

# Brunswick County Public Utilities - NC

PO Box 249  
Bolivia, NC 28422-0249

## LELAND N.C.

Client Project# NORTHWEST WATER PLANT  
Samples Received: 5/9/2025

### Analytical Report 0525-827

#### PFAS by Isotope Dilution (non-potable water)

Report Issue Date: 6/6/2025

I certify that to the best of my knowledge all analytical data presented in this report have been checked for completeness, accuracy, errors and legibility in addition to having been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s). This analytical report was prepared in Portable Document Format (.PDF) and contains 28 pages. This report shall not be reproduced except in full without approval of the laboratory. This will provide assurance that parts of the report are not taken out of context.

Amendment(s):

Signature:



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## Table of Contents

Case Narrative .....	
General Reporting Notes .....	
PFAS Acronym List.....	
Results .....	
Summary of Results .....	
Detailed Results .....	
QC Data .....	
Method Blank.....	
LCS.....	
Sample Custody.....	
Chain of Custody .....	

# Narrative Summary



# Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0525-827-1
Client ID.	NORTHWEST WATER PLANT Site: LELAND N.C.

## 1. Custody

Jayson-Shane Santos received the samples at 5.4 °C after being relinquished by Brunswick County Public Utilities - NC.

The samples were received in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

**Table 1 - Sample Inventory**

EU Lab Sample ID	Client Sample ID	Matrix	Received
0525-827-001-1	050925-SO1	aqueous	2025-05-09
0525-827-001-1A	050925-SO1	aqueous	2025-05-09
0525-827-002-1	050925-EO1	aqueous	2025-05-09
0525-827-002-1A	050925-EO1	aqueous	2025-05-09

## 2. Methods and Analytes

A list of analytes of interest and corresponding methods of analysis is shown in Table 3. Abbreviations are defined in the listed Appendices.

**Table 3 - Methods and Analytes**

EU Method	Analytes	Cleanup Method
EU047	Brunswick List	ENVI-Carb

## 3. Analysis

The samples were analyzed for PFPrA by direct injection using Sciex Triple Quad 7500 (LC/MS/MS "Bumblebee").

The samples were analyzed for the remaining analytes of interest using Waters Acquity UPLC equipped with Xevo TQ MS (LC/MS/MS "Frodo").

The samples were analyzed using more than one batch preparation and analytical sequence to include all analytes of interest.

## 4. Calibration

In the initial calibration, the reported analytes exhibited  $R^2$  of  $\geq 0.99$ . The reported analytes in the calibration standards, Initial Calibration Verification (ICV) and continuing calibration (concal) met the accuracy criterion for native analytes.

# Enthalpy Analytical Narrative Summary

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The Standards that did not were:

- SID BM67 (M2-6:2 FTS, M2-8:2 FTS)
- SID BM68 (M2-6:2 FTS)

Select Extraction Standard (ES) surrogate recoveries exceeded method control limits. Impacted analytes met method acceptance criteria in the concal results. The data was accepted with no further action.

## 5. QC Notes

Ongoing Precision Recovery (OPR) control limits have not been established for some analytes of interest.

Except where noted below, the QC sample analyses passed all method criteria.

QC samples that did not meet method acceptance criteria were:

- MB\_118073\_PFAS (M2-6:2 FTS, d3-N-MeFOSA, d5-N-EtFOSA)
- OPR\_118073\_PFAS (M2-6:2 FTS, d3-N-MeFOSA, d5-N-EtFOSA)

See additional Reporting Notes below.

PFAS by Isotope Dilution (non-potable water) samples were extracted within 28 days, and extracts analyzed within 28 days.

## 6. Reporting Notes

The results presented in this report are representative of the samples as provided to the laboratory.

This report provides all results including detections below LOD following client instruction.

Some labeled extraction standards (ES) in the analyses recovered outside method control limits for ES recovery, as denoted by the "Q" qualifier. The target analytes are quantified based on their ratio to their labeled standard analogs. As a result, low or high labeled standard recovery do not cause any change to ratios or contribute any additional error in the measurement of the target analytes. When detected at a signal-to-noise above 10:1 the ES peak area is used to quantify its respective target analyte using accepted isotope dilution principles. The data is reported without adverse impact.

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

Enthalpy Analytical, LLC in Wilmington NC is accredited by the Louisiana Department of Environmental Quality to the 2016 TNI Standard under certificate number 05075.

## General Reporting Notes – Data Qualifiers

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC - Wilmington, NC data reports, unless specifically noted otherwise.

### General Data Qualifiers

- Ac - Alternate calculation flag indicates the es recovery was calculated using the opening concal when either of the following situations is encountered in the data processing software: the ES recovery is over 400% or the JS is not detected.
- B – The analyte was found in the method blank, at a concentration that was at least 10% of the amount in the sample.
- Cxx – Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group ('xx') are shown with the number of the lowest IUPAC co-eluter.
- E – The reported concentration exceeds the calibration range (upper point of the calibration curve). For HRMS data, this condition does not imply additional measurement uncertainty. For LC-MS/MS data, these values should be considered as having measurement uncertainty higher than values within the calibration range.
- EDL – Estimated Detection Level: The EDL is unique to isotope dilution methods and reflects the conditions of analysis at the time of analysis, including the equipment used. Where the MDL is a static value, the EDL is a dynamic value.
- EMPC – Estimated Maximum Possible Concentration: EMPC is specific to Dioxin/Furan tests to indicate the determined ion-abundance ratio was outside the allowed theoretical range (usually due to being near the detection limit, although it can very rarely be caused by a co-eluting interference). The EMPC concentration is adjusted to reflect the value at the theoretical ion-abundance ratio.
- I/IR – The ion ratio between the primary and secondary ions was observed to be outside the method criteria. The analyte concentration may be inaccurate due to interference.
- J – The analyte has a concentration below the minimum calibration level (LOQ value) but greater than the LOD. These values should be considered as having measurement uncertainty higher than values within the calibration range
- L - For reports containing PFAS analytes only, this flag indicates that an analyte has a concentration below the Minimum Detection Limit (MDL) . The reported concentration is not recommended for regulatory use as the analyte signal may have a signal-to-noise ratio less than the criteria deemed necessary to be considered a detected analyte.
- LOD – Limit of Detection: For reports conforming to the DOD ELAP QSM, this is the QSM-defined LOD. For reports conforming to TNI requirements (but not DOD ELAP QSM requirements), this value is the minimum detection limit (MDL). The LOD is adjusted for sample weight or volume.



## General Reporting Notes – Data Qualifiers

- LOQ – Limit of Quantitation: For reports conforming to the DOD ELAP QSM, this is the QSM-defined LOQ. For reports conforming to TNI requirements (but not DOD ELAP QSM requirements), this value is the reporting limit (RL). The LOQ is adjusted for sample weight or volume.
- <LOD() – Analyte was not found at a concentration high enough to be reported as detected. It is reported as less than the LOD, and the LOD is given in the parentheses.
- <LOQ() – Analyte was not found at a concentration high enough to be reported as above the QSM-defined LOQ or TNI defined Reporting Limit. It is reported as less than the LOQ, and the LOQ is given in the parentheses.
- ND – Indicates a non-detect.
- NR – Indicates a value that is not reportable due to issues observed in sample preparation or analysis.
- PR – The associated congener(s) is(are) poorly resolved.
- QI – Indicates the presence of a quantitative interference.
- RL – Reporting Limit. Lowest reportable value. The level is higher than the MDL.
- SI – Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
- U – The analyte was not detected.
- V / Q – The labeled standard recovery is not within method control limits.
- X – Indicates the result is from re-injection/repeat/second-column analysis.

### **Lab Identifiers/ Data Attributes**

- AR – Indicates use of the archived portion of the sample extract.
- CU – Indicates a sample that required additional clean-up prior to HRMS injection/processing.
- D – Dilution Data. Result was obtained from the analysis of a dilution. The number that follows the “D” indicates the dilution factor.
- DE – Indicates a dilution performed with the addition of ES (Extraction Standard) solution.
- DUP – Designation for a duplicate sample.
- MS – Designation for a matrix spike.
- MSD – Designation for a matrix spike duplicate.



## General Reporting Notes – Data Qualifiers

- R – Indicates a re-extraction of the sample.
- RJ – Indicates a reinjection of the sample extract.
- S – Indicates a sample split. The number that follows the “S” indicates the split factor.
- SAT – Indicates an analyte saturated the detector.

PFAS Compound Acronym List			Methods					
Acronym	CAS #	Compound Name	SOP EU047	EPA 1633 (B-24)	EPA 1633X	EPA 537.1	EPA 533	EPA 8327*
<b>Target Analytes</b>								
PFBA	375-22-4	Perfluorobutanoic Acid	X	X	X		X	X
PFPeA	2706-90-3	Perfluoropentanoic Acid	X	X	X		X	X
PFHxA	307-24-4	Perfluorohexanoic Acid	X	X	X	X	X	X
PFHpA	375-85-9	Perfluoroheptanoic Acid	X	X	X	X	X	X
PFOA	335-67-1	Perfluorooctanoic Acid	X	X	X	X	X	X
PFNA	375-95-1	Perfluorononanoic Acid	X	X	X	X	X	X
PFDA	335-76-2	Perfluorodecanoic acid	X	X	X	X	X	X
PFUnA (PFUnDA)	2058-94-8	Perfluoroundecanoic acid	X	X	X	X	X	X
PFDoA (PFDoDA)	307-55-1	Perfluorododecanoic acid	X	X	X	X		X
PFTrDA (PFTriA, PFTTrDA)	72629-94-8	Perfluorotridecanoic acid	X	X	X	X		X
PFTeDA (PFTA, PFTreA)	376-06-7	Perfluorotetradecanoic acid	X	X	X	X		X
PFBS	375-73-5	Perfluorobutane sulfonic acid	X	X	X	X	X	X
PFPeS	2706-91-4	Perfluoropentane sulfonic acid	X	X	X		X	X
PFHxS	355-46-4	Perfluorohexane sulfonic acid	X	X	X	X	X	X
PFHpS	375-92-8	Perfluoroheptane sulfonic acid	X	X	X		X	X
PFOS	1763-23-1	Perfluorooctane sulfonic acid	X	X	X	X	X	X
PFNS	68259-12-1	Perfluorononane sulfonic acid	X	X	X			X
PFDS	335-77-3	Perfluorodecane sulfonic acid	X	X	X			X
4:2 FTS	757124-72-4	4:2 fluorotelomer sulfonic acid	X	X	X		X	X
6:2 FTS	27619-97-2	6:2 fluorotelomer sulfonic acid	X	X	X		X	X
8:2 FTS	39108-34-4	8:2 fluorotelomer sulfonic acid	X	X	X		X	X
10:2 FTS	120226-60-0	Fluorotelomer sulfonate 10:2						X
FHxSA	41997-13-1	Perfluorohexanesulfonamide			X			X
PFOSA (FOSA)	754-91-6	Perfluorooctane sulfonamide	X	X	X			X
N-MeFOSAA	2355-31-9	N-methyl perfluorooctane sulfonamido acetic acid	X	X	X	X		X
N-MeFOSA	31506-32-8	N-methylperfluoro-1-octanesulfonamide	X	X	X			X
N-MeFOSE	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	X	X	X			X
N-EtFOSAA	2991-50-6	N-ethyl perfluorooctane sulfonamido acetic acid	X	X	X	X		X
N-EtFOSA	4151-50-2	N-ethylperfluoro-1-octanesulfonamide	X	X	X			X
N-EtFOSE	1691-99-2	2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol	X	X	X			X
HFPO-DA	13252-13-6	Hexafluoropropyleneoxide dimer acid (GenX)	X	X	X	X	X	X
11Cl-PF3OUds	763051-92-9	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	X	X	X	X	X	X
9Cl-PF3ONS	756426-58-1	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	X	X	X	X	X	X
ADONA	919005-14-4	4,8-dioxa-3H-perfluorononanoic acid	X	X	X	X	X	X
PFESA	113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid		X	X		X	X
PFMOBA (PFMBA)	863090-89-5	Perfluoro-4-methoxybutanoic acid		X	X		X	X
NFDHA	151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid		X	X		X	X
PFMOPrA (PFMPA)	377-73-1	Perfluoro-3-methoxypropanoic acid		X	X		X	X
PFPrA	422-64-0	Perfluoropropionic acid, 2,2,3,3-Pentafluoropropionic acid			X			X
PFPrS (PFPS)	423-41-6	Perfluoropropanesulfonic acid			X			X



PFAS Compound Acronym List			Methods					
Acronym	CAS #	Compound Name	SOP EU047	EPA 1633 (B-24)	EPA 1633X	EPA 537.1	EPA 533	EPA 8327*
PFMOAA	674-13-5	Perfluoro-2-methoxyacetic acid;			X			X
PFO2HxA	39492-88-1	Perfluoro (3,5-dioxahexanoic) acid			X			X
PFO3OA	39492-89-2	Perfluoro (3,5,7-trioxaoctanoic) acid			X			X
PFO4DA	39492-90-5	Perfluoro (3,5,7,9-tetraoxadecanoic) acid			X			X
PFO5DA	39492-91-6	Perfluoro(3,5,7,9,11-pentaoxadodecanoic) acid			X			X
Nafion Byproduct 1 (PS Acid)	29311-67-9	1,1,2,2-tetrafluoro-2-[1,1,1,2,3,3-hexafluoro-3-(1,2,2-trifluoroethenoxy)propan-2-yl]oxyethanesulfonic acid			X			X
Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	Perfluoro-2-[[perfluoro-3-(perfluoroethoxy)-2-propanyl]oxy]ethanesulfonic acid (Hydro-PS Acid)			X			X
PEPA	267239-61-2	Perfluoro-2-ethoxypropanoic acid			X			X
PMPA	13140-29-9	Perfluoro-2-methoxypropanoic acid			X			X
PFECA-G, (PFPE-1)	801212-59-9	4-(Heptafluoroisopropoxy)hexafluorobutanoic acid, Perfluoro-4-isopropoxybutanoic acid			X			X
PFHxDA	67905-19-5	Perfluorohexadecanoic acid			X			
R-PSDA (Nafion Byproduct 4)	2416366-18-0	Perfluoro-4-(2-sulfoethoxy)pentanoic acid; 2,2,3,3,4,5,5-Octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)pentanoic acid			X			X
Hydrolyzed PSDA (Nafion Byproduct 5)	2416366-19-1	2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro-2-sulfoethoxy)propoxy]-acetic acid			X			X
R-PSDCA (Nafion Byproduct 6)	2416366-21-5	1,1,2,2-tetrafluoro-2-[1,2,2,3,3-pentafluoro-1-(trifluoromethyl)propoxy] ethanesulfonic acid			X			X
EVE Acid	69087-46-3	2,2,3,3-tetrafluoro-3-((1,1,1,2,3,3-hexafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propan-2-yl)oxy)propionic acid			X			X
FBSA	30334-69-1	Perfluorobutylsulfonamide			X			X
MeFBSA	68298-12-4	1-Butanesulfonamide; (N-(Methyl)nonafluorobutanesulfonamide); 1,1,2,2,3,3,4,4,4-nonafluoro-N-methyl-1-Butanesulfonamide			X			X
Hydro-EVE Acid	773804-62-9	2,2,3,3-Tetrafluoro-3-[[1,1,1,2,3,3-hexafluoro-3-(1,2,2,2-tetrafluoroethoxy)propan-2-yl]oxy}propanoic acid			X			X
R-EVE Acid	2416366-22-6	4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-pentanoic acid			X			X
NVHOS	1132933-86-8	Perfluoroethoxysulfonic acid; 1,1,2,2-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane-1-sulfonic acid			X			X

PFAS Compound Acronym List			Methods					
Acronym	CAS #	Compound Name	SOP EU047	EPA 1633 (B-24)	EPA 1633X	EPA 537.1	EPA 533	EPA 8327*
PFDoS	79780-39-5	Perfluorododecane sulfonic acid		X	X			X
PFOA	16517-11-6	Perfluorooctadecanoic acid			X			
3:3 FTCA	356-02-5	2H,2H,3H,3H-Perfluorohexanoic acid		X	X			X
5:3 FTCA	914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid		X	X			X
7:3 FTCA	812-70-4	2H,2H,3H,3H-Perfluorodecanoic acid		X	X			X
N-AP-FHxSA	50598-28-2	N-(3-(Dimethylamino)propyl)tridecafluoro-1-hexanesulfonamide			X			X
N-CMAmP-6:2 FOSA	34455-29-3	N-(Carboxymethyl)-N,N-dimethyl-3-(((3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)sulfonyl)amino)1-propanaminium			X			X
BPAF	1478-61-1	Bisphenol AF			X			X
HQ-115	90076-65-6	Bis(trifluoromethane)sulfonimide lithium salt			X			X

\* Accreditation pending

# Results

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Summary

	Compound	CAS	050925-SO1 ng/L	050925-EO1 ng/L
Acids	PFPtA	422-64-0	ND U	ND U
	PFBA	375-22-4	3.64	3.08
	PFPeA	2706-90-3	6.23	6.01
	PFHxA	307-24-4	5.96	5.76
	PFHpA	375-85-9	2.81	2.59
	PFOA	335-67-1	5.46	5.09
	PFNA	375-95-1	0.629	0.595
	PFDA	335-76-2	0.247 J	0.241 J
	PFUnDA	2058-94-8	0.00660 L	ND U
	PFDoDA	307-55-1	ND U	ND U
	PFTtDA	72629-94-8	ND U	ND U
	PFTeDA	376-06-7	ND U	ND U
	PFHxDA	67905-19-5	ND U	ND U
	Sulfonates	PFBS	375-73-5	3.48
PFPeS		2706-91-4	0.690	0.559
PFHxS		355-46-4	4.61	4.30
PFHpS		375-92-8	0.197 L	0.176 L
PFOS		1763-23-1	11.1	10.8
PFNS		68259-12-1	ND U	ND U
PFDS		335-77-3	ND U	ND U
4:2 FTS		757124-72-4	ND U	ND U
6:2 FTS		27619-97-2	0.132 L	0.112 L
8:2 FTS		39108-34-4	ND U	ND U
10:2 FTS		120226-60-0	ND U	ND U
Sulfonamidos	FBSA	30334-69-1	0.602	0.470 J
	N-EtFOSA	4151-50-2	ND U	ND U
	N-EtFOSAA	2991-50-6	ND U	ND U
	N-EtFOSE	1691-99-2	ND U	ND U
	N-MeFOSA	31506-32-8	ND U	ND U
	N-MeFOSAA	2355-31-9	ND U	ND U
	N-MeFOSE	24448-09-7	ND U	ND U
	PFOSA	754-91-6	0.0103 L	ND U
PFECAs	ADONA	919005-14-4	ND U	ND U
	EVE Acid	69087-46-3	ND U	ND U
	HFPO-DA	13252-13-6	2.14	4.81
	Hydro-EVE Acid	773804-62-9	ND U	0.0157 L
	NFDHA	151772-58-6	ND U	ND U
	PEPA	267239-61-2	2.25	3.28
	PFECA-G	801212-59-9	ND U	ND U
	PFMOAA	674-13-5	10.3	16.5
	PFMOBA	863090-89-5	ND U	ND U
	PFMOPrA	377-73-1	ND U	ND U
	PFO2HxA	39492-88-1	2.10	4.44
	PFO3OA	39492-89-2	0.589	0.907
	PFO4DA	39492-90-5	ND U	ND U
	PFO5DA	39492-91-6	ND U	ND U
	PMPA	13140-29-9	4.28	9.93
	R-EVE	2416366-22-6	1.83	2.44
	PFESAs	11Cl-PF3OUds	763051-92-9	ND U
9Cl-PF3ONS		756426-58-1	ND U	ND U
Hydrolyzed PSDA		2416366-19-1	1.35	4.37
Nafion Byproduct 1 (PS Acid)		29311-67-9	ND U	ND U
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	0.157 L	0.305 L
NVHOS		1132933-86-8	ND U	0.338 J
PFEESA		113507-82-7	ND U	ND U
R-PSDA		2416366-18-0	2.04 L	2.43
R-PSDCA		2416366-21-5	ND U	ND U

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	050925-SO1		
Sampling Site			
Enthalpy ID	0525-827-001-1	Prep Batch	eu19426
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-05-09 13:00	Instrument	Bumblebee
Received Date	2025-05-09	Sample Vol mL	0.1
Prep Date	2024-05-14 15:00	Extract Vol mL	0.2
AnalysisDate	2025-05-14 18:53	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B140525-05141853	ND	700	1530			U
ES	13C3-PFPrA		B140525-05141853				20-150%	116%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name 050925-SO1  
 Sampling Site  
 Enthalpy ID 0525-827-001-1A Prep Batch EU118073  
 Matrix aqueous Analyst jogres  
 Sampling Date 2025-05-09 13:00 Instrument Frodo  
 Received Date 2025-05-09 Sample Vol mL 307.92  
 Prep Date 2025-05-16 11:40 Extract Vol mL 0.4  
 AnalysisDate 2025-05-17 01:55 Split Factor N/A  
 SampleType Sample Method Code EU-047-NPW  
 Bottle ID A

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	FR160525038	3.64	0.206	0.520				
	PFPeA	2706-90-3	FR160525038	6.23	0.149	0.520				
	PFFhxA	307-24-4	FR160525038	5.96	0.174	0.520				
	PFFHpA	375-85-9	FR160525038	2.81	0.182	0.520				
	PFOA	335-67-1	FR160525038	5.46	0.119	0.520				
	PFNA	375-95-1	FR160525038	0.629	0.117	0.520				
	PFDA	335-76-2	FR160525038	0.247	0.149	0.520			J	
	PFUnDA	2058-94-8	FR160525038	0.00660	0.117	0.520			L	
	PFDODA	307-55-1	FR160525038	ND	0.211	0.520			U	
	PFTrDA	72629-94-8	FR160525038	ND	0.172	0.520			U	
	PFTeDA	376-06-7	FR160525038	ND	0.198	0.520			U	
	PFFhxDA	67905-19-5	FR160525038	ND	0.276	0.520			U	
	Sulfonates	PFBS	375-73-5	FR160525038	3.48	0.276	0.520			
PFPeS		2706-91-4	FR160525038	0.690	0.107	0.490				
PFFhXS		355-46-4	FR160525038	4.61	0.401	0.476				
PFFHpS		375-92-8	FR160525038	0.197	0.252	0.495			L	
PFOS		1763-23-1	FR160525038	11.1	0.274	0.481				
PFNS		68259-12-1	FR160525038	ND	0.161	0.500			U	
PFDS		335-77-3	FR160525038	ND	0.273	0.500			U	
4:2 FTS		757124-72-4	FR160525038	ND	0.0674	0.487			U	
6:2 FTS		27619-97-2	FR160525038	0.132	0.245	0.495			L	
8:2 FTS		39108-34-4	FR160525038	ND	0.116	0.498			U	
10:2 FTS	120226-60-0	FR160525038	ND	0.398	0.520			U		
Sulfonamidos	FBSA	30334-69-1	FR160525038	0.602	0.247	0.520				
	N-EiFOSA	4151-50-2	FR160525038	ND	0.322	0.520			U	
	N-EiFOSAA	2991-50-6	FR160525038	ND	0.211	0.520			U	
	N-EiFOSE	1691-99-2	FR160525038	ND	0.796	2.34			U	
	N-MeFOSA	31506-32-8	FR160525038	ND	0.214	0.520			U	
	N-MeFOSAA	2355-31-9	FR160525038	ND	0.146	0.520			U	
	N-MeFOSE	24448-09-7	FR160525038	ND	0.494	2.34			U	
	PFOSA	754-91-6	FR160525038	0.0103	0.0729	0.520			L	
	ADONA	919005-14-4	FR160525038	ND	0.141	0.492			U	
PFECAs	EVE Acid	69087-46-3	FR160525038	ND	0.166	1.17			U	
	HFPO-DA	13252-13-6	FR160525038	2.14	0.0550	0.520				
	Hydro-EVE Acid	773804-62-9	FR160525038	ND	0.170	0.520			U	
	NFDHA	151772-58-6	FR160525038	ND	0.109	0.520			U	
	PEPA	267239-61-2	FR160525038	2.25	0.0974	0.520				
	PFECA-G	801212-59-9	FR160525038	ND	0.0693	0.520			U	
	PFMOAA	674-13-5	FR160525038	10.3	0.263	0.520				
	PFMOBA	863090-89-5	FR160525038	ND	0.872	1.17			U	
	PFMOPrA	377-73-1	FR160525038	ND	0.185	0.520			U	
	PFO2HxA	39492-88-1	FR160525038	2.10	0.167	0.520				
	PFO3OA	39492-89-2	FR160525038	0.589	0.239	0.520				
	PFO4DA	39492-90-5	FR160525038	ND	0.411	2.60			U	
	PFO5DA	39492-91-6	FR160525038	ND	0.416	2.60			U	
	PMPA	13140-29-9	FR160525038	4.28	0.122	0.520				
	R-EVE	2416366-22-6	FR160525038	1.83	0.862	1.17				
	PFESAs	11Cl-PF3OUdS	763051-92-9	FR160525038	ND	0.245	0.490			U
		9Cl-PF3ONS	756426-58-1	FR160525038	ND	0.333	0.484			U
Hydrolyzed PSDA		2416366-19-1	FR160525038	1.35	0.346	0.520				
Nafion Byproduct 1 (PS Acid)		29311-67-9	FR160525038	ND	0.278	0.520			U	
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	FR160525038	0.157	0.430	0.520			L	
NVHOS		1132933-86-8	FR160525038	ND	0.0801	0.520			U	
PFEESA		113507-82-7	FR160525038	ND	0.156	0.520			U	
R-PSDA		2416366-18-0	FR160525038	2.04	2.29	2.29			L	
ES	R-PSDCA	2416366-21-5	FR160525038	ND	0.219	0.520			U	
	MPFBA		FR160525038				20-150%	96.7%		
	M5PFPeA		FR160525038				20-150%	269%	Q	
	M3PFBS		FR160525038				20-150%	395%	Q	
	M2-4:2 FTS		FR160525038				20-150%	186%	Q	
	M5PFFhxA		FR160525038				20-150%	84.1%		
	M3HFPO-DA		FR160525038				20-150%	73.1%		
M4PFFHpA		FR160525038				20-150%	87.7%			

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	050925-SO1		
Sampling Site			
Enthalpy ID	0525-827-001-1A	Prep Batch	EU118073
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-05-09 13:00	Instrument	Frodo
Received Date	2025-05-09	Sample Vol mL	307.92
Prep Date	2025-05-16 11:40	Extract Vol mL	0.4
AnalysisDate	2025-05-17 01:55	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
M3PFHxS		FR160525038				20-150%	103%	
M2-6:2 FTS		FR160525038				20-150%	165%	Q
M8PFOA		FR160525038				20-150%	96.2%	
M9PFNA		FR160525038				20-150%	80.5%	
M8PFOS		FR160525038				20-150%	87.3%	
M2-8:2 FTS		FR160525038				20-150%	119%	
M8FOSA-I		FR160525038				20-150%	64.6%	
M6PFDA		FR160525038				20-150%	86.1%	
d3-N-MeFOSAA		FR160525038				20-150%	78.7%	
d5-N-EtFOSAA		FR160525038				20-150%	73.7%	
M7PFUdA		FR160525038				20-150%	72.2%	
MPFDoA		FR160525038				20-150%	53.1%	
M2PFTeDA		FR160525038				20-150%	18.1%	Q
d3-N-MeFOSA		FR160525038				10-200%	4.00%	Q
d5-N-EtFOSA		FR160525038				10-200%	3.22%	Q
d7-N-MeFOSE		FR160525038				10-200%	24.1%	
d9-N-EtFOSE		FR160525038				10-200%	22.2%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	050925-EO1		
Sampling Site			
Enthalpy ID	0525-827-002-1	Prep Batch	eu19426
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-05-09 13:00	Instrument	Bumblebee
Received Date	2025-05-09	Sample Vol mL	0.1
Prep Date	2024-05-14 15:00	Extract Vol mL	0.2
AnalysisDate	2025-05-14 19:04	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B140525-05141904	ND	700	1530			U
ES	13C3-PFPrA		B140525-05141904				20-150%	127%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name 050925-EO1  
 Sampling Site  
 Enthalpy ID 0525-827-002-1A Prep Batch EU118073  
 Matrix aqueous Analyst jogres  
 Sampling Date 2025-05-09 13:00 Instrument Frodo  
 Received Date 2025-05-09 Sample Vol mL 296.18  
 Prep Date 2025-05-16 11:40 Extract Vol mL 0.4  
 AnalysisDate 2025-05-17 02:17 Split Factor N/A  
 SampleType Sample Method Code EU-047-NPW  
 Bottle ID A

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFBA	375-22-4	FR160525039	3.08	0.214	0.540			
	PFPeA	2706-90-3	FR160525039	6.01	0.154	0.540			
	PFFhxA	307-24-4	FR160525039	5.76	0.181	0.540			
	PFFHpA	375-85-9	FR160525039	2.59	0.189	0.540			
	PFOA	335-67-1	FR160525039	5.09	0.124	0.540			
	PFNA	375-95-1	FR160525039	0.595	0.122	0.540			
	PFDA	335-76-2	FR160525039	0.241	0.154	0.540			J
	PFUnDA	2058-94-8	FR160525039	ND	0.122	0.540			U
	PFDODA	307-55-1	FR160525039	ND	0.219	0.540			U
	PFTrDA	72629-94-8	FR160525039	ND	0.179	0.540			U
	PFTeDA	376-06-7	FR160525039	ND	0.206	0.540			U
	PFFhxDA	67905-19-5	FR160525039	ND	0.287	0.540			U
	Sulfonates	PFBS	375-73-5	FR160525039	3.27	0.287	0.540		
PFPeS		2706-91-4	FR160525039	0.559	0.111	0.509			
PFFhXS		355-46-4	FR160525039	4.30	0.417	0.495			
PFFHpS		375-92-8	FR160525039	0.176	0.262	0.515			L
PFOS		1763-23-1	FR160525039	10.8	0.285	0.500			
PFNS		68259-12-1	FR160525039	ND	0.168	0.520			U
PFDS		335-77-3	FR160525039	ND	0.284	0.520			U
4:2 FTS		757124-72-4	FR160525039	ND	0.0701	0.506			U
6:2 FTS		27619-97-2	FR160525039	0.112	0.255	0.515			L
8:2 FTS		39108-34-4	FR160525039	ND	0.121	0.517			U
10:2 FTS	120226-60-0	FR160525039	ND	0.414	0.540			U	
Sulfonamidos	FBSA	30334-69-1	FR160525039	0.470	0.257	0.540			J
	N-EiFOSA	4151-50-2	FR160525039	ND	0.334	0.540			U
	N-EiFOSAA	2991-50-6	FR160525039	ND	0.219	0.540			U
	N-EiFOSE	1691-99-2	FR160525039	ND	0.827	2.43			U
	N-MeFOSA	31506-32-8	FR160525039	ND	0.223	0.540			U
	N-MeFOSAA	2355-31-9	FR160525039	ND	0.152	0.540			U
	N-MeFOSE	24448-09-7	FR160525039	ND	0.513	2.43			U
	PFOSA	754-91-6	FR160525039	ND	0.0758	0.540			U
	ADONA	919005-14-4	FR160525039	ND	0.146	0.512			U
	EVE Acid	69087-46-3	FR160525039	ND	0.172	1.22			U
PFECAs	HFPO-DA	13252-13-6	FR160525039	4.81	0.0572	0.540			
	Hydro-EVE Acid	773804-62-9	FR160525039	0.0157	0.177	0.540			L
	NFDHA	151772-58-6	FR160525039	ND	0.114	0.540			U
	PEPA	267239-61-2	FR160525039	3.28	0.101	0.540			
	PFECA-G	801212-59-9	FR160525039	ND	0.0721	0.540			U
	PFMOAA	674-13-5	FR160525039	16.5	0.273	0.540			
	PFMOBA	863090-89-5	FR160525039	ND	0.907	1.22			U
	PFMOPrA	377-73-1	FR160525039	ND	0.192	0.540			U
	PFO2HxA	39492-88-1	FR160525039	4.44	0.174	0.540			
	PFO3OA	39492-89-2	FR160525039	0.907	0.248	0.540			
	PFO4DA	39492-90-5	FR160525039	ND	0.427	2.70			U
	PFO5DA	39492-91-6	FR160525039	ND	0.432	2.70			U
	PMPA	13140-29-9	FR160525039	9.93	0.127	0.540			
	R-EVE	2416366-22-6	FR160525039	2.44	0.896	1.22			
	PFESAs	11CI-PF3OUdS	763051-92-9	FR160525039	ND	0.255	0.509		
9CI-PF3ONS		756426-58-1	FR160525039	ND	0.346	0.503			U
Hydrolyzed PSDA		2416366-19-1	FR160525039	4.37	0.360	0.540			
Nafion Byproduct 1 (PS Acid)		29311-67-9	FR160525039	ND	0.289	0.540			U
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	FR160525039	0.305	0.447	0.540			L
NVHOS		1132933-86-8	FR160525039	0.338	0.0832	0.540			J
PFEESA		113507-82-7	FR160525039	ND	0.162	0.540			U
R-PSDA		2416366-18-0	FR160525039	2.43	2.38	2.38			
R-PSDCA		2416366-21-5	FR160525039	ND	0.228	0.540			U
ES		MPFBA		FR160525039				20-150%	97.6%
	M5PFPeA		FR160525039				20-150%	190%	Q
	M3PFBS		FR160525039				20-150%	248%	Q
	M2-4:2 FTS		FR160525039				20-150%	153%	Q
	M5PFFhxA		FR160525039				20-150%	82.9%	
	M3HFPO-DA		FR160525039				20-150%	73.4%	
	M4PFFHpA		FR160525039				20-150%	88.2%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	050925-EO1	Prep Batch	EU118073
Sampling Site		Analyst	jogres
Enthalpy ID	0525-827-002-1A	Instrument	Frodo
Matrix	aqueous	Sample Vol mL	296.18
Sampling Date	2025-05-09 13:00	Extract Vol mL	0.4
Received Date	2025-05-09	Split Factor	N/A
Prep Date	2025-05-16 11:40	Method Code	EU-047-NPW
AnalysisDate	2025-05-17 02:17		
SampleType	Sample		
Bottle ID	A		

Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
M3PFHxS		FR160525039				20-150%	104%	
M2-6:2 FTS		FR160525039				20-150%	160%	Q
M8PFOA		FR160525039				20-150%	98.1%	
M9PFNA		FR160525039				20-150%	86.8%	
M8PFOS		FR160525039				20-150%	94.6%	
M2-8:2 FTS		FR160525039				20-150%	134%	
M8FOSA-I		FR160525039				20-150%	90.1%	
M6PFDA		FR160525039				20-150%	97.5%	
d3-N-MeFOSAA		FR160525039				20-150%	92.2%	
d5-N-EtFOSAA		FR160525039				20-150%	89.0%	
M7PFUdA		FR160525039				20-150%	92.5%	
MPFDoA		FR160525039				20-150%	80.6%	
M2PFTeDA		FR160525039				20-150%	43.2%	
d3-N-MeFOSA		FR160525039				10-200%	11.6%	
d5-N-EtFOSA		FR160525039				10-200%	10.2%	
d7-N-MeFOSE		FR160525039				10-200%	35.2%	
d9-N-EtFOSE		FR160525039				10-200%	29.7%	

# QC Data

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_118073_PFAS	Prep Batch	EU118073
Sampling Site		Analyst	jogres
Enthalpy ID	MB_118073_PFAS	Instrument	Frodo
Matrix	aqueous	Sample Vol mL	500
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-05-16 11:40	Method Code	EU-047-NPW
AnalysisDate	2025-05-16 22:30		
SampleType	Blank		
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	FR160525029	ND	0.127	0.320			U	
	PFPeA	2706-90-3	FR160525029	ND	0.0915	0.320			U	
	PFFhxA	307-24-4	FR160525029	ND	0.107	0.320			U	
	PFFHpA	375-85-9	FR160525029	ND	0.112	0.320			U	
	PFOA	335-67-1	FR160525029	ND	0.0732	0.320			U	
	PFNA	375-95-1	FR160525029	ND	0.0723	0.320			U	
	PFDA	335-76-2	FR160525029	ND	0.0915	0.320			U	
	PFUnDA	2058-94-8	FR160525029	ND	0.0723	0.320			U	
	PFDODA	307-55-1	FR160525029	ND	0.130	0.320			U	
	PFTrDA	72629-94-8	FR160525029	0.0245	0.106	0.320			L	
	PFTeDA	376-06-7	FR160525029	ND	0.122	0.320			U	
	PFFhxDA	67905-19-5	FR160525029	0.0314	0.170	0.320			L	
	Sulfonates	PFBS	375-73-5	FR160525029	ND	0.170	0.320			U
		PFPeS	2706-91-4	FR160525029	ND	0.0657	0.301			U
PFFhXS		355-46-4	FR160525029	ND	0.247	0.293			U	
PFFHpS		375-92-8	FR160525029	ND	0.155	0.305			U	
PFOS		1763-23-1	FR160525029	ND	0.169	0.296			U	
PFNS		68259-12-1	FR160525029	ND	0.0993	0.308			U	
PFDS		335-77-3	FR160525029	ND	0.168	0.308			U	
4:2 FTS		757124-72-4	FR160525029	ND	0.0415	0.300			U	
6:2 FTS		27619-97-2	FR160525029	ND	0.151	0.305			U	
8:2 FTS		39108-34-4	FR160525029	ND	0.0717	0.307			U	
10:2 FTS	120226-60-0	FR160525029	ND	0.245	0.320			U		
Sulfonamidos	FBSA	30334-69-1	FR160525029	ND	0.152	0.320			U	
	N-EiFOSA	4151-50-2	FR160525029	ND	0.198	0.320			U	
	N-EiFOSAA	2991-50-6	FR160525029	ND	0.130	0.320			U	
	N-EiFOSE	1691-99-2	FR160525029	ND	0.490	1.44			U	
	N-MeFOSA	31506-32-8	FR160525029	ND	0.132	0.320			U	
	N-MeFOSAA	2355-31-9	FR160525029	ND	0.0899	0.320			U	
	N-MeFOSE	24448-09-7	FR160525029	ND	0.304	1.44			U	
	PFOSA	754-91-6	FR160525029	ND	0.0449	0.320			U	
	PFECAs	ADONA	919005-14-4	FR160525029	ND	0.0867	0.303			U
EVE Acid		69087-46-3	FR160525029	ND	0.102	0.720			U	
HFPO-DA		13252-13-6	FR160525029	ND	0.0339	0.320			U	
Hydro-EVE Acid		773804-62-9	FR160525029	ND	0.105	0.320			U	
NFDHA		151772-58-6	FR160525029	ND	0.0673	0.320			U	
PEPA		267239-61-2	FR160525029	ND	0.0600	0.320			U	
PFECA-G		801212-59-9	FR160525029	ND	0.0427	0.320			U	
PFMOAA		674-13-5	FR160525029	ND	0.162	0.320			U	
PFMOBA		863090-89-5	FR160525029	ND	0.537	0.720			U	
PFMOPrA		377-73-1	FR160525029	ND	0.114	0.320			U	
PFO2HxA		39492-88-1	FR160525029	ND	0.103	0.320			U	
PFO3OA		39492-89-2	FR160525029	ND	0.147	0.320			U	
PFO4DA		39492-90-5	FR160525029	ND	0.253	1.60			U	
PFO5DA		39492-91-6	FR160525029	ND	0.256	1.60			U	
PMPA		13140-29-9	FR160525029	ND	0.0754	0.320			U	
R-EVE		2416366-22-6	FR160525029	ND	0.531	0.720			U	
PFESAs		11CI-PF3OUdS	763051-92-9	FR160525029	ND	0.151	0.301			U
	9CI-PF3ONS	756426-58-1	FR160525029	ND	0.205	0.298			U	
	Hydrolyzed PSDA	2416366-19-1	FR160525029	ND	0.213	0.320			U	
	Nafion Byproduct 1 (PS Acid)	29311-67-9	FR160525029	ND	0.171	0.320			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	FR160525029	ND	0.265	0.320			U	
	NVHOS	1132933-86-8	FR160525029	ND	0.0493	0.320			U	
	PFEESA	113507-82-7	FR160525029	ND	0.0962	0.320			U	
	R-PSDA	2416366-18-0	FR160525029	ND	1.41	1.41			U	
ES	R-PSDCA	2416366-21-5	FR160525029	ND	0.135	0.320			U	
	MPFBA		FR160525029				20-150%	91.1%		
	M5PFPeA		FR160525029				20-150%	92.1%		
	M3PFBS		FR160525029				20-150%	92.3%		
	M2-4:2 FTS		FR160525029				20-150%	115%		
	M5PFFhxA		FR160525029				20-150%	82.7%		
	M3HFPO-DA		FR160525029				20-150%	73.7%		
M4PFFHpA		FR160525029				20-150%	86.3%			

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_118073_PFAS	Prep Batch	EU118073
Sampling Site		Analyst	jogres
Enthalpy ID	MB_118073_PFAS	Instrument	Frodo
Matrix	aqueous	Sample Vol mL	500
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-05-16 11:40	Method Code	EU-047-NPW
AnalysisDate	2025-05-16 22:30		
SampleType	Blank		
Bottle ID	-		

Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
M3PFHxS		FR160525029				20-150%	103%	
M2-6:2 FTS		FR160525029				20-150%	155%	Q
M8PFOA		FR160525029				20-150%	97.0%	
M9PFNA		FR160525029				20-150%	85.1%	
M8PFOS		FR160525029				20-150%	93.1%	
M2-8:2 FTS		FR160525029				20-150%	137%	
M8FOSA-I		FR160525029				20-150%	91.4%	
M6PFDA		FR160525029				20-150%	96.7%	
d3-N-MeFOSAA		FR160525029				20-150%	90.6%	
d5-N-EtFOSAA		FR160525029				20-150%	83.9%	
M7PFUdA		FR160525029				20-150%	93.6%	
MPFDoA		FR160525029				20-150%	84.6%	
M2PFTeDA		FR160525029				20-150%	40.2%	
d3-N-MeFOSA		FR160525029				10-200%	9.34%	Q
d5-N-EtFOSA		FR160525029				10-200%	8.93%	Q
d7-N-MeFOSE		FR160525029				10-200%	45.7%	
d9-N-EtFOSE		FR160525029				10-200%	42.9%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_19426_PFAS	Prep Batch	eu19426
Sampling Site		Analyst	jogres
Enthalpy ID	MB_19426_PFAS	Instrument	Bumblebee
Matrix	aqueous	Sample Vol mL	0.1
Sampling Date		Extract Vol mL	0.2
Received Date		Split Factor	N/A
Prep Date	2024-05-14 15:00	Method Code	EU-047-NPW
AnalysisDate	2025-05-14 18:06		
SampleType	Blank		
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B140525-05141806	ND	700	1530			U
ES	13C3-PFPrA		B140525-05141806				20-150%	107%	

# Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Enthalpy ID	OPR_118073_PFAS	Prep Batch	EU118073	Sample Vol (mL)	500
Sample Name	OPR_118073_PFAS	Prep Date	2025-05-16 11:40	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2025-05-16 22:53	Split Factor	N/A
Sampling Date		Analyst	jogres	Method Code	EU-047-NPW
Received Date		Instrument	Frodo	Sample Type	Control
		Bottle ID	-		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	FR160525030	9.62	0.127	0.320	47.9-144%	96.2%		
	PFPeA	2706-90-3	FR160525030	9.46	0.0915	0.320	41.7-159%	94.6%		
	PFHxA	307-24-4	FR160525030	9.87	0.107	0.320	43.2-154%	98.7%		
	PFFHpA	375-85-9	FR160525030	9.05	0.112	0.320	42.1-155%	90.5%		
	PFOA	335-67-1	FR160525030	9.58	0.0732	0.320	51.1-148%	95.8%		
	PFNA	375-95-1	FR160525030	9.84	0.0723	0.320	51.6-153%	98.4%		
	PFDA	335-76-2	FR160525030	9.27	0.0915	0.320	44.5-156%	92.7%		
	PFUnDA	2058-94-8	FR160525030	9.31	0.0723	0.320	40.3-156%	93.1%		
	PFDODA	307-55-1	FR160525030	9.68	0.130	0.320	40.4-158%	96.8%		
	PFTrDA	72629-04-8	FR160525030	18.1	0.106	0.320	42.2-201%	181%		
	PFTeDA	376-06-7	FR160525030	9.49	0.122	0.320	43-162%	94.9%		
	Sulfonates	PFBS	375-73-5	FR160525030	8.49	0.170	0.320	42.7-155%	95.7%	
		PFPeS	2706-91-4	FR160525030	8.83	0.0657	0.301	40.3-152%	93.9%	
		PFHxS	355-46-4	FR160525030	8.17	0.247	0.293	45-148%	89.4%	
		PFFHpS	375-92-8	FR160525030	9.13	0.155	0.305	39.8-166%	95.8%	
PFOS		1763-23-1	FR160525030	8.76	0.169	0.296	59.2-132%	94.4%		
PFNS		68259-12-1	FR160525030	9.11	0.0993	0.308	38.1-153%	94.7%		
PFDS		335-77-3	FR160525030	9.11	0.168	0.308	28.6-148%	94.4%		
4:2 FTS		757124-72-4	FR160525030	8.90	0.0415	0.300	41.5-157%	95.0%		
6:2 FTS		27619-97-2	FR160525030	8.90	0.151	0.305	44.5-160%	93.6%		
8:2 FTS		39108-34-4	FR160525030	7.66	0.0717	0.307	39.4-166%	79.7%		
Sulfonamidos		N-EtFOSA	4151-50-2	FR160525030	10.0	0.198	0.320	26.7-172%	100%	
		N-EtFOSAA	2991-50-6	FR160525030	10.0	0.130	0.320	42.8-156%	100%	
	N-EtFOSE	1691-99-2	FR160525030	40.8	0.490	1.44	38.9-161%	90.6%		
	N-MeFOSA	31506-32-8	FR160525030	9.42	0.132	0.320	26.4-183%	94.2%		
	N-MeFOSAA	2355-31-9	FR160525030	9.79	0.0899	0.320	42-155%	97.9%		
	N-MeFOSE	24448-09-7	FR160525030	43.4	0.304	1.44	37.6-155%	96.5%		
	PFOSA	754-91-6	FR160525030	8.54	0.0449	0.320	39.1-158%	85.4%		
PFECAs	ADONA	919005-14-4	FR160525030	8.59	0.0867	0.303	32.2-151%	85.9%		
	HFPO-DA	13252-13-6	FR160525030	9.44	0.0339	0.320	61.8-131%	94.4%		
PFESAs	11Cl-PF3OUdS	763051-92-9	FR160525030	8.30	0.151	0.301	21.8-141%	83.0%		
	9Cl-PF3ONS	756426-58-1	FR160525030	8.79	0.205	0.298	37.6-146%	87.9%		
ES	MPFBA		FR160525030				20-150%	94.9%		
	M5PFPeA		FR160525030				20-150%	94.6%		
	M3PFBS		FR160525030				20-150%	96.7%		
	M2-4:2 FTS		FR160525030				20-150%	111%		
	M5PFHxA		FR160525030				20-150%	82.1%		
	M3HFPO-DA		FR160525030				20-150%	75.0%		
	M4PFHpA		FR160525030				20-150%	84.5%		
	M3PFHxS		FR160525030				20-150%	105%		
	M2-6:2 FTS		FR160525030				20-150%	151%	Q	
	M8PFOA		FR160525030				20-150%	91.9%		
	M9PFNA		FR160525030				20-150%	83.3%		
	M8PFOS		FR160525030				20-150%	94.6%		
	M2-8:2 FTS		FR160525030				20-150%	138%		
	M8FOSA-I		FR160525030				20-150%	89.1%		
	M6PFDA		FR160525030				20-150%	96.2%		
	d3-N-MeFOSAA		FR160525030				20-150%	91.2%		
	d5-N-EtFOSAA		FR160525030				20-150%	88.4%		
	M7PFUdA		FR160525030				20-150%	95.2%		
	MPFDcA		FR160525030				20-150%	87.3%		
	M2PFTeDA		FR160525030				20-150%	38.3%		
	d3-N-MeFOSA		FR160525030				10-200%	3.29%	Q	
	d5-N-EtFOSA		FR160525030				10-200%	3.48%	Q	
	d7-N-MeFOSE		FR160525030				10-200%	48.7%		
d9-N-EtFOSE		FR160525030				10-200%	47.2%			

## Enthalpy Analytical

Job No.: 0525-827-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Enthalpy ID	OPR_19426_PFAS	Prep Batch	eu19426	Sample Vol (mL)	0.1
Sample Name	OPR_19426_PFAS	Prep Date	2024-05-14 15:00	Extract Vol (mL)	0.2
Matrix	aqueous	Analysis Date	2025-05-14 18:18	Split Factor	N/A
Sampling Date		Analyst	jogres	Method Code	EU-047-NPW
Received Date		Instrument	Bumblebee	Sample Type	Control
		Bottle ID	-		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B140525-05141818	22700	700	1530	40-150%	113%	
ES	13C3-PFPrA		B140525-05141818				20-150%	116%	

# Sample Custody





JOB ID:  Date / Time:  Initials:   
 OR  
 Client:

Cooler

Temp °C:  Thermometer ID:

Received via	<input type="checkbox"/> FedEx	<i>Check one</i> <input checked="" type="checkbox"/> On ice: <input type="checkbox"/> Melted ice: <input type="checkbox"/> Ambient:	<i>Check one</i> <input type="checkbox"/> in a Box: <input checked="" type="checkbox"/> in a Cooler: <input type="checkbox"/> Cooler in Box:	Yes	No	
	<input type="checkbox"/> UPS			<input type="checkbox"/> Cooler seals:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> DHL			<input type="checkbox"/> Sample seals:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/> USPS	<input checked="" type="checkbox"/> Good condition:	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	<input checked="" type="checkbox"/> Courier	Comment: <input type="text"/>				
	<input type="checkbox"/> Other					

Temp °C:  Thermometer ID:

Cooler  of

Received via	<input type="checkbox"/> FedEx	<i>Check one</i> <input type="checkbox"/> On ice: <input type="checkbox"/> Melted ice: <input type="checkbox"/> Ambient:	<i>Check one</i> <input type="checkbox"/> in a Box: <input type="checkbox"/> in a Cooler: <input type="checkbox"/> Cooler in Box:	Yes	No	
	<input type="checkbox"/> UPS			<input type="checkbox"/> Cooler seals:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> DHL			<input type="checkbox"/> Sample seals:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> USPS	<input type="checkbox"/> Good condition:	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/> Courier	Comment: <input type="text"/>				
	<input type="checkbox"/> Other					

Temp °C:  Thermometer ID:

Cooler  of

Received via	<input type="checkbox"/> FedEx	<i>Check one</i> <input type="checkbox"/> On ice: <input type="checkbox"/> Melted ice: <input type="checkbox"/> Ambient:	<i>Check one</i> <input type="checkbox"/> in a Box: <input type="checkbox"/> in a Cooler: <input type="checkbox"/> Cooler in Box:	Yes	No	
	<input type="checkbox"/> UPS			<input type="checkbox"/> Cooler seals:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> DHL			<input type="checkbox"/> Sample seals:	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> USPS	<input type="checkbox"/> Good condition:	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/> Courier	Comment: <input type="text"/>				
	<input type="checkbox"/> Other					