J	106	50-150	
Perfluorohexanoic acid	ng/L	2	1.8J	91	50-150	
Perfluorononanoic acid	ng/L	2	2.0J	99	50-150	
Perfluorooctanesulfonic acid	ng/L	1.9	1.8J	97	50-150	
Perfluorooctanoic acid	ng/L	2	1.9J	95	50-150	
Perfluoroundecanoic acid	ng/L	2	1.8J	92	50-150	
PFBA	ng/L	2	1.9J	96	50-150	
PFEESA	ng/L	1.8	1.7J	94	50-150	
PFHpS	ng/L	1.9	1.8J	94	50-150	
PFMBA	ng/L	2	2.0	101	50-150	
PFMPA	ng/L	2	2.0J	98	50-150	
PFPeA	ng/L	2	2.0	101	50-150	
PFPeS	ng/L	1.9	1.8J	95	50-150	
13C2-PFDoA (S)	%			105	50-200	
13C24:2FTS (S)	%			118	50-200	
13C26:2FTS (S)	%			118	50-200	
13C28:2FTS (S)	%			113	50-200	
13C3-PFBS (S)	%			116	50-200	
13C3-PFHxS (S)	%			111	50-200	
13C3HFPO-DA(S)	%			97	50-200	
13C4-PFBA (S)	%			108	50-200	
13C4-PFHpA (S)	%			102	50-200	
13C5-PFHxA (S)	%			108	50-200	
13C5-PFPeA (S)	%			103	50-200	
13C6-PFDA (S)	%			104	50-200	
13C7-PFUdA (S)	%			103	50-200	
13C8-PFOA (S)	%			105	50-200	

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QUALITY CONTROL DATA

Project: NSA Mayport
Pace Project No.: 35816698

LABORATORY CONTROL SAMPLE: 5155316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			112	50-200	
13C9-PFNA (S)	%			101	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5155317 5155318

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		35816703001 Result	Spike Conc.	Spike Conc.	Result							Result
11CI-PF3OUdS	ng/L	0.42U	7.9	7.3	7.2	6.2	91	85	70-130	16	30	
4:2 FTS	ng/L	0.54U	7.9	7.3	7.7	6.9	97	95	70-130	11	30	
6:2 FTS	ng/L	3.3U	7.9	7.3	7.4	6.5	91	86	70-130	14	30	
8:2 FTS	ng/L	0.45U	7.9	7.3	7.9	7.1	100	97	70-130	12	30	
9CI-PF3ONS	ng/L	0.47U	7.9	7.3	7.3	6.2	91	84	70-130	16	30	
ADONA	ng/L	0.41U	7.9	7.3	6.7	5.8	84	80	70-130	14	30	
HFPO-DA	ng/L	0.70U	8.4	7.7	8.9	8.1	101	99	70-130	10	30	
NFDHA	ng/L	0.28U	8.4	7.7	7.8	6.4	92	83	70-130	19	30	
Perfluorobutanesulfonic acid	ng/L	0.41U	7.5	6.9	6.8	6.3	91	92	70-130	8	30	
Perfluorodecanoic acid	ng/L	0.30U	8.4	7.7	7.8	6.6	93	87	70-130	16	30	
Perfluorododecanoic acid	ng/L	0.51U	8.4	7.7	7.5	6.1	90	79	70-130	21	30	
Perfluoroheptanoic acid	ng/L	0.42U	8.4	7.7	8.2	6.9	98	90	70-130	17	30	
Perfluorohexanesulfonic acid	ng/L	0.35U	7.5	6.9	7.8	6.5	103	94	70-130	17	30	
Perfluorohexanoic acid	ng/L	0.30U	8.4	7.7	7.7	6.8	91	86	70-130	14	30	
Perfluorononanoic acid	ng/L	0.32U	8.4	7.7	7.7	6.5	91	84	70-130	17	30	
Perfluorooctanesulfonic acid	ng/L	0.33U	7.9	7.3	7.6	6.2	95	85	70-130	19	30	
Perfluorooctanoic acid	ng/L	0.30U	8.4	7.7	7.9	6.9	94	90	70-130	13	30	
Perfluoroundecanoic acid	ng/L	0.40U	8.4	7.7	8.0	6.1	96	79	70-130	28	30	
PFBA	ng/L	0.58U	8.4	7.7	7.8	6.6	89	83	70-130	16	30	
PFEESA	ng/L	0.33U	7.5	6.9	7.0	6.2	93	91	70-130	12	30	
PFHpS	ng/L	0.38U	7.9	7.3	7.5	6.2	94	85	70-130	19	30	
PFMBA	ng/L	0.25U	8.4	7.7	8.3	7.1	99	93	70-130	15	30	
PFMPA	ng/L	0.32U	8.4	7.7	7.6	6.7	90	86	70-130	13	30	
PFPeA	ng/L	0.30U	8.4	7.7	8.1	7.1	97	92	70-130	13	30	
PFPeS	ng/L	0.33U	7.9	7.3	7.6	6.5	95	90	70-130	14	30	
13C2-PFDoA (S)	%						96	115	50-200			
13C24:2FTS (S)	%						184	199	50-200			
13C26:2FTS (S)	%						194	208	50-200			S0
13C28:2FTS (S)	%						149	159	50-200			
13C3-PFBS (S)	%						119	120	50-200			
13C3-PFHxS (S)	%						117	120	50-200			
13C3HFPO-DA(S)	%						73	83	50-200			
13C4-PFBA (S)	%						102	107	50-200			
13C4-PFHpA (S)	%						93	95	50-200			
13C5-PFHxA (S)	%						92	99	50-200			
13C5-PFPeA (S)	%						86	92	50-200			

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5155317												5155318	
Parameter	Units	35816703001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
			Spike Conc.	Spike Conc.									
13C6-PFDA (S)	%						91	99	50-200				
13C7-PFUdA (S)	%						94	105	50-200				
13C8-PFOA (S)	%						98	99	50-200				
13C8-PFOS (S)	%						116	121	50-200				
13C9-PFNA (S)	%						93	97	50-200				

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

QC Batch: 938239

Analysis Method: EPA 537.1

QC Batch Method: EPA 537.1

Analysis Description: 537.1 PFOA Compounds, Water

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35816698003, 35816698004

METHOD BLANK: 5155984

Matrix: Water

Associated Lab Samples: 35816698003, 35816698004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	1.6U	2.0	1.6	08/02/23 23:45	
9CI-PF3ONS	ng/L	1.2U	2.0	1.2	08/02/23 23:45	
ADONA	ng/L	0.74U	2.0	0.74	08/02/23 23:45	
HFPO-DA	ng/L	1.7U	2.0	1.7	08/02/23 23:45	
NEtFOSAA	ng/L	0.95U	2.0	0.95	08/02/23 23:45	
NMeFOSAA	ng/L	1.6U	2.0	1.6	08/02/23 23:45	
Perfluorobutanesulfonic acid	ng/L	0.68U	2.0	0.68	08/02/23 23:45	
Perfluorodecanoic acid	ng/L	0.99U	2.0	0.99	08/02/23 23:45	
Perfluorododecanoic acid	ng/L	1.5U	2.0	1.5	08/02/23 23:45	
Perfluoroheptanoic acid	ng/L	1.0U	2.0	1.0	08/02/23 23:45	
Perfluorohexanesulfonic acid	ng/L	0.75U	2.0	0.75	08/02/23 23:45	
Perfluorohexanoic acid	ng/L	1.3U	2.0	1.3	08/02/23 23:45	
Perfluorononanoic acid	ng/L	2.0U	2.0	2.0	08/02/23 23:45	
Perfluorooctanesulfonic acid	ng/L	1.2U	2.0	1.2	08/02/23 23:45	
Perfluorooctanoic acid	ng/L	0.89U	2.0	0.89	08/02/23 23:45	
Perfluorotetradecanoic acid	ng/L	1.9U	2.0	1.9	08/02/23 23:45	
Perfluorotridecanoic acid	ng/L	1.8U	2.0	1.8	08/02/23 23:45	
Perfluoroundecanoic acid	ng/L	2.0U	2.0	2.0	08/02/23 23:45	
13C2-PFDA (S)	%	107	70-130		08/02/23 23:45	
13C2-PFHxA (S)	%	108	70-130		08/02/23 23:45	
HFPO-DAS (S)	%	99	70-130		08/02/23 23:45	
NEtFOSAA-d5 (S)	%	104	70-130		08/02/23 23:45	

LABORATORY CONTROL SAMPLE: 5155985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	7.5	8.4	112	70-130	
9CI-PF3ONS	ng/L	7.4	8.5	114	70-130	
ADONA	ng/L	7.6	8.5	112	70-130	
HFPO-DA	ng/L	8	9.0	113	70-130	
NEtFOSAA	ng/L	8	9.3	116	70-130	
NMeFOSAA	ng/L	8	8.9	111	70-130	
Perfluorobutanesulfonic acid	ng/L	7.1	7.7	109	70-130	
Perfluorodecanoic acid	ng/L	8	9.2	114	70-130	
Perfluorododecanoic acid	ng/L	8	9.1	114	70-130	
Perfluoroheptanoic acid	ng/L	8	9.0	112	70-130	
Perfluorohexanesulfonic acid	ng/L	7.3	8.3	114	70-130	
Perfluorohexanoic acid	ng/L	8	9.0	112	70-130	
Perfluorononanoic acid	ng/L	8	9.2	115	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

LABORATORY CONTROL SAMPLE: 5155985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Perfluorooctanesulfonic acid	ng/L	7.4	8.6	116	70-130	
Perfluorooctanoic acid	ng/L	8	8.8	110	70-130	
Perfluorotetradecanoic acid	ng/L	8	8.9	112	70-130	
Perfluorotridecanoic acid	ng/L	8	8.7	109	70-130	
Perfluoroundecanoic acid	ng/L	8	9.0	112	70-130	
13C2-PFDA (S)	%			111	70-130	
13C2-PFHxA (S)	%			108	70-130	
HFPO-DAS (S)	%			106	70-130	
NETFOSAA-d5 (S)	%			107	70-130	

LABORATORY CONTROL SAMPLE: 5155986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	1.9	2.1	111	50-150	
9CI-PF3ONS	ng/L	1.9	2.1	116	50-150	
ADONA	ng/L	1.9	2.2	115	50-150	
HFPO-DA	ng/L	2	2.3	117	50-150	
NETFOSAA	ng/L	2	2.4	118	50-150	
NMeFOSAA	ng/L	2	2.4	118	50-150	
Perfluorobutanesulfonic acid	ng/L	1.8	1.9J	109	50-150	
Perfluorodecanoic acid	ng/L	2	2.3	117	50-150	
Perfluorododecanoic acid	ng/L	2	2.3	114	50-150	
Perfluoroheptanoic acid	ng/L	2	2.3	117	50-150	
Perfluorohexanesulfonic acid	ng/L	1.8	1.9J	104	50-150	
Perfluorohexanoic acid	ng/L	2	2.4	119	50-150	
Perfluorononanoic acid	ng/L	2	2.3	117	50-150	
Perfluorooctanesulfonic acid	ng/L	1.9	2.3	125	50-150	
Perfluorooctanoic acid	ng/L	2	2.3	114	50-150	
Perfluorotetradecanoic acid	ng/L	2	2.3	114	50-150	
Perfluorotridecanoic acid	ng/L	2	2.3	115	50-150	
Perfluoroundecanoic acid	ng/L	2	2.3	115	50-150	
13C2-PFDA (S)	%			122	70-130	
13C2-PFHxA (S)	%			123	70-130	
HFPO-DAS (S)	%			116	70-130	
NETFOSAA-d5 (S)	%			117	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5155987 5155988

Parameter	Units	35815759001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	Spike Conc.							
11CI-PF3OUdS	ng/L	0.0016U ug/L	145	139	137	147	94	106	70-130	7	30
9CI-PF3ONS	ng/L	0.0011U ug/L	144	137	136	143	95	104	70-130	5	30

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QUALITY CONTROL DATA

Project: NSA Mayport

Pace Project No.: 35816698

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5155987												5155988	
Parameter	Units	35815759001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD	
ADONA	ng/L	0.00071U ug/L	145	139	140	144	96	104	70-130	3	30		
HFPO-DA	ng/L	0.0016U ug/L	154	147	142	154	93	105	70-130	8	30		
NEtFOSAA	ng/L	0.00091U ug/L	154	147	142	152	92	103	70-130	7	30		
NMeFOSAA	ng/L	0.0015U ug/L	154	147	144	162	94	110	70-130	12	30		
Perfluorobutanesulfonic acid	ng/L	0.0015J ug/L	136	130	131	137	95	105	70-130	5	30		
Perfluorodecanoic acid	ng/L	0.00095U ug/L	154	147	148	156	96	106	70-130	5	30		
Perfluorododecanoic acid	ng/L	0.0014U ug/L	154	147	145	157	94	107	70-130	8	30		
Perfluoroheptanoic acid	ng/L	0.00099U ug/L	154	147	149	155	97	105	70-130	3	30		
Perfluorohexanesulfonic acid	ng/L	0.0024 ug/L	140	134	140	144	98	106	70-130	3	30		
Perfluorohexanoic acid	ng/L	0.0014J ug/L	154	147	148	152	96	103	70-130	2	30		
Perfluorononanoic acid	ng/L	0.0019U ug/L	154	147	152	158	99	108	70-130	4	30		
Perfluorooctanesulfonic acid	ng/L	0.0012U ug/L	142	136	137	146	96	107	70-130	6	30		
Perfluorooctanoic acid	ng/L	0.0014J ug/L	154	147	150	153	97	104	70-130	2	30		
Perfluorotetradecanoic acid	ng/L	0.0018U ug/L	154	147	145	155	94	106	70-130	7	30		
Perfluorotridecanoic acid	ng/L	0.0017U ug/L	154	147	143	153	93	104	70-130	7	30		
Perfluoroundecanoic acid	ng/L	0.0019U ug/L	154	147	143	156	93	106	70-130	8	30		
13C2-PFDA (S)	%						107	111	70-130				
13C2-PFHxA (S)	%						115	116	70-130				
HFPO-DAS (S)	%						117	115	70-130				
NEtFOSAA-d5 (S)	%						104	114	70-130				

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QUALIFIERS

Project: NSA Mayport

Pace Project No.: 35816698

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

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NSA Mayport

Pace Project No.: 35816698

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35816698001	NS MAYPORT	EPA 533	938102	EPA 533	938655
35816698002	NS MAYPORT FB	EPA 533	938102	EPA 533	938655
35816698003	NS MAYPORT	EPA 537.1	938239	EPA 537.1	938669
35816698004	NS MAYPORT FB	EPA 537.1	938239	EPA 537.1	938669

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Pace

WO#: 35816698

PM: VEG Due Date: 08/14/23
 CLIENT: AHENVI

Receipt Form (SCUR)

Project #
 Project Manager:
 Client:

Date and Initials of person:
 Examining contents:
 Label:
 Deliver: EAST
 pH:
 Initials: NPI

Thermometer Used: T-414 Date: 7/31/23 Time: 1123

State of Origin: For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp. °C 5.4 (Visual) 0 (Correction Factor) 5.4 (Actual)
 Cooler #2 Temp. °C 3.3 (Visual) (Correction Factor) 3.3 (Actual)
 Cooler #3 Temp. °C 1.2 (Visual) (Correction Factor) 1.2 (Actual)
 Cooler #4 Temp. °C 3.9 (Visual) (Correction Factor) 3.9 (Actual)
 Cooler #5 Temp. °C (Visual) (Correction Factor) (Actual)
 Cooler #6 Temp. °C (Visual) (Correction Factor) (Actual)
 Recheck for OOT °C (Visual) (Correction Factor) (Actual)

Samples on ice, cooling process has begun.
 Samples on ice, cooling process has begun.
 Samples on ice, cooling process has begun.
 Samples on ice, cooling process has begun.
 Samples on ice, cooling process has begun.
 Samples on ice, cooling process has begun.
 Time: Initials:

Courier: Fed Ex UPS USPS Client Commercial Pace Other:
 Shipping Method: Standard Overnight First Overnight Priority Overnight Ground International Priority Other:
 Billing: Recipient Sender Third Party Credit Card Unknown

Tracking #
 Custody Seal Present: Yes No Seal properly placed and intact: Yes No
 Ice: Wet Blue Dry None Melted
 Packing Material: Bubble Wrap Bubble Bags None Other:

Samples shorted to lab: Yes No (If yes, complete the following)
 Shorted Date: Shorted Time:
 Bottle Quantity / Type:

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Filled Out: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Relinquished From Pace: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Sampler Name: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A								
	Relinquished To Pace: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Sampling Date(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Sampling Time(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A								
Samples Arrived within Hold Time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:								
Rush Turnaround Requested on COC.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Comments:								
Sufficient Volume.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:								
Correct Containers Used.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:								
Containers Intact.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Comments:								
Sample Labels Match COC (Sample ID, Date/Time of Collection).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Comments:								
All containers needing acid / base preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
All containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: Vials, Microbiology, O&G, PFAS	<table border="1"> <tr> <th colspan="2">Preservation Information</th> </tr> <tr> <td>Preservative: _____</td> <td>Date: _____</td> </tr> <tr> <td>Lot / Trace: _____</td> <td>Time: _____</td> </tr> <tr> <td>Amount added (mL): _____</td> <td>Initials: _____</td> </tr> </table>	Preservation Information		Preservative: _____	Date: _____	Lot / Trace: _____	Time: _____	Amount added (mL): _____	Initials: _____
	Preservation Information								
	Preservative: _____	Date: _____							
Lot / Trace: _____	Time: _____								
Amount added (mL): _____	Initials: _____								
Headspace in Volatile Vials? (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A								

Comments / Resolutions (use back for additional comments): No matrix or # of containers on COC

PFC Sample Collection Form

Facility:	NS Mayport, Florida		
Sample Collection Date/Time:	07/26/20 at 0900		
Sampled By:	Steve Harper		
Sample Location Description - (Well House, WTP, etc.):	WTP		
Water Supply Source (Check one)	<input checked="" type="radio"/> Well	<input type="radio"/> Surface Water	<input type="radio"/> Consecutive System
Sample Port Type (tap, hose bib, etc.)	Sink Tap in WTP Lab		
Weather Conditions:	80°F, partly cloudy, sunny		
Field Blank Collected:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Duplicate Collected:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Shipping Container type:	<input checked="" type="radio"/> Cooler	<input type="radio"/> Box	
Ice Added?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Shipper Used?	Delivered in person 07/31/23		
Notes & Photos:	Tracking Number	NA	