



MEMORANDUM

To: Tom Rauth, NAVFAC SE
From: AH Engineering Consultants, Inc.
Subject: NALF Orange Grove, TX, Per- and Polyfluoroalkyl Substances [PFAS] Sampling Support Analytical Results (USEPA Methods 533 and 537.1) – Event 2
Date: 20 September 2024

On 15 August 2024, AH engineer Faysal Bekdash, visited NALF Orange Grove, TX., following logistics coordination with Albert Guajardo, PWD Kingsville, to collect samples from the potable water system that were subsequently analyzed for the presence of PFAS substances (USEPA Method 537.1 and 533).

Finished water samples were collected from the lunchroom area kitchen sink. 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 were shipped via UPS overnight to Pace Analytical Services located in Ormond Beach Florida. Samples were received in the laboratory on 16 August 2024 in satisfactory condition.

Analytical results show that none of the 29 PFAS parameters analyzed were detected above the respective Practical Quantification Limits (PQLs). PFOS/PFOA were not detected. Lab QA/QC checks were satisfactory (Field Blank, Method Blank, Matrix Spike/Matrix Spike Duplicates).

Table 1 PFAS Analytical Results

Parameter	CAS Number	Method	Results (ng/L)	Practical Quantification Limit (PQL) AKA Method Report Limit (MRL) (ng/L)	Method Detection Limit (MDL) (ng/L)
11CI-PF3OUdS	763051-92-9	533	0.41U	1.8	0.41
4:2 FTS	757124-72-4	533	0.53U	1.8	0.53
6:2 FTS	27619-97-2	533	3.3U	3.6	3.3
8:2 FTS	39108-34-4	533	0.45U	1.8	0.45
9CI-PF3ONS	756426-58-1	533	0.46U	1.8	0.46
ADONA	919005-14-4	533	0.40U	1.8	0.40
HFPO-DA	13252-13-6	533	0.68U	1.8	0.68
NFDHA	151772-58-6	533	1.5U	1.8	1.5
PFBA	375-22-4	533	0.57U	1.8	0.57
PFEESA	113507-82-7	533	0.33U	1.8	0.33
PFHpS	375-92-8	533	0.41U	1.8	0.41
PFMBA	863090-89-5	533	0.25U	1.8	0.25
PFMPA	377-73-1	533	0.31U	1.8	0.31
PFPeA	2706-90-3	533	0.29U	1.8	0.29
PFPeS	2706-91-4	533	0.71U	1.8	0.71
NEtFOSAA	2991-50-6	537.1	0.89U	1.9	0.89
NMeFOSAA	2355-31-9	537.1	1.5U	1.9	1.5
Perfluorobutanesulfonic acid (PFBSA)	375-73-5	533	0.40U	1.8	0.40
Perfluorodecanoic acid (PFDA)	335-76-2	533	0.29U	1.8	0.29
Perfluorododecanoic acid (PFDOA)	307-55-1	533	0.50U	1.8	0.50
Perfluoroheptanoic acid (PFHPA)	375-85-9	533	0.41U	1.8	0.41
Perfluorohexanesulfonic acid (PFHXSA)	355-46-4	533	0.85U	1.8	0.85
Perfluorohexanoic acid (PFHXA)	307-24-4	533	0.29U	1.8	0.29
Perfluorononanoic acid (PFNA)	375-95-1	533	0.31U	1.8	0.31
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	533	0.33U	1.8	0.33
Perfluorooctanoic acid (PFOA)	335-67-1	533	0.29U	1.8	0.29
Perfluorotetradecanoic acid (PFTEA)	376-06-7	537.1	1.8U	1.9	1.8
Perfluorotridecanoic acid (PFTRIA)	72629-94-8	537.1	1.7U	1.9	1.7
Perfluoroundecanoic acid (PFUNA)	2058-94-8	533	0.39U	1.8	0.39

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.

In accordance with the USEPAs April 10, 2024, publishing of the PFAS National Primary Drinking Water Regulations (NPDWR), AH compared the published MCLs with the results in Table 1. Table 2 below provides the results of this comparison, showing that of the 5 PFAS MCLs, none exceeded their respective MCLs. Additionally, the USEPA PFAS NPDWR also includes a final Hazard Index (unitless MCL of 1) for a mixture of PFHxS,

PFNA, HFPO-DA, and PFBS. AH calculated the hazard index per the regulatory prescribed method and determined a Hazard Index of 0.0 (refer to Table 3).

Table 2 USEPA PFAS MCL Comparison

Individual USEPA PFAS MCL Comparison	Result (ng/L)	USEPA MCL (ng/L)
PFOA	0.29U	4
PFOS	0.33U	4
PFHxS	0.85U	10
HFPO-DA	0.68U	10
PFNA	0.31U	10

Table 3 USEPA Hazard Index MCL Calculation

USEPA Hazard Index MCL Calculation:		
HFPO-DA	0.68U	0
PFBS	0.40U	0
PFNA	0.31U	0
PFHxS	0.85U	0
Hazard Index:		0.00
USEPA Hazard Index MCL = 1 (unitless)		

The final rule (<https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas>) requires:

- Public water systems must monitor for these PFAS and have three years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Water systems must also provide the public with information on the levels of these PFAS in their drinking water beginning in 2027.
- Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs.
- Beginning in five years (2029), public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation.

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 Laboratory Report



August 27, 2024

Anthony Gruber
AH Environmental

RE: Project: NALF Orange Grove
Pace Project No.: 35899358

Dear Anthony Gruber:

Enclosed are the analytical results for sample(s) received by the laboratory on August 16, 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 - 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: Jay Allen, AH Environmental Consultants
Faysal Bekdash, AH Environmental Consultants, Inc.
Nick DeGuida, AH Environmental Consultants



REPORT OF LABORATORY ANALYSIS

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



CERTIFICATIONS

Project: NALF Orange Grove

Pace Project No.: 35899358

Pace Analytical Services Ormond Beach

8 East Tower Circle, Ormond Beach, FL 32174

Alaska DEC- CS/UST/LUST

Alabama Certification #: 41320

California Certification# 3096

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

Nevada Certification: FL NELAC Reciprocity

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

Utah FL NELAC Reciprocity

Utah

Virginia Environmental Certification #: 460165

West Virginia Certification #: 9962C

Wisconsin Certification #: 399079670

Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

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



SAMPLE SUMMARY

Project: NALF Orange Grove
Pace Project No.: 35899358

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35899358001	NALF OG DW-5-537.1/533	Drinking Water	08/15/24 12:35	08/16/24 10:30
35899358002	NALF OG DW-3-537.1/533	Drinking Water	08/15/24 12:20	08/16/24 10:30
35899358003	Field Blank	Drinking Water	08/15/24 12:30	08/16/24 10:30

REPORT OF LABORATORY ANALYSIS

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



SAMPLE ANALYTE COUNT

Project: NALF Orange Grove

Pace Project No.: 35899358

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35899358001	NALF OG DW-5-537.1/533	EPA 533	TSW	41	PASI-O
		EPA 537.1	TMM1	22	PASI-O
35899358002	NALF OG DW-3-537.1/533	EPA 533	TSW	41	PASI-O
		EPA 537.1	TMM1	22	PASI-O
35899358003	Field Blank	EPA 533	TSW	41	PASI-O
		EPA 537.1	TMM1	22	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: NALF OG DW-5-537.1/533 Lab ID: 35899358001 Collected: 08/15/24 12:35 Received: 08/16/24 10:30 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	0.41U	ng/L	1.8	0.41	1	08/23/24 05:21	08/26/24 02:00	763051-92-9	P4
4:2 FTS	0.53U	ng/L	1.8	0.53	1	08/23/24 05:21	08/26/24 02:00	757124-72-4	P4
6:2 FTS	3.3U	ng/L	3.7	3.3	1	08/23/24 05:21	08/26/24 02:00	27619-97-2	P4
8:2 FTS	0.45U	ng/L	1.8	0.45	1	08/23/24 05:21	08/26/24 02:00	39108-34-4	P4
9CI-PF3ONS	0.47U	ng/L	1.8	0.47	1	08/23/24 05:21	08/26/24 02:00	756426-58-1	P4
ADONA	0.41U	ng/L	1.8	0.41	1	08/23/24 05:21	08/26/24 02:00	919005-14-4	P4
HFPO-DA	0.69U	ng/L	1.8	0.69	1	08/23/24 05:21	08/26/24 02:00	13252-13-6	P4
NFDHA	1.5U	ng/L	1.8	1.5	1	08/23/24 05:21	08/26/24 02:00	151772-58-6	P4
PFBS	0.41U	ng/L	1.8	0.41	1	08/23/24 05:21	08/26/24 02:00	375-73-5	P4
PFDA	0.29U	ng/L	1.8	0.29	1	08/23/24 05:21	08/26/24 02:00	335-76-2	P4
PFHxA	0.29U	ng/L	1.8	0.29	1	08/23/24 05:21	08/26/24 02:00	307-24-4	P4
PFBA	0.58U	ng/L	1.8	0.58	1	08/23/24 05:21	08/26/24 02:00	375-22-4	P4
PFEESA	0.33U	ng/L	1.8	0.33	1	08/23/24 05:21	08/26/24 02:00	113507-82-7	P4
PFHpS	0.38U	ng/L	1.8	0.38	1	08/23/24 05:21	08/26/24 02:00	375-92-8	P4
PFMBA	0.25U	ng/L	1.8	0.25	1	08/23/24 05:21	08/26/24 02:00	863090-89-5	P4
PFMPA	0.31U	ng/L	1.8	0.31	1	08/23/24 05:21	08/26/24 02:00	377-73-1	P4
PFPeA	0.29U	ng/L	1.8	0.29	1	08/23/24 05:21	08/26/24 02:00	2706-90-3	P4
PFPeS	0.72U	ng/L	1.8	0.72	1	08/23/24 05:21	08/26/24 02:00	2706-91-4	P4
PFDoA	0.51U	ng/L	1.8	0.51	1	08/23/24 05:21	08/26/24 02:00	307-55-1	P4
PFHpA	0.41U	ng/L	1.8	0.41	1	08/23/24 05:21	08/26/24 02:00	375-85-9	P4
PFHxS	0.87U	ng/L	1.8	0.87	1	08/23/24 05:21	08/26/24 02:00	355-46-4	P4
PFNA	0.31U	ng/L	1.8	0.31	1	08/23/24 05:21	08/26/24 02:00	375-95-1	P4
PFOS	0.33U	ng/L	1.8	0.33	1	08/23/24 05:21	08/26/24 02:00	1763-23-1	P4
PFOA	0.29U	ng/L	1.8	0.29	1	08/23/24 05:21	08/26/24 02:00	335-67-1	P4
PFUnA	0.40U	ng/L	1.8	0.40	1	08/23/24 05:21	08/26/24 02:00	2058-94-8	P4
Surrogates									
13C24:2FTS (S)	126	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C26:2FTS (S)	119	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C28:2FTS (S)	123	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C2-PFDoA (S)	89	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C3HFPO-DA(S)	81	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C3-PFBS (S)	113	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C3-PFHxS (S)	113	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C4-PFBA (S)	111	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C4-PFHpA (S)	88	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C5-PFHxA (S)	93	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C5-PFPeA (S)	84	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C6-PFDA (S)	77	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C7-PFUdA (S)	84	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C8-PFOA (S)	87	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C8-PFOS (S)	114	%	50-200		1	08/23/24 05:21	08/26/24 02:00		
13C9-PFNA (S)	85	%	50-200		1	08/23/24 05:21	08/26/24 02:00		

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: NALF OG DW-5-537.1/533 Lab ID: 35899358001 Collected: 08/15/24 12:35 Received: 08/16/24 10:30 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	1.9	1.5	1	08/21/24 17:20	08/23/24 08:41	763051-92-9	
9CI-PF3ONS	1.1U	ng/L	1.9	1.1	1	08/21/24 17:20	08/23/24 08:41	756426-58-1	
ADONA	0.69U	ng/L	1.9	0.69	1	08/21/24 17:20	08/23/24 08:41	919005-14-4	
HFPO-DA	1.5U	ng/L	1.9	1.5	1	08/21/24 17:20	08/23/24 08:41	13252-13-6	
NEtFOSAA	0.88U	ng/L	1.9	0.88	1	08/21/24 17:20	08/23/24 08:41	2991-50-6	
NMeFOSAA	1.5U	ng/L	1.9	1.5	1	08/21/24 17:20	08/23/24 08:41	2355-31-9	
PFBS	0.63U	ng/L	1.9	0.63	1	08/21/24 17:20	08/23/24 08:41	375-73-5	
PFDA	0.92U	ng/L	1.9	0.92	1	08/21/24 17:20	08/23/24 08:41	335-76-2	
PFHxA	1.2U	ng/L	1.9	1.2	1	08/21/24 17:20	08/23/24 08:41	307-24-4	
PFDoA	1.4U	ng/L	1.9	1.4	1	08/21/24 17:20	08/23/24 08:41	307-55-1	
PFHpA	0.95U	ng/L	1.9	0.95	1	08/21/24 17:20	08/23/24 08:41	375-85-9	
PFHxS	0.69U	ng/L	1.9	0.69	1	08/21/24 17:20	08/23/24 08:41	355-46-4	
PFNA	1.9U	ng/L	1.9	1.9	1	08/21/24 17:20	08/23/24 08:41	375-95-1	
PFOS	1.1U	ng/L	1.9	1.1	1	08/21/24 17:20	08/23/24 08:41	1763-23-1	
PFOA	0.83U	ng/L	1.9	0.83	1	08/21/24 17:20	08/23/24 08:41	335-67-1	
PFTeDA	1.8U	ng/L	1.9	1.8	1	08/21/24 17:20	08/23/24 08:41	376-06-7	
PFTrDA	1.6U	ng/L	1.9	1.6	1	08/21/24 17:20	08/23/24 08:41	72629-94-8	
PFUnA	1.9U	ng/L	1.9	1.9	1	08/21/24 17:20	08/23/24 08:41	2058-94-8	
Surrogates									
13C2-PFDA (S)	98	%	70-130		1	08/21/24 17:20	08/23/24 08:41		
13C2-PFHxA (S)	90	%	70-130		1	08/21/24 17:20	08/23/24 08:41		
NEtFOSAA-d5 (S)	97	%	70-130		1	08/21/24 17:20	08/23/24 08:41		
HFPO-DAS (S)	95	%	70-130		1	08/21/24 17:20	08/23/24 08:41		

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: NALF OG DW-3-537.1/533 Lab ID: 35899358002 Collected: 08/15/24 12:20 Received: 08/16/24 10:30 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	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 19:44	763051-92-9	
4:2 FTS	0.53U	ng/L	1.8	0.53	1	08/25/24 20:00	08/26/24 19:44	757124-72-4	
6:2 FTS	3.3U	ng/L	3.6	3.3	1	08/25/24 20:00	08/26/24 19:44	27619-97-2	
8:2 FTS	0.45U	ng/L	1.8	0.45	1	08/25/24 20:00	08/26/24 19:44	39108-34-4	
9CI-PF3ONS	0.46U	ng/L	1.8	0.46	1	08/25/24 20:00	08/26/24 19:44	756426-58-1	
ADONA	0.40U	ng/L	1.8	0.40	1	08/25/24 20:00	08/26/24 19:44	919005-14-4	
HFPO-DA	0.68U	ng/L	1.8	0.68	1	08/25/24 20:00	08/26/24 19:44	13252-13-6	
NFDHA	1.5U	ng/L	1.8	1.5	1	08/25/24 20:00	08/26/24 19:44	151772-58-6	
PFBS	0.40U	ng/L	1.8	0.40	1	08/25/24 20:00	08/26/24 19:44	375-73-5	
PFDA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 19:44	335-76-2	
PFHxA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 19:44	307-24-4	
PFBA	0.57U	ng/L	1.8	0.57	1	08/25/24 20:00	08/26/24 19:44	375-22-4	
PFEESA	0.33U	ng/L	1.8	0.33	1	08/25/24 20:00	08/26/24 19:44	113507-82-7	
PFHpS	0.37U	ng/L	1.8	0.37	1	08/25/24 20:00	08/26/24 19:44	375-92-8	
PFMBA	0.25U	ng/L	1.8	0.25	1	08/25/24 20:00	08/26/24 19:44	863090-89-5	
PFMPA	0.31U	ng/L	1.8	0.31	1	08/25/24 20:00	08/26/24 19:44	377-73-1	
PFPeA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 19:44	2706-90-3	
PFPeS	0.71U	ng/L	1.8	0.71	1	08/25/24 20:00	08/26/24 19:44	2706-91-4	
PFDoA	0.50U	ng/L	1.8	0.50	1	08/25/24 20:00	08/26/24 19:44	307-55-1	
PFHpA	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 19:44	375-85-9	
PFHxS	0.85U	ng/L	1.8	0.85	1	08/25/24 20:00	08/26/24 19:44	355-46-4	
PFNA	0.31U	ng/L	1.8	0.31	1	08/25/24 20:00	08/26/24 19:44	375-95-1	
PFOS	0.33U	ng/L	1.8	0.33	1	08/25/24 20:00	08/26/24 19:44	1763-23-1	
PFOA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 19:44	335-67-1	
PFUnA	0.39U	ng/L	1.8	0.39	1	08/25/24 20:00	08/26/24 19:44	2058-94-8	
Surrogates									
13C24:2FTS (S)	89	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C26:2FTS (S)	87	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C28:2FTS (S)	91	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C2-PFDoA (S)	83	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C3HFPO-DA(S)	75	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C3-PFBS (S)	88	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C3-PFHxS (S)	86	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C4-PFBA (S)	78	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C4-PFHpA (S)	74	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C5-PFHxA (S)	74	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C5-PFPeA (S)	72	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C6-PFDA (S)	75	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C7-PFUdA (S)	77	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C8-PFOA (S)	73	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C8-PFOS (S)	86	%	50-200		1	08/25/24 20:00	08/26/24 19:44		
13C9-PFNA (S)	78	%	50-200		1	08/25/24 20:00	08/26/24 19:44		

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: NALF OG DW-3-537.1/533 Lab ID: 35899358002 Collected: 08/15/24 12:20 Received: 08/16/24 10:30 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	1.9	1.5	1	08/21/24 17:20	08/23/24 09:43	763051-92-9	
9CI-PF3ONS	1.1U	ng/L	1.9	1.1	1	08/21/24 17:20	08/23/24 09:43	756426-58-1	
ADONA	0.69U	ng/L	1.9	0.69	1	08/21/24 17:20	08/23/24 09:43	919005-14-4	
HFPO-DA	1.6U	ng/L	1.9	1.6	1	08/21/24 17:20	08/23/24 09:43	13252-13-6	
NEtFOSAA	0.89U	ng/L	1.9	0.89	1	08/21/24 17:20	08/23/24 09:43	2991-50-6	
NMeFOSAA	1.5U	ng/L	1.9	1.5	1	08/21/24 17:20	08/23/24 09:43	2355-31-9	
PFBS	0.64U	ng/L	1.9	0.64	1	08/21/24 17:20	08/23/24 09:43	375-73-5	
PFDA	0.93U	ng/L	1.9	0.93	1	08/21/24 17:20	08/23/24 09:43	335-76-2	
PFHxA	1.2U	ng/L	1.9	1.2	1	08/21/24 17:20	08/23/24 09:43	307-24-4	
PFDoA	1.4U	ng/L	1.9	1.4	1	08/21/24 17:20	08/23/24 09:43	307-55-1	
PFHpA	0.97U	ng/L	1.9	0.97	1	08/21/24 17:20	08/23/24 09:43	375-85-9	
PFHxS	0.70U	ng/L	1.9	0.70	1	08/21/24 17:20	08/23/24 09:43	355-46-4	
PFNA	1.9U	ng/L	1.9	1.9	1	08/21/24 17:20	08/23/24 09:43	375-95-1	
PFOS	1.2U	ng/L	1.9	1.2	1	08/21/24 17:20	08/23/24 09:43	1763-23-1	
PFOA	0.84U	ng/L	1.9	0.84	1	08/21/24 17:20	08/23/24 09:43	335-67-1	
PFTeDA	1.8U	ng/L	1.9	1.8	1	08/21/24 17:20	08/23/24 09:43	376-06-7	
PFTrDA	1.7U	ng/L	1.9	1.7	1	08/21/24 17:20	08/23/24 09:43	72629-94-8	
PFUnA	1.9U	ng/L	1.9	1.9	1	08/21/24 17:20	08/23/24 09:43	2058-94-8	
Surrogates									
13C2-PFDA (S)	100	%	70-130		1	08/21/24 17:20	08/23/24 09:43		
13C2-PFHxA (S)	94	%	70-130		1	08/21/24 17:20	08/23/24 09:43		
NEtFOSAA-d5 (S)	99	%	70-130		1	08/21/24 17:20	08/23/24 09:43		
HFPO-DAS (S)	96	%	70-130		1	08/21/24 17:20	08/23/24 09:43		

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: Field Blank Lab ID: 35899358003 Collected: 08/15/24 12:30 Received: 08/16/24 10:30 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	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 20:00	763051-92-9	
4:2 FTS	0.53U	ng/L	1.8	0.53	1	08/25/24 20:00	08/26/24 20:00	757124-72-4	
6:2 FTS	3.3U	ng/L	3.7	3.3	1	08/25/24 20:00	08/26/24 20:00	27619-97-2	
8:2 FTS	0.45U	ng/L	1.8	0.45	1	08/25/24 20:00	08/26/24 20:00	39108-34-4	
9CI-PF3ONS	0.47U	ng/L	1.8	0.47	1	08/25/24 20:00	08/26/24 20:00	756426-58-1	
ADONA	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 20:00	919005-14-4	
HFPO-DA	0.69U	ng/L	1.8	0.69	1	08/25/24 20:00	08/26/24 20:00	13252-13-6	
NFDHA	1.5U	ng/L	1.8	1.5	1	08/25/24 20:00	08/26/24 20:00	151772-58-6	
PFBS	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 20:00	375-73-5	
PFDA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 20:00	335-76-2	
PFHxA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 20:00	307-24-4	
PFBA	0.58U	ng/L	1.8	0.58	1	08/25/24 20:00	08/26/24 20:00	375-22-4	
PFEESA	0.33U	ng/L	1.8	0.33	1	08/25/24 20:00	08/26/24 20:00	113507-82-7	
PFHpS	0.38U	ng/L	1.8	0.38	1	08/25/24 20:00	08/26/24 20:00	375-92-8	
PFMBA	0.25U	ng/L	1.8	0.25	1	08/25/24 20:00	08/26/24 20:00	863090-89-5	
PFMPA	0.31U	ng/L	1.8	0.31	1	08/25/24 20:00	08/26/24 20:00	377-73-1	
PFPeA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 20:00	2706-90-3	
PFPeS	0.72U	ng/L	1.8	0.72	1	08/25/24 20:00	08/26/24 20:00	2706-91-4	
PFDoA	0.51U	ng/L	1.8	0.51	1	08/25/24 20:00	08/26/24 20:00	307-55-1	
PFHpA	0.41U	ng/L	1.8	0.41	1	08/25/24 20:00	08/26/24 20:00	375-85-9	
PFHxS	0.87U	ng/L	1.8	0.87	1	08/25/24 20:00	08/26/24 20:00	355-46-4	
PFNA	0.31U	ng/L	1.8	0.31	1	08/25/24 20:00	08/26/24 20:00	375-95-1	
PFOS	0.33U	ng/L	1.8	0.33	1	08/25/24 20:00	08/26/24 20:00	1763-23-1	
PFOA	0.29U	ng/L	1.8	0.29	1	08/25/24 20:00	08/26/24 20:00	335-67-1	
PFUnA	0.40U	ng/L	1.8	0.40	1	08/25/24 20:00	08/26/24 20:00	2058-94-8	
Surrogates									
13C24:2FTS (S)	115	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C26:2FTS (S)	113	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C28:2FTS (S)	112	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C2-PFDoA (S)	94	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C3HFPO-DA(S)	102	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C3-PFBS (S)	116	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C3-PFHxS (S)	114	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C4-PFBA (S)	105	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C4-PFHpA (S)	101	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C5-PFHxA (S)	100	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C5-PFPeA (S)	97	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C6-PFDA (S)	93	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C7-PFUdA (S)	92	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C8-PFOA (S)	98	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C8-PFOS (S)	108	%	50-200		1	08/25/24 20:00	08/26/24 20:00		
13C9-PFNA (S)	100	%	50-200		1	08/25/24 20:00	08/26/24 20:00		

REPORT OF LABORATORY ANALYSIS

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



ANALYTICAL RESULTS

Project: NALF Orange Grove

Pace Project No.: 35899358

Sample: Field Blank Lab ID: 35899358003 Collected: 08/15/24 12:30 Received: 08/16/24 10:30 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	08/21/24 17:20	08/23/24 09:59	763051-92-9	
9CI-PF3ONS	1.1U	ng/L	1.8	1.1	1	08/21/24 17:20	08/23/24 09:59	756426-58-1	
ADONA	0.68U	ng/L	1.8	0.68	1	08/21/24 17:20	08/23/24 09:59	919005-14-4	
HFPO-DA	1.5U	ng/L	1.8	1.5	1	08/21/24 17:20	08/23/24 09:59	13252-13-6	
NEtFOSAA	0.87U	ng/L	1.8	0.87	1	08/21/24 17:20	08/23/24 09:59	2991-50-6	
NMeFOSAA	1.5U	ng/L	1.8	1.5	1	08/21/24 17:20	08/23/24 09:59	2355-31-9	
PFBS	0.62U	ng/L	1.8	0.62	1	08/21/24 17:20	08/23/24 09:59	375-73-5	
PFDA	0.91U	ng/L	1.8	0.91	1	08/21/24 17:20	08/23/24 09:59	335-76-2	
PFHxA	1.2U	ng/L	1.8	1.2	1	08/21/24 17:20	08/23/24 09:59	307-24-4	
PFDoA	1.4U	ng/L	1.8	1.4	1	08/21/24 17:20	08/23/24 09:59	307-55-1	
PFHpA	0.95U	ng/L	1.8	0.95	1	08/21/24 17:20	08/23/24 09:59	375-85-9	
PFHxS	0.69U	ng/L	1.8	0.69	1	08/21/24 17:20	08/23/24 09:59	355-46-4	
PFNA	1.8U	ng/L	1.8	1.8	1	08/21/24 17:20	08/23/24 09:59	375-95-1	
PFOS	1.1U	ng/L	1.8	1.1	1	08/21/24 17:20	08/23/24 09:59	1763-23-1	
PFOA	0.82U	ng/L	1.8	0.82	1	08/21/24 17:20	08/23/24 09:59	335-67-1	
PFTeDA	1.8U	ng/L	1.8	1.8	1	08/21/24 17:20	08/23/24 09:59	376-06-7	
PFTTrDA	1.6U	ng/L	1.8	1.6	1	08/21/24 17:20	08/23/24 09:59	72629-94-8	
PFUnA	1.8U	ng/L	1.8	1.8	1	08/21/24 17:20	08/23/24 09:59	2058-94-8	
Surrogates									
13C2-PFDA (S)	103	%	70-130		1	08/21/24 17:20	08/23/24 09:59		
13C2-PFHxA (S)	102	%	70-130		1	08/21/24 17:20	08/23/24 09:59		
NEtFOSAA-d5 (S)	99	%	70-130		1	08/21/24 17:20	08/23/24 09:59		
HFPO-DAS (S)	99	%	70-130		1	08/21/24 17:20	08/23/24 09:59		

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

QC Batch: 1036118

Analysis Method: EPA 533

QC Batch Method: EPA 533

Analysis Description: 533 PFAS Compounds, Water

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35899358001

METHOD BLANK: 5694348

Matrix: Drinking Water

Associated Lab Samples: 35899358001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	0.45U	2.0	0.45	08/25/24 19:23	
4:2 FTS	ng/L	0.58U	2.0	0.58	08/25/24 19:23	
6:2 FTS	ng/L	3.6U	4.0	3.6	08/25/24 19:23	
8:2 FTS	ng/L	0.49U	2.0	0.49	08/25/24 19:23	
9CI-PF3ONS	ng/L	0.51U	2.0	0.51	08/25/24 19:23	
ADONA	ng/L	0.44U	2.0	0.44	08/25/24 19:23	
HFPO-DA	ng/L	0.75U	2.0	0.75	08/25/24 19:23	
NFDHA	ng/L	1.6U	2.0	1.6	08/25/24 19:23	
PFBA	ng/L	1.3J	2.0	0.63	08/25/24 19:23	
PFBS	ng/L	0.44U	2.0	0.44	08/25/24 19:23	
PFDA	ng/L	0.32U	2.0	0.32	08/25/24 19:23	
PFDaA	ng/L	0.55U	2.0	0.55	08/25/24 19:23	
PFEESA	ng/L	0.36U	2.0	0.36	08/25/24 19:23	
PFHpA	ng/L	0.45U	2.0	0.45	08/25/24 19:23	
PFHpS	ng/L	0.41U	2.0	0.41	08/25/24 19:23	
PFHxA	ng/L	0.32U	2.0	0.32	08/25/24 19:23	
PFHxS	ng/L	0.94U	2.0	0.94	08/25/24 19:23	
PFMBA	ng/L	0.27U	2.0	0.27	08/25/24 19:23	
PFMPA	ng/L	0.34U	2.0	0.34	08/25/24 19:23	
PFNA	ng/L	0.34U	2.0	0.34	08/25/24 19:23	
PFOA	ng/L	0.32U	2.0	0.32	08/25/24 19:23	
PFOS	ng/L	0.36U	2.0	0.36	08/25/24 19:23	
PFPeA	ng/L	0.32U	2.0	0.32	08/25/24 19:23	
PFPeS	ng/L	0.78U	2.0	0.78	08/25/24 19:23	
PFUnA	ng/L	0.43U	2.0	0.43	08/25/24 19:23	
13C2-PFDaA (S)	%	97	50-200		08/25/24 19:23	
13C24:2FTS (S)	%	112	50-200		08/25/24 19:23	
13C26:2FTS (S)	%	115	50-200		08/25/24 19:23	
13C28:2FTS (S)	%	120	50-200		08/25/24 19:23	
13C3-PFBS (S)	%	111	50-200		08/25/24 19:23	
13C3-PFHxS (S)	%	112	50-200		08/25/24 19:23	
13C3HFPO-DA(S)	%	86	50-200		08/25/24 19:23	
13C4-PFBA (S)	%	111	50-200		08/25/24 19:23	
13C4-PFHpA (S)	%	95	50-200		08/25/24 19:23	
13C5-PFHxA (S)	%	97	50-200		08/25/24 19:23	
13C5-PFPeA (S)	%	87	50-200		08/25/24 19:23	
13C6-PFDA (S)	%	99	50-200		08/25/24 19:23	
13C7-PFUdA (S)	%	99	50-200		08/25/24 19:23	
13C8-PFOA (S)	%	99	50-200		08/25/24 19:23	
13C8-PFOS (S)	%	114	50-200		08/25/24 19:23	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

METHOD BLANK: 5694348

Matrix: Drinking Water

Associated Lab Samples: 35899358001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	108	50-200		08/25/24 19:23	

LABORATORY CONTROL SAMPLE: 5694349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	7.6	7.6	100	70-130	
4:2 FTS	ng/L	7.6	9.0	119	70-130	
6:2 FTS	ng/L	7.6	8.0	105	70-130	
8:2 FTS	ng/L	7.6	7.8	103	70-130	
9CI-PF3ONS	ng/L	7.6	7.7	102	70-130	
ADONA	ng/L	7.6	8.3	109	70-130	
HFPO-DA	ng/L	8	9.3	116	70-130	
NFDHA	ng/L	8	7.9	99	70-130	
PFBA	ng/L	8	7.7	96	70-130	
PFBS	ng/L	7.2	7.5	104	70-130	
PFDA	ng/L	8	8.3	103	70-130	
PFDoA	ng/L	8	8.1	102	70-130	
PFEESA	ng/L	7.2	7.5	105	70-130	
PFHpA	ng/L	8	9.5	118	70-130	
PFHpS	ng/L	7.6	7.4	98	70-130	
PFHxA	ng/L	8	8.7	108	70-130	
PFHxS	ng/L	7.2	8.0	111	70-130	
PFMBA	ng/L	8	8.7	109	70-130	
PFMPA	ng/L	8	7.7	96	70-130	
PFNA	ng/L	8	7.8	97	70-130	
PFOA	ng/L	8	8.6	108	70-130	
PFOS	ng/L	7.6	7.9	104	70-130	
PFPeA	ng/L	8	9.8	123	70-130	
PFPeS	ng/L	7.6	8.1	107	70-130	
PFUnA	ng/L	8	7.9	98	70-130	
13C2-PFDoA (S)	%			96	50-200	
13C24:2FTS (S)	%			112	50-200	
13C26:2FTS (S)	%			115	50-200	
13C28:2FTS (S)	%			118	50-200	
13C3-PFBS (S)	%			111	50-200	
13C3-PFHxS (S)	%			114	50-200	
13C3HFPO-DA(S)	%			84	50-200	
13C4-PFBA (S)	%			113	50-200	
13C4-PFHpA (S)	%			95	50-200	
13C5-PFHxA (S)	%			98	50-200	
13C5-PFPeA (S)	%			88	50-200	
13C6-PFDA (S)	%			96	50-200	
13C7-PFUdA (S)	%			97	50-200	
13C8-PFOA (S)	%			99	50-200	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

LABORATORY CONTROL SAMPLE: 5694349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			115	50-200	
13C9-PFNA (S)	%			102	50-200	

LABORATORY CONTROL SAMPLE: 5694350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	1.9	1.8J	96	50-150	
4:2 FTS	ng/L	1.9	2.1	113	50-150	
6:2 FTS	ng/L	1.9	3.6U	103	50-150	
8:2 FTS	ng/L	1.9	1.8J	95	50-150	
9CI-PF3ONS	ng/L	1.9	1.8J	96	50-150	
ADONA	ng/L	1.9	2.0J	103	50-150	
HFPO-DA	ng/L	2	2.3	116	50-150	
NFDHA	ng/L	2	1.9J	93	50-150	
PFBA	ng/L	2	1.7J	87	50-150	
PFBS	ng/L	1.8	1.9J	104	50-150	
PFDA	ng/L	2	1.9J	97	50-150	
PFDaA	ng/L	2	1.9J	95	50-150	
PFEESA	ng/L	1.8	1.8J	98	50-150	
PFHpA	ng/L	2	2.3	113	50-150	
PFHpS	ng/L	1.9	1.8J	94	50-150	
PFHxA	ng/L	2	2.0	101	50-150	
PFHxS	ng/L	1.8	2.0	114	50-150	
PFMBA	ng/L	2	2.1	106	50-150	
PFMPA	ng/L	2	1.9J	97	50-150	
PFNA	ng/L	2	1.7J	86	50-150	
PFOA	ng/L	2	2.2	108	50-150	
PFOS	ng/L	1.9	1.9J	103	50-150	
PFPeA	ng/L	2	2.4	119	50-150	
PFPeS	ng/L	1.9	2.0	106	50-150	
PFUnA	ng/L	2	1.8J	90	50-150	
13C2-PFDoA (S)	%			99	50-200	
13C24:2FTS (S)	%			113	50-200	
13C26:2FTS (S)	%			115	50-200	
13C28:2FTS (S)	%			120	50-200	
13C3-PFBS (S)	%			108	50-200	
13C3-PFHxS (S)	%			109	50-200	
13C3HFPO-DA(S)	%			86	50-200	
13C4-PFBA (S)	%			115	50-200	
13C4-PFHpA (S)	%			95	50-200	
13C5-PFHxA (S)	%			97	50-200	
13C5-PFPeA (S)	%			89	50-200	
13C6-PFDA (S)	%			99	50-200	
13C7-PFUdA (S)	%			100	50-200	
13C8-PFOA (S)	%			100	50-200	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

LABORATORY CONTROL SAMPLE: 5694350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			114	50-200	
13C9-PFNA (S)	%			107	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5694451 5694452

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		35899354002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
11CI-PF3OUdS	ng/L	0.43U	7.2	7.1	7.3	7.2	101	102	70-130	1	30	
4:2 FTS	ng/L	0.56U	7.2	7.1	8.9	8.5	123	120	70-130	4	30	
6:2 FTS	ng/L	3.4U	7.2	7.1	7.3	7.4	101	104	70-130	1	30	
8:2 FTS	ng/L	0.47U	7.2	7.1	7.6	7.5	105	106	70-130	2	30	
9CI-PF3ONS	ng/L	0.49U	7.2	7.1	7.4	7.1	102	100	70-130	4	30	
ADONA	ng/L	0.42U	7.2	7.1	7.9	7.6	109	107	70-130	3	30	
HFPO-DA	ng/L	0.72U	7.6	7.5	8.4	8.7	110	116	70-130	4	30	
NFDHA	ng/L	1.6U	7.6	7.5	7.5	7.3	98	97	70-130	3	30	
PFBA	ng/L	0.82J	7.6	7.5	7.7	7.2	91	85	70-130	7	30	
PFBS	ng/L	0.42U	6.8	6.7	7.2	6.8	104	100	70-130	6	30	
PFDA	ng/L	0.31U	7.6	7.5	7.9	7.8	104	105	70-130	2	30	
PFDoA	ng/L	0.53U	7.6	7.5	7.8	7.6	103	102	70-130	3	30	
PFEESA	ng/L	0.34U	6.8	6.7	6.9	6.9	100	103	70-130	1	30	
PFHpA	ng/L	0.43U	7.6	7.5	9.2	8.8	120	118	70-130	4	30	
PFHpS	ng/L	0.39U	7.2	7.1	7.0	7.0	96	98	70-130	0	30	
PFHxA	ng/L	0.31U	7.6	7.5	8.1	8.1	107	108	70-130	1	30	
PFHxS	ng/L	0.90U	6.8	6.7	7.4	7.4	108	110	70-130	1	30	
PFMBA	ng/L	0.26U	7.6	7.5	8.5	8.1	112	109	70-130	5	30	
PFMPA	ng/L	0.33U	7.6	7.5	7.5	7.4	98	98	70-130	2	30	
PFNA	ng/L	0.33U	7.6	7.5	7.0	7.0	92	92	70-130	1	30	
PFOA	ng/L	0.31U	7.6	7.5	8.4	8.3	110	110	70-130	2	30	
PFOS	ng/L	0.34U	7.2	7.1	7.7	7.2	106	101	70-130	7	30	
PFPeA	ng/L	0.31U	7.6	7.5	9.5	9.3	124	125	70-130	1	30	
PFPeS	ng/L	0.75U	7.2	7.1	7.7	7.5	106	105	70-130	3	30	
PFUnA	ng/L	0.41U	7.6	7.5	7.3	7.1	96	96	70-130	3	30	
13C2-PFDoA (S)	%						82	86	50-200			
13C24:2FTS (S)	%						109	107	50-200			
13C26:2FTS (S)	%						111	105	50-200			
13C28:2FTS (S)	%						115	111	50-200			
13C3-PFBS (S)	%						106	102	50-200			
13C3-PFHxS (S)	%						108	104	50-200			
13C3HFPO-DA(S)	%						78	74	50-200			
13C4-PFBA (S)	%						101	104	50-200			
13C4-PFHpA (S)	%						79	82	50-200			
13C5-PFHxA (S)	%						84	87	50-200			
13C5-PFPeA (S)	%						76	79	50-200			
13C6-PFDA (S)	%						64	71	50-200			
13C7-PFUdA (S)	%						75	81	50-200			

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5694451 5694452														
Parameter	Units	35899354002		5694451		5694452		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
13C8-PFOA (S)	%							74	76		50-200			
13C8-PFOS (S)	%							108	105		50-200			
13C9-PFNA (S)	%							70	75		50-200			

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

QC Batch: 1036525

Analysis Method: EPA 533

QC Batch Method: EPA 533

Analysis Description: 533 PFAS Compounds, Water

Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35899358002, 35899358003

METHOD BLANK: 5696664

Matrix: Drinking Water

Associated Lab Samples: 35899358002, 35899358003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	0.45U	2.0	0.45	08/26/24 16:42	
4:2 FTS	ng/L	0.58U	2.0	0.58	08/26/24 16:42	
6:2 FTS	ng/L	3.6U	4.0	3.6	08/26/24 16:42	
8:2 FTS	ng/L	0.49U	2.0	0.49	08/26/24 16:42	
9CI-PF3ONS	ng/L	0.51U	2.0	0.51	08/26/24 16:42	
ADONA	ng/L	0.44U	2.0	0.44	08/26/24 16:42	
HFPO-DA	ng/L	0.75U	2.0	0.75	08/26/24 16:42	
NFDHA	ng/L	1.6U	2.0	1.6	08/26/24 16:42	
PFBA	ng/L	0.63U	2.0	0.63	08/26/24 16:42	
PFBS	ng/L	0.44U	2.0	0.44	08/26/24 16:42	
PFDA	ng/L	0.32U	2.0	0.32	08/26/24 16:42	
PFDaA	ng/L	0.55U	2.0	0.55	08/26/24 16:42	
PFEESA	ng/L	0.36U	2.0	0.36	08/26/24 16:42	
PFHpA	ng/L	0.45U	2.0	0.45	08/26/24 16:42	
PFHpS	ng/L	0.41U	2.0	0.41	08/26/24 16:42	
PFHxA	ng/L	0.32U	2.0	0.32	08/26/24 16:42	
PFHxS	ng/L	0.94U	2.0	0.94	08/26/24 16:42	
PFMBA	ng/L	0.27U	2.0	0.27	08/26/24 16:42	
PFMPA	ng/L	0.34U	2.0	0.34	08/26/24 16:42	
PFNA	ng/L	0.34U	2.0	0.34	08/26/24 16:42	
PFOA	ng/L	0.32U	2.0	0.32	08/26/24 16:42	
PFOS	ng/L	0.36U	2.0	0.36	08/26/24 16:42	
PFPeA	ng/L	0.32U	2.0	0.32	08/26/24 16:42	
PFPeS	ng/L	0.78U	2.0	0.78	08/26/24 16:42	
PFUnA	ng/L	0.43U	2.0	0.43	08/26/24 16:42	
13C2-PFDaA (S)	%	93	50-200		08/26/24 16:42	
13C24:2FTS (S)	%	113	50-200		08/26/24 16:42	
13C26:2FTS (S)	%	110	50-200		08/26/24 16:42	
13C28:2FTS (S)	%	110	50-200		08/26/24 16:42	
13C3-PFBS (S)	%	115	50-200		08/26/24 16:42	
13C3-PFHxS (S)	%	113	50-200		08/26/24 16:42	
13C3HFPO-DA(S)	%	98	50-200		08/26/24 16:42	
13C4-PFBA (S)	%	104	50-200		08/26/24 16:42	
13C4-PFHpA (S)	%	101	50-200		08/26/24 16:42	
13C5-PFHxA (S)	%	99	50-200		08/26/24 16:42	
13C5-PFPeA (S)	%	97	50-200		08/26/24 16:42	
13C6-PFDA (S)	%	95	50-200		08/26/24 16:42	
13C7-PFUdA (S)	%	91	50-200		08/26/24 16:42	
13C8-PFOA (S)	%	99	50-200		08/26/24 16:42	
13C8-PFOS (S)	%	111	50-200		08/26/24 16:42	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

METHOD BLANK: 5696664

Matrix: Drinking Water

Associated Lab Samples: 35899358002, 35899358003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
13C9-PFNA (S)	%	103	50-200		08/26/24 16:42	

LABORATORY CONTROL SAMPLE: 5696665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11Cl-PF3OUdS	ng/L	37.8	37.8	100	70-130	
4:2 FTS	ng/L	37.5	40.9	109	70-130	
6:2 FTS	ng/L	38.1	41.0	108	70-130	
8:2 FTS	ng/L	38.4	40.3	105	70-130	
9Cl-PF3ONS	ng/L	37.4	39.2	105	70-130	
ADONA	ng/L	37.8	42.2	112	70-130	
HFPO-DA	ng/L	40	44.3	111	70-130	
NFDHA	ng/L	40	44.1	110	70-130	
PFBA	ng/L	40	47.3	118	70-130	
PFBS	ng/L	35.5	37.2	105	70-130	
PFDA	ng/L	40	43.7	109	70-130	
PFDoA	ng/L	40	44.6	111	70-130	
PFEESA	ng/L	35.7	37.4	105	70-130	
PFHpA	ng/L	40	45.7	114	70-130	
PFHpS	ng/L	38.2	40.4	106	70-130	
PFHxA	ng/L	40	44.7	112	70-130	
PFHxS	ng/L	36.5	39.1	107	70-130	
PFMBA	ng/L	40	45.1	113	70-130	
PFMPA	ng/L	40	44.4	111	70-130	
PFNA	ng/L	40	41.1	103	70-130	
PFOA	ng/L	40	44.8	112	70-130	
PFOS	ng/L	37.2	39.4	106	70-130	
PFPeA	ng/L	40	46.4	116	70-130	
PFPeS	ng/L	37.6	40.8	108	70-130	
PFOA	ng/L	40	45.4	113	70-130	
13C2-PFDoA (S)	%			93	50-200	
13C24:2FTS (S)	%			112	50-200	
13C26:2FTS (S)	%			111	50-200	
13C28:2FTS (S)	%			109	50-200	
13C3-PFBS (S)	%			117	50-200	
13C3-PFHxS (S)	%			112	50-200	
13C3HFPO-DA(S)	%			102	50-200	
13C4-PFBA (S)	%			102	50-200	
13C4-PFHpA (S)	%			99	50-200	
13C5-PFHxA (S)	%			100	50-200	
13C5-PFPeA (S)	%			97	50-200	
13C6-PFDA (S)	%			95	50-200	
13C7-PFUdA (S)	%			91	50-200	
13C8-PFOA (S)	%			97	50-200	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

LABORATORY CONTROL SAMPLE: 5696665

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			110	50-200	
13C9-PFNA (S)	%			103	50-200	

LABORATORY CONTROL SAMPLE: 5696666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	1.9	1.6J	87	50-150	
4:2 FTS	ng/L	1.9	1.9J	98	50-150	
6:2 FTS	ng/L	1.9	3.6U	104	50-150	
8:2 FTS	ng/L	1.9	2.0	107	50-150	
9CI-PF3ONS	ng/L	1.9	1.7J	91	50-150	
ADONA	ng/L	1.9	1.9J	98	50-150	
HFPO-DA	ng/L	2	2.1	104	50-150	
NFDHA	ng/L	2	2.2	108	50-150	
PFBA	ng/L	2	2.0	101	50-150	
PFBS	ng/L	1.8	1.7J	97	50-150	
PFDA	ng/L	2	1.9J	97	50-150	
PFDoA	ng/L	2	1.9J	96	50-150	
PFEESA	ng/L	1.8	1.7J	94	50-150	
PFHpA	ng/L	2	2.1	103	50-150	
PFHpS	ng/L	1.9	2.0J	103	50-150	
PFHxA	ng/L	2	2.1	103	50-150	
PFHxS	ng/L	1.8	1.9J	105	50-150	
PFMBA	ng/L	2	2.1	104	50-150	
PFMPA	ng/L	2	1.9J	97	50-150	
PFNA	ng/L	2	2.0	101	50-150	
PFOA	ng/L	2	2.1	103	50-150	
PFOS	ng/L	1.9	2.0J	105	50-150	
PFPeA	ng/L	2	2.1	106	50-150	
PFPeS	ng/L	1.9	1.8J	96	50-150	
PFUnA	ng/L	2	2.0J	99	50-150	
13C2-PFDoA (S)	%			92	50-200	
13C24:2FTS (S)	%			116	50-200	
13C26:2FTS (S)	%			113	50-200	
13C28:2FTS (S)	%			108	50-200	
13C3-PFBS (S)	%			116	50-200	
13C3-PFHxS (S)	%			113	50-200	
13C3HFPO-DA(S)	%			99	50-200	
13C4-PFBA (S)	%			102	50-200	
13C4-PFHpA (S)	%			98	50-200	
13C5-PFHxA (S)	%			98	50-200	
13C5-PFPeA (S)	%			96	50-200	
13C6-PFDA (S)	%			95	50-200	
13C7-PFUdA (S)	%			91	50-200	
13C8-PFOA (S)	%			97	50-200	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove
Pace Project No.: 35899358

LABORATORY CONTROL SAMPLE: 5696666

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
13C8-PFOS (S)	%			110	50-200	
13C9-PFNA (S)	%			101	50-200	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5696667 5696668

Parameter	Units	5696667		5696668		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		3589988004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
11CI-PF3OUdS	ng/L	0.00042U ug/L	35.3	35.6	34.2	34.2	97	96	70-130	0	30
4:2 FTS	ng/L	0.00054U ug/L	35.1	35.4	38.0	37.8	108	107	70-130	0	30
6:2 FTS	ng/L	0.0033U ug/L	35.6	35.9	36.8	31.8	103	88	70-130	15	30
8:2 FTS	ng/L	0.00045U ug/L	35.9	36.2	37.2	36.4	104	100	70-130	2	30
9CI-PF3ONS	ng/L	0.00047U ug/L	35	35.2	35.5	34.9	102	99	70-130	2	30
ADONA	ng/L	0.00041U ug/L	35.3	35.6	37.4	36.4	106	102	70-130	3	30
HFPO-DA	ng/L	0.00069U ug/L	37.4	37.7	41.0	37.3	110	99	70-130	10	30
NFDHA	ng/L	0.0015U ug/L	37.4	37.7	39.9	39.7	106	105	70-130	0	30
PFBA	ng/L	0.00058U ug/L	37.4	37.7	43.8	42.4	117	112	70-130	3	30
PFBS	ng/L	0.00041U ug/L	33.2	33.5	33.8	33.4	102	100	70-130	1	30
PFDA	ng/L	0.00030U ug/L	37.4	37.7	39.7	39.3	106	104	70-130	1	30
PFDoA	ng/L	0.00051U ug/L	37.4	37.7	40.2	39.6	107	105	70-130	2	30
PFEESA	ng/L	0.00033U ug/L	33.4	33.6	34.6	34.3	104	102	70-130	1	30
PFHpA	ng/L	0.00042U ug/L	37.4	37.7	41.1	40.0	110	106	70-130	3	30
PFHpS	ng/L	0.00038U ug/L	35.7	36	36.9	36.0	103	100	70-130	3	30
PFHxA	ng/L	0.00030U ug/L	37.4	37.7	40.8	39.9	109	106	70-130	2	30
PFHxS	ng/L	0.00087U ug/L	34.2	34.4	35.9	34.5	105	100	70-130	4	30
PFMBA	ng/L	0.00025U ug/L	37.4	37.7	42.1	40.1	112	106	70-130	5	30
PFMPA	ng/L	0.00031U ug/L	37.4	37.7	40.3	39.7	108	105	70-130	1	30
PFNA	ng/L	0.00031U ug/L	37.4	37.7	37.9	36.8	101	97	70-130	3	30
PFOA	ng/L	0.00030U ug/L	37.4	37.7	42.7	39.5	114	105	70-130	8	30
PFOS	ng/L	0.00033U ug/L	34.8	35.1	35.6	35.1	102	100	70-130	2	30

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5696667 5696668												
Parameter	Units	35899988004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
PFPeA	ng/L	0.00030U ug/L	37.4	37.7	42.7	41.1	114	109	70-130	4	30	
PFPeS	ng/L	0.00072U ug/L	35.2	35.5	36.7	35.8	104	101	70-130	2	30	
PFUnA	ng/L	0.00040U ug/L	37.4	37.7	41.2	39.4	110	104	70-130	5	30	
13C2-PFDoA (S)	%						99	98	50-200			
13C24:2FTS (S)	%						117	113	50-200			
13C26:2FTS (S)	%						117	117	50-200			
13C28:2FTS (S)	%						117	115	50-200			
13C3-PFBS (S)	%						122	120	50-200			
13C3-PFHxS (S)	%						116	117	50-200			
13C3HFPO-DA(S)	%						96	98	50-200			
13C4-PFBA (S)	%						97	100	50-200			
13C4-PFHpA (S)	%						98	97	50-200			
13C5-PFHxA (S)	%						97	95	50-200			
13C5-PFPeA (S)	%						92	92	50-200			
13C6-PFDA (S)	%						97	96	50-200			
13C7-PFUdA (S)	%						94	95	50-200			
13C8-PFOA (S)	%						95	95	50-200			
13C8-PFOS (S)	%						117	115	50-200			
13C9-PFNA (S)	%						103	100	50-200			

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove
Pace Project No.: 35899358

QC Batch: 1035695 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: 35899358001, 35899358002, 35899358003

METHOD BLANK: 5692169 Matrix: Water
Associated Lab Samples: 35899358001, 35899358002, 35899358003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
11CI-PF3OUdS	ng/L	1.6U	2.0	1.6	08/23/24 05:33	
9CI-PF3ONS	ng/L	1.2U	2.0	1.2	08/23/24 05:33	
ADONA	ng/L	0.74U	2.0	0.74	08/23/24 05:33	
HFPO-DA	ng/L	1.7U	2.0	1.7	08/23/24 05:33	
NEtFOSAA	ng/L	0.95U	2.0	0.95	08/23/24 05:33	
NMeFOSAA	ng/L	1.6U	2.0	1.6	08/23/24 05:33	
PFBS	ng/L	0.68U	2.0	0.68	08/23/24 05:33	
PFDA	ng/L	0.99U	2.0	0.99	08/23/24 05:33	
PFDaA	ng/L	1.5U	2.0	1.5	08/23/24 05:33	
PFHpA	ng/L	1.0U	2.0	1.0	08/23/24 05:33	
PFHxA	ng/L	1.3U	2.0	1.3	08/23/24 05:33	
PFHxS	ng/L	0.75U	2.0	0.75	08/23/24 05:33	
PFNA	ng/L	2.0U	2.0	2.0	08/23/24 05:33	
PFOA	ng/L	0.89U	2.0	0.89	08/23/24 05:33	
PFOS	ng/L	1.2U	2.0	1.2	08/23/24 05:33	
PFTeDA	ng/L	1.9U	2.0	1.9	08/23/24 05:33	
PFTrDA	ng/L	1.8U	2.0	1.8	08/23/24 05:33	
PFUnA	ng/L	2.0U	2.0	2.0	08/23/24 05:33	
13C2-PFDA (S)	%	99	70-130		08/23/24 05:33	
13C2-PFHxA (S)	%	99	70-130		08/23/24 05:33	
HFPO-DAS (S)	%	99	70-130		08/23/24 05:33	
NEtFOSAA-d5 (S)	%	88	70-130		08/23/24 05:33	

LABORATORY CONTROL SAMPLE: 5692170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	151	130	86	70-130	
9CI-PF3ONS	ng/L	150	137	92	70-130	
ADONA	ng/L	151	141	93	70-130	
HFPO-DA	ng/L	160	154	96	70-130	
NEtFOSAA	ng/L	160	129	80	70-130	
NMeFOSAA	ng/L	160	138	86	70-130	
PFBS	ng/L	142	135	95	70-130	
PFDA	ng/L	160	147	92	70-130	
PFDaA	ng/L	160	131	82	70-130	
PFHpA	ng/L	160	152	95	70-130	
PFHxA	ng/L	160	152	95	70-130	
PFHxS	ng/L	146	137	94	70-130	
PFNA	ng/L	160	151	95	70-130	

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

LABORATORY CONTROL SAMPLE: 5692170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PFOA	ng/L	160	148	92	70-130	
PFOS	ng/L	148	137	92	70-130	
PFTeDA	ng/L	160	130	82	70-130	
PFTTrDA	ng/L	160	127	79	70-130	
PFUnA	ng/L	160	138	87	70-130	
13C2-PFDA (S)	%			95	70-130	
13C2-PFHxA (S)	%			99	70-130	
HFPO-DAS (S)	%			100	70-130	
NEtFOSAA-d5 (S)	%			82	70-130	

LABORATORY CONTROL SAMPLE: 5692171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
11CI-PF3OUdS	ng/L	1.9	1.9J	100	50-150	
9CI-PF3ONS	ng/L	1.9	1.9J	101	50-150	
ADONA	ng/L	1.9	1.9J	100	50-150	
HFPO-DA	ng/L	2	2.2	108	50-150	
NEtFOSAA	ng/L	2	1.5J	73	50-150	
NMeFOSAA	ng/L	2	1.8J	92	50-150	
PFBS	ng/L	1.8	1.8J	102	50-150	
PFDA	ng/L	2	2.0J	99	50-150	
PFDaA	ng/L	2	1.9J	93	50-150	
PFHpA	ng/L	2	2.0	100	50-150	
PFHxA	ng/L	2	2.1	104	50-150	
PFHxS	ng/L	1.8	2.0J	109	50-150	
PFNA	ng/L	2	2.1	103	50-150	
PFOA	ng/L	2	2.0J	98	50-150	
PFOS	ng/L	1.9	2.0	108	50-150	
PFTeDA	ng/L	2	2.0J	98	50-150	
PFTTrDA	ng/L	2	1.9J	94	50-150	
PFUnA	ng/L	2	2.0U	95	50-150	
13C2-PFDA (S)	%			98	70-130	
13C2-PFHxA (S)	%			96	70-130	
HFPO-DAS (S)	%			92	70-130	
NEtFOSAA-d5 (S)	%			71	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 5692177 5692178

Parameter	Units	MS 35899358001		MSD		MS 5692178		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
11CI-PF3OUdS	ng/L	1.5U	6.5	6.9	6.2	6.7	96	97	70-130	7	30		
9CI-PF3ONS	ng/L	1.1U	6.4	6.8	6.3	6.7	99	99	70-130	7	30		
ADONA	ng/L	0.69U	6.5	6.9	6.9	7.4	107	107	70-130	6	30		
HFPO-DA	ng/L	1.5U	6.8	7.3	7.1	7.5	100	100	70-130	6	30		

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

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA

Project: NALF Orange Grove

Pace Project No.: 35899358

Parameter	Units	35899358001		5692177		5692178		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
NEtFOSAA	ng/L	0.88U	6.8	7.3	6.7	7.0	97	96	70-130	5	30			
NMeFOSAA	ng/L	1.5U	6.8	7.3	6.9	7.2	101	99	70-130	4	30			
PFBS	ng/L	0.63U	6	6.4	6.3	6.6	105	103	70-130	4	30			
PFDA	ng/L	0.92U	6.8	7.3	7.0	7.5	102	103	70-130	6	30			
PFDoA	ng/L	1.4U	6.8	7.3	6.7	7.2	98	99	70-130	7	30			
PFHpA	ng/L	0.95U	6.8	7.3	7.1	7.5	102	103	70-130	6	30			
PFHxA	ng/L	1.2U	6.8	7.3	6.6	7.1	95	96	70-130	7	30			
PFHxS	ng/L	0.69U	6.2	6.6	6.6	6.6	105	100	70-130	1	30			
PFNA	ng/L	1.9U	6.8	7.3	7.1	7.5	104	103	70-130	5	30			
PFOA	ng/L	0.83U	6.8	7.3	6.9	7.2	100	99	70-130	5	30			
PFOS	ng/L	1.1U	6.3	6.7	6.7	6.9	105	102	70-130	3	30			
PFTeDA	ng/L	1.8U	6.8	7.3	6.7	6.9	97	95	70-130	3	30			
PFTrDA	ng/L	1.6U	6.8	7.3	6.6	6.9	96	95	70-130	5	30			
PFUnA	ng/L	1.9U	6.8	7.3	6.9	7.2	101	99	70-130	4	30			
13C2-PFDA (S)	%						97	97	70-130					
13C2-PFHxA (S)	%						90	90	70-130					
HFPO-DAS (S)	%						96	93	70-130					
NEtFOSAA-d5 (S)	%						96	96	70-130					

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

REPORT OF LABORATORY ANALYSIS

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



QUALIFIERS

Project: NALF Orange Grove

Pace Project No.: 35899358

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

P4 Sample field preservation does not meet EPA or method recommendations for this analysis.

REPORT OF LABORATORY ANALYSIS

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



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NALF Orange Grove

Pace Project No.: 35899358

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35899358001	NALF OG DW-5-537.1/533	EPA 533	1036118	EPA 533	1036475
35899358002	NALF OG DW-3-537.1/533	EPA 533	1036525	EPA 533	1036579
35899358003	Field Blank	EPA 533	1036525	EPA 533	1036579
35899358001	NALF OG DW-5-537.1/533	EPA 537.1	1035695	EPA 537.1	1035959
35899358002	NALF OG DW-3-537.1/533	EPA 537.1	1035695	EPA 537.1	1035959
35899358003	Field Blank	EPA 537.1	1035695	EPA 537.1	1035959

REPORT OF LABORATORY ANALYSIS

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

Pace Container Order #3137143

bo.garcia@pacelabs.com

Addresses	Ship To :	Return To:
Order By : Company AH Environmental Consultants, Contact Anthony Gruber Email agruber@ahenv.com Address _____ Address 2 _____ City _____ State _____ Zip _____ Phone _____	Ship To : Company AH Environmental Consultants, Inc. Contact Faysal Bekdash Email fbekdash@ahenv.com Address 6508 76th Place Address 2 _____ City CABIN JOHN State MD Zip 20818 Phone 9044230949	Return To: Company Ormond Beach, FL (Pace Analytical) Contact Bo Garcia Email bo.garcia@pacelabs.com Address 8 East Tower Circle Address 2 _____ City Ormond Beach State FL Zip 32174 Phone (386)672-5668

Info				
Project Name NALF Orange Grove	Due Date 07/24/2024	Profile 7971	Quote _____	
Project Manager Garcia, Bo	Return Date _____	Carrier FedEx Ground	Location FL	

Return Shipping Labels <input type="checkbox"/> Return Label Type _____ <input type="checkbox"/> No Shipper <input type="checkbox"/> With Shipper	Bottle Labels <input type="checkbox"/> Blank <input type="checkbox"/> Pre-Printed No Sample IDs <input checked="" type="checkbox"/> Pre-Printed With Sample IDs	Bottles <input type="checkbox"/> Boxed Cases <input type="checkbox"/> Individually Wrapped <input checked="" type="checkbox"/> Grouped By Sample ID/Matrix
Trip Blanks <input type="checkbox"/> Include Trip Blanks	Misc <input checked="" type="checkbox"/> Sampling Instructions <input type="checkbox"/> Custody Seal <input type="checkbox"/> Temp. Blanks <input checked="" type="checkbox"/> Coolers 1 _____ <input type="checkbox"/> Syringes _____	
COC Options <input type="checkbox"/> Number of Blanks _____ <input type="checkbox"/> Pre-Printed _____	<input type="checkbox"/> Extra Bubble Wrap <input type="checkbox"/> Short Hold/Rush Stickers <input type="checkbox"/> DI Water _____ <input type="checkbox"/> USDA Regulated Soils <input type="checkbox"/> Dry Weight _____	

# of Samp Matrix	Analysis	Qty / Samp	Container	Total	# of QC	Lot #	Notes
1	DW 537.1 FIELD BLANK	4	2-250 mL plastic with Trizma + 2-250 mL with DI	4		M324203BB	
1	DW 533 FIELD BLANK	4	2-250 mL plastic with ammonium acetate + 2-250 mL with DI	4		M412106BB	
1	DW 533 PFAS (extra containers)	5	250 mL plastic with ammonium acetate	5		M412106BB	
1	DW 533 PFAS Compounds, Water	3	250 mL plastic with ammonium acetate	3		M412106BB	
1	DW 537.1 PFAS (extra containers)	5	250mL plastic Trizma	5		M324203BB	
1	DW 537.1 PFAS Compounds, Water	3	250mL plastic Trizma	3		M324203BB	

Hazard Shipping Placard In Place : N/A

LAB USE:

*Sample receiving hours are typically 8am-5pm, but may differ by location. Please check with your Pace Project Manager.

*Pace Analytical reserves the right to return hazardous, toxic, or radioactive samples to you.

*Pace Analytical reserves the right to charge for unused bottles, as well as cost associated with sample storage/disposal.

*Payment term are net 30 days.

*Please include the proposal number on the chain of custody to ensure proper billing.

Ship Date : 07/24/2024

Prepared By: KAM1

Verified By: _____

CLIENT USE (Optional):

Date Rec'd: _____

Received By: _____

Sample Notes :

Pace

WO#: 35899358

PM: VEG Due Date: 08/30/24
CLIENT: AHENVI

Project #
Project Manager:
Client:

Date and Initials of person: Zah
Examining contents: Zah
Verifying pH: -
Initials: BCP

Thermometer Used: T-426

Date: 8/16/24 Time: 1100

State of Origin: _____
 For WV projects, all containers verified to $\leq 6^{\circ}\text{C}$
Cooler #1 Temp. $^{\circ}\text{C}$ 3.0 (Visual) 0.0 (Correction Factor) 3.0 (Actual)
Cooler #2 Temp. $^{\circ}\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)
Cooler #3 Temp. $^{\circ}\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)
Cooler #4 Temp. $^{\circ}\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)
Cooler #5 Temp. $^{\circ}\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)
Cooler #6 Temp. $^{\circ}\text{C}$ _____ (Visual) _____ (Correction Factor) _____ (Actual)
Recheck for CO2 $^{\circ}\text{C}$ _____ (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: Next day air
Billing: Recipient Sender Third Party Credit Card Unknown

Tracking # 12 254 662 ci 9625 6803

Custody Seal Present: Yes No Seal properly placed and intact: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____

Ice: Wet Blue Dry None Melted

Samples shorted to lab: Yes No (if yes, complete the following)
Shorted Date: _____

Bottle Quantity / Type: _____

Shorted Time: _____

Chain of Custody:	Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Sampler Name: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
	Relinquished To Pace: <input checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A Comments:
Sufficient Volume	<input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Yes <input 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:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Exceptions: Vials, Microbiology, O&G, PFAS	
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): <u>NO sampler Relinquish to Pace</u>	



Preservation Information	
Preservative: _____	Date: _____
Lot / Trace: _____	Time: _____
Amount added (mL): _____	Initials: _____

Labeled by: Zah

Reviewed by: STC

Delivered by: Zah

PFC Sample Collection Form

Facility:	NALF Orange Grove, TX		
Sample Collection Date/Time:	8/15/2024 at 12:35pm		
Sampled By:	Faysal Bekdash		
Sample Location Description - (Well House, WTP, etc.):	Lunch Room Area		
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.)	Kitchen Sink Tap		
Weather Conditions:	Sunny and 90° F		
Samples Collected:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Field Blank Collected:	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Extra Samples 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?	Yes/USP overnight		
Notes & Photos:	<div style="display: flex; justify-content: space-around;">   </div>		