

# Brunswick County Public Utilities - NC

PO Box 249  
Bolivia, NC 28422-0249

## LELAND N.C.

Client Project# NORTHWEST WATER PLANT  
Samples Received: 1/3/2025

### Analytical Report 0125-704

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

Report Issue Date: 1/27/2025

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 27 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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# Narrative Summary



# Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0125-704-1
Client ID.	NORTHWEST WATER PLANT Site: LELAND N.C.

## 1. Custody

Meredith Curtis received the samples at 1.3 °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
0125-704-001-1	010325-S01	aqueous	2025-01-03
0125-704-001-2	010325-S01	aqueous	2025-01-03
0125-704-002-1	010325-E01	aqueous	2025-01-03
0125-704-002-2	010325-E01	aqueous	2025-01-03

## 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
EU-047	Brunswick List + PFPrA	ENVI-Carb

## 3. Analysis

The samples were analyzed using Sciex Triple Quad 7500 (LC/MS/MS "Bumblebee").

The samples were analyzed using Waters Acquity UPLC equipped with Xevo TQ MS (LC/MS/MS "Sauron").

## 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 BH57 (PFTeDA)
- SID BH58 (PFTeDA, PFTTrDA)

Analyte(s) that exceeded method control limits in the concals were not detected >LOQ in the samples. The data is reported without adverse impact.

## 5. QC Notes

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

QC samples that did not meet method acceptance criteria were:

- OPR\_18780\_PFAS (HFPO-DA)

Analyte HFPO-DA exceeded method limits for percent recovery in the ongoing precision recovery (OPR) QC sample. However, the value is within marginal exceedance criteria. Therefore, data is accepted and reported without adverse impact.

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.

Some labeled extraction standards (ES) in the sample analyses recovered outside the 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 2009 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			
Acronym	CAS #	Compound Name	
* accredited for SOP EU047 / EPA method 1633 # Method 537.1 Accredited ^ Method 533 Accredited ~EPA 1633 extended list			
<b>Target Analytes</b>			
* , ^	PFBA	375-22-4	Perfluorobutanoic Acid
* , # , ^	PFPeA	2706-90-3	Perfluoropentanoic Acid
* , # , ^	PFHxA	307-24-4	Perfluorohexanoic Acid
* , # , ^	PFHpA	375-85-9	Perfluoroheptanoic Acid
* , # , ^	PFOA	335-67-1	Perfluorooctanoic Acid
* , # , ^	PFNA	375-95-1	Perfluorononanoic Acid
* , # , ^	PFDA	335-76-2	Perfluorodecanoic acid
* , # , ^	PFUnA (PFUnDA)	2058-94-8	Perfluoroundecanoic acid
* , #	PFDoA (PFDoDA)	307-55-1	Perfluorododecanoic acid
* , #	PFTriA (PFTriA)	72629-94-8	Perfluorotridecanoic acid
* , # , ^	PFTeDA (PFTA)	376-06-7	Perfluorotetradecanoic acid
* , ^	PFBS	375-73-5	Perfluorobutane sulfonic acid
* , # , ^	PFPeS	2706-91-4	Perfluoropentane sulfonic acid
* , ^	PFHxS	355-46-4	Perfluorohexane sulfonic acid
* , # , ^	PFHpS	375-92-8	Perfluoroheptane sulfonic acid
* , # , ^	PFOS	1763-23-1	Perfluorooctane sulfonic acid
*	PFNS	68259-12-1	Perfluorononane sulfonic acid
*	PFDS	335-77-3	Perfluorodecane sulfonic acid
* , ^	4:2 FTS	757124-72-4	4:2 fluorotelomer sulfonic acid
* , ^	6:2 FTS	27619-97-2	6:2 fluorotelomer sulfonic acid
* , ^	8:2 FTS	39108-34-4	8:2 fluorotelomer sulfonic acid
~	10:2 FTS	120226-60-0	Fluorotelomer sulfonate 10:2
~	FHxSA	41997-13-1	Perfluorohexanesulfonamide
*	PFOSA (FOSA)	754-91-6	Perfluorooctane sulfonamide
* , #	N-MeFOSAA	2355-31-9	N-methyl perfluorooctane sulfonamido acetic acid
*	N-MeFOSA	31506-32-8	N-methylperfluoro-1-octanesulfonamide
*	N-MeFOSE	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
* , #	N-EtFOSAA	2991-50-6	N-ethyl perfluorooctane sulfonamido acetic acid
*	N-EtFOSA	4151-50-2	N-ethylperfluoro-1-octanesulfonamide
*	N-EtFOSE	1691-99-2	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
* , # , ^	HFPO-DA	13252-13-6	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (Gen-X)
* , # , ^	11Cl-PF3OUdS	763051-92-9	11-chloroheptafluoro-3-oxadecane-1-sulfonic acid
* , # , ^	9Cl-PF3ONS	756426-58-1	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
* , # , ^	ADONA	919005-14-4	4,8-dioxa-3H-perfluorononanoic acid
* , ^	PFEESA	113507-82-7	Perfluoro(2-ethoxyethane)sulphonic acid
* , ^	PFMOBA (PFMBA)	863090-89-5	Perfluoro-4-methoxybutanoic acid
* , ^	NFDHA	151772-58-6	Nonafluoro-3,6-dioxahexanoic acid
* , ^	PFMOPrA (PFMPA)	377-73-1	Perfluoro-3-methoxypropanoic acid
~	PFPrA	422-64-0	2,2,3,3,3-Pentafluoropropionic acid
~	PFPrS (PFPS)	423-41-6	Perfluoropropanesulfonic acid
~	PFMOAA	674-13-5	Perfluoro-2-methoxyacetic acid
~	PFO2HxA	39492-88-1	Perfluoro (3,5-dioxahexanoic) acid
~	PFO3OA	39492-89-2	Perfluoro (3,5,7-trioxaoctanoic) acid
~	PFO4DA	39492-90-5	Perfluoro (3,5,7,9-tetraoxadecanoic) acid
~	PFO5DA	39492-91-6	Perfluoro(3,5,7,9,11-pentaoxadodecanoic) acid
~	Nafion Byproduct 1 (PS Acid)	29311-67-9	Nafion Byproduct 1
~	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	Nafion Byproduct 2
~	PEPA	267239-61-2	Perfluoro-2-ethoxypropanoic acid
~	PMPA	13140-29-9	Perfluoro-2-methoxypropanoic acid

PFAS Compound Acronym List		
Acronym	CAS #	Compound Name
* accredited for SOP EU047 / EPA method 1633	# Method 537.1 Accredited	^ Method 533 Accredited ~EPA 1633 extended list
~ PFECA-G	801212-59-9	4-(Heptafluoroisopropoxy)hexafluorobutanoic acid
~ PFHxDA	67905-19-5	Perfluorohexadecanoic acid
~ R-PSDA (Nafion Byproduct 4)	2416366-18-0	Perfluoro-4-(2-sulfoethoxy)pentanoic acid
Hydrolyzed PSDA (Nafion Byproduct 5)	2416366-19-1	2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2-tetrafluoro-2-sulfoethoxy)propoxy]-acetic acid
~ 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
~ 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
~ FBSA	30334-69-1	Perfluorobutylsulfonamide
~ MeFBSA	68298-12-4	1-Butanesulfonamide; (N-(Methyl)nonafluorobutanesulfonamide)
~ 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
~ 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
~ NVHOS	1132933-86-8	Perfluoroethoxysulfonic acid
*~ PFDoS	79780-39-5	Perfluorododecane sulfonic acid
~ PFODA	16517-11-6	Perfluorooctadecanoic acid
* 3:3 FTCA	356-02-5	2H,2H,3H,3H-Perfluorohexanoic acid
* 5:3 FTCA	914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid
* 7:3 FTCA	812-70-4	2H,2H,3H,3H-Perfluorodecanoic acid
~ N-AP-FHxSA	50598-28-2	N-(3-(Dimethylamino)propyl)tridecafluoro-1-hexanesulfonamide
~ 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
~ BPAF	1478-61-1	Bisphenol AF
~ HQ-115	90076-65-6	Bis(trifluoromethane)sulfonimide lithium salt

# Results

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)

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

## Summary

	Compound	CAS	010325-S01 ng/L	010325-E01 ng/L
Acids	PFPrA	422-64-0	ND U	ND U
	PFBA	375-22-4	ND U	ND U
	PFPeA	2706-90-3	6.30	6.96
	PFHxA	307-24-4	6.09	5.86
	PFHpA	375-85-9	3.62	3.85
	PFOA	335-67-1	5.64	6.28
	PFNA	375-95-1	0.592	0.627
	PFDA	335-76-2	0.187 J	0.202 J
	PFUnDA	2058-94-8	ND U	ND U
	PFDoDA	307-55-1	ND U	ND U
	PFTrDA	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	3.14
PFPeS		2706-91-4	0.517 J	0.643
PFHxS		355-46-4	4.37	5.25
PFHpS		375-92-8	0.0388 L	0.0957 L
PFOS		1763-23-1	10.7	12.3
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	0.225 L	0.233 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	0.238 L	0.191 L
	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	0.0244 L	ND U
	PFECAs	ADONA	919005-14-4	ND U
EVE Acid		69087-46-3	ND U	ND U
HFPO-DA		13252-13-6	6.79	5.84
Hydro-EVE Acid		773804-62-9	0.215 J	0.218 J
NFDHA		151772-58-6	ND U	ND U
PEPA		267239-61-2	4.70	3.24
PFECA-G		801212-59-9	ND U	ND U
PFMOAA		674-13-5	59.5	47.7
PFMOBA		863090-89-5	ND U	ND U
PFMOPrA		377-73-1	ND U	ND U
PFO2HxA		39492-88-1	4.84	5.51
PFO3OA		39492-89-2	ND U	ND U
PFO4DA		39492-90-5	ND U	ND U
PFO5DA		39492-91-6	ND U	ND U
PMPA		13140-29-9	16.1	15.3
R-EVE		2416366-22-6	13.4	16.8
PFESAs		11Cl-PF3OUdS	763051-92-9	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U
	Hydrolyzed PSDA	2416366-19-1	5.51	6.28
	Nafion Byproduct 1 (PS Acid)	29311-67-9	ND U	ND U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	0.355 L	0.346 L
	NVHOS	1132933-86-8	ND U	ND U
	PFEESA	113507-82-7	ND U	ND U
	R-PSDA	2416366-18-0	7.75	9.69
	R-PSDCA	2416366-21-5	ND U	ND U

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	010325-S01		
Sampling Site			
Enthalpy ID	0125-704-001-1	Prep Batch	eu18792
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-01-03 07:30	Instrument	Bumblebee
Received Date	2025-01-03	Sample Vol mL	0.1
Prep Date	2025-01-08 07:00	Extract Vol mL	0.2
AnalysisDate	2025-01-09 09:48	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	B090125-01090948	ND	700	1530			U
ES	13C3-PFPrA		B090125-01090948				20-150%	128%	

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name 010325-S01  
 Sampling Site  
 Enthalpy ID 0125-704-001-2 Prep Batch eu18780  
 Matrix aqueous Analyst jogres  
 Sampling Date 2025-01-03 07:30 Instrument Sauron  
 Received Date 2025-01-03 Sample Vol mL 280.76  
 Prep Date 2025-01-09 13:39 Extract Vol mL 0.4  
 AnalysisDate 2025-01-10 14:14 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	S011025010	ND	0.226	0.570			U	
	PFPeA	2706-90-3	S011025010	6.30	0.163	0.570				
	PFFhxA	307-24-4	S011025010	6.09	0.191	0.570				
	PFFHpA	375-85-9	S011025010	3.62	0.199	0.570				
	PFOA	335-67-1	S011025010	5.64	0.130	0.570				
	PFNA	375-95-1	S011025010	0.592	0.129	0.570				
	PFDA	335-76-2	S011025010	0.187	0.163	0.570			J	
	PFUnDA	2058-94-8	S011025010	ND	0.129	0.570			U	
	PFDoDA	307-55-1	S011025010	ND	0.232	0.570			U	
	PFTriDA	72629-94-8	S011025010	ND	0.189	0.570			U	
	PFTeDA	376-06-7	S011025010	ND	0.217	0.570			U	
	PFFhxDA	67905-19-5	S011025010	ND	0.303	0.570			U	
	Sulfonates	PFBS	375-73-5	S011025010	3.14	0.303	0.570			
		PFPeS	2706-91-4	S011025010	0.517	0.117	0.537			J
PFFhXS		355-46-4	S011025010	4.37	0.440	0.522				
PFFHpS		375-92-8	S011025010	0.0388	0.276	0.543			L	
PFOS		1763-23-1	S011025010	10.7	0.301	0.528				
PFNS		68259-12-1	S011025010	ND	0.177	0.549			U	
PFDS		335-77-3	S011025010	ND	0.299	0.549			U	
4:2 FTS		757124-72-4	S011025010	ND	0.0739	0.534			U	
6:2 FTS		27619-97-2	S011025010	0.225	0.269	0.543			L	
8:2 FTS		39108-34-4	S011025010	ND	0.128	0.546			U	
10:2 FTS	120226-60-0	S011025010	ND	0.436	0.570			U		
Sulfonamidos	FBSA	30334-69-1	S011025010	0.238	0.271	0.570			L	
	N-EiFOSA	4151-50-2	S011025010	ND	0.353	0.570			U	
	N-EiFOSAA	2991-50-6	S011025010	ND	0.232	0.570			U	
	N-EiFOSE	1691-99-2	S011025010	ND	0.873	2.56			U	
	N-MeFOSA	31506-32-8	S011025010	ND	0.235	0.570			U	
	N-MeFOSAA	2355-31-9	S011025010	ND	0.160	0.570			U	
	N-MeFOSE	24448-09-7	S011025010	ND	0.541	2.56			U	
	PFOSA	754-91-6	S011025010	0.0244	0.0800	0.570			L	
	PFECAs	ADONA	919005-14-4	S011025010	ND	0.154	0.540			U
EVE Acid		69087-46-3	S011025010	ND	0.182	1.28			U	
HFPO-DA		13252-13-6	S011025010	6.79	0.0604	0.570				
Hydro-EVE Acid		773804-62-9	S011025010	0.215	0.187	0.570			J	
NFDHA		151772-58-6	S011025010	ND	0.120	0.570			U	
PEPA		267239-61-2	S011025010	4.70	0.107	0.570				
PFECA-G		801212-59-9	S011025010	ND	0.0760	0.570			U	
PFMOAA		674-13-5	S011025010	59.5	0.289	0.570				
PFMOBA		863090-89-5	S011025010	ND	0.956	1.28			U	
PFMOPrA		377-73-1	S011025010	ND	0.203	0.570			U	
PFO2HxA		39492-88-1	S011025010	4.84	0.183	0.570				
PFO3OA		39492-89-2	S011025010	ND	0.262	0.570			U	
PFO4DA		39492-90-5	S011025010	ND	0.451	2.85			U	
PFO5DA		39492-91-6	S011025010	ND	0.456	2.85			U	
PMPA		13140-29-9	S011025010	16.1	0.134	0.570				
R-EVE		2416366-22-6	S011025010	13.4	0.946	1.28				
PFESAs		11CI-PF3OUdS	763051-92-9	S011025010	ND	0.269	0.537			U
	9CI-PF3ONS	756426-58-1	S011025010	ND	0.365	0.531			U	
	Hydrolyzed PSDA	2416366-19-1	S011025010	5.51	0.379	0.570				
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S011025010	ND	0.305	0.570			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S011025010	0.355	0.472	0.570			L	
	NVHOS	1132933-86-8	S011025010	ND	0.0878	0.570			U	
	PFEESA	113507-82-7	S011025010	ND	0.171	0.570			U	
	R-PSDA	2416366-18-0	S011025010	7.75	2.51	2.51				
	R-PSDCA	2416366-21-5	S011025010	ND	0.240	0.570			U	
ES	MPFBA		S011025010				20-150%	76.9%		
	M5PFPeA		S011025010				20-150%	157%	Q	
	M3PFBS		S011025010				20-150%	245%	Q	
	M2-4:2 FTS		S011025010				20-150%	114%		
	M5PFFhxA		S011025010				20-150%	82.5%		
	M3HFPO-DA		S011025010				20-150%	80.2%		
	M4PFFHpA		S011025010				20-150%	89.4%		

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	010325-S01		
Sampling Site			
Enthalpy ID	0125-704-001-2	Prep Batch	eu18780
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-01-03 07:30	Instrument	Sauron
Received Date	2025-01-03	Sample Vol mL	280.76
Prep Date	2025-01-09 13:39	Extract Vol mL	0.4
AnalysisDate	2025-01-10 14:14	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		S011025010				20-150%	70.7%	
M2-6:2 FTS		S011025010				20-150%	55.1%	
M8PFOA		S011025010				20-150%	80.8%	
M9PFNA		S011025010				20-150%	91.3%	
M8PFOS		S011025010				20-150%	72.2%	
M2-8:2 FTS		S011025010				20-150%	50.4%	
M8FOSA-I		S011025010				20-150%	52.4%	
M6PFDA		S011025010				20-150%	79.2%	
d3-N-MeFOSAA		S011025010				20-150%	71.9%	
d5-N-EtFOSAA		S011025010				20-150%	70.4%	
M7PFUdA		S011025010				20-150%	73.7%	
MPFDoA		S011025010				20-150%	55.7%	
M2PFTeDA		S011025010				20-150%	36.6%	
d3-N-MeFOSA		S011025010				10-200%	6.12%	Q
d5-N-EtFOSA		S011025010				10-200%	6.46%	Q
d7-N-MeFOSE		S011025010				10-200%	38.9%	
d9-N-EtFOSE		S011025010				10-200%	38.3%	

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	010325-E01		
Sampling Site			
Enthalpy ID	0125-704-002-1	Prep Batch	eu18792
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-01-03 07:30	Instrument	Bumblebee
Received Date	2025-01-03	Sample Vol mL	0.1
Prep Date	2025-01-08 07:00	Extract Vol mL	0.2
AnalysisDate	2025-01-09 10:00	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	B090125-01091000	ND	700	1530			U
ES	13C3-PFPrA		B090125-01091000				20-150%	0.0280%	Q

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	010325-E01		
Sampling Site			
Enthalpy ID	0125-704-002-2	Prep Batch	eu18780
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-01-03 07:30	Instrument	Sauron
Received Date	2025-01-03	Sample Vol mL	280.75
Prep Date	2025-01-09 13:39	Extract Vol mL	0.4
AnalysisDate	2025-01-10 14:36	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	S011025011	ND	0.226	0.570			U	
	PFPeA	2706-90-3	S011025011	6.96	0.163	0.570				
	PFFhxA	307-24-4	S011025011	5.86	0.191	0.570				
	PFFHpA	375-85-9	S011025011	3.85	0.199	0.570				
	PFOA	335-67-1	S011025011	6.28	0.130	0.570				
	PFNA	375-95-1	S011025011	0.627	0.129	0.570				
	PFDA	335-76-2	S011025011	0.202	0.163	0.570			J	
	PFUnDA	2058-94-8	S011025011	ND	0.129	0.570			U	
	PFFDoDA	307-55-1	S011025011	ND	0.232	0.570			U	
	PFFTrDA	72629-94-8	S011025011	ND	0.189	0.570			U	
	PFFTeDA	376-06-7	S011025011	ND	0.217	0.570			U	
	PFFhxDA	67905-19-5	S011025011	ND	0.303	0.570			U	
	Sulfonates	PFBS	375-73-5	S011025011	3.29	0.303	0.570			
		PFPeS	2706-91-4	S011025011	0.643	0.117	0.537			
PFFhXS		355-46-4	S011025011	5.25	0.440	0.522				
PFFHpS		375-92-8	S011025011	0.0957	0.276	0.543			L	
PFOS		1763-23-1	S011025011	12.3	0.301	0.528				
PFNS		68259-12-1	S011025011	ND	0.177	0.549			U	
PFDS		335-77-3	S011025011	ND	0.299	0.549			U	
4:2 FTS		757124-72-4	S011025011	ND	0.0739	0.534			U	
6:2 FTS		27619-97-2	S011025011	0.233	0.269	0.543			L	
8:2 FTS		39108-34-4	S011025011	ND	0.128	0.546			U	
10:2 FTS	120226-60-0	S011025011	ND	0.436	0.570			U		
Sulfonamidos	FBSA	30334-69-1	S011025011	0.191	0.271	0.570			L	
	N-EiFOSA	4151-50-2	S011025011	ND	0.353	0.570			U	
	N-EiFOSAA	2991-50-6	S011025011	ND	0.232	0.570			U	
	N-EiFOSE	1691-99-2	S011025011	ND	0.873	2.56			U	
	N-MeFOSA	31506-32-8	S011025011	ND	0.235	0.570			U	
	N-MeFOSAA	2355-31-9	S011025011	ND	0.160	0.570			U	
	N-MeFOSE	24448-09-7	S011025011	ND	0.541	2.56			U	
	PFOSA	754-91-6	S011025011	ND	0.0800	0.570			U	
	PFECAs	ADONA	919005-14-4	S011025011	ND	0.154	0.540			U
EVE Acid		69087-46-3	S011025011	ND	0.182	1.28			U	
HFPO-DA		13252-13-6	S011025011	5.84	0.0604	0.570				
Hydro-EVE Acid		773804-62-9	S011025011	0.218	0.187	0.570			J	
NFDHA		151772-58-6	S011025011	ND	0.120	0.570			U	
PEPA		267239-61-2	S011025011	3.24	0.107	0.570				
PFECA-G		801212-59-9	S011025011	ND	0.0760	0.570			U	
PFMOAA		674-13-5	S011025011	47.7	0.289	0.570				
PFMOBA		863090-89-5	S011025011	ND	0.956	1.28			U	
PFMOPrA		377-73-1	S011025011	ND	0.203	0.570			U	
PFO2HxA		39492-88-1	S011025011	5.51	0.183	0.570				
PFO3OA		39492-89-2	S011025011	ND	0.262	0.570			U	
PFO4DA		39492-90-5	S011025011	ND	0.451	2.85			U	
PFO5DA		39492-91-6	S011025011	ND	0.456	2.85			U	
PMPA		13140-29-9	S011025011	15.3	0.134	0.570				
R-EVE		2416366-22-6	S011025011	16.8	0.946	1.28				
PFESAs		11CI-PF3OUdS	763051-92-9	S011025011	ND	0.269	0.537			U
	9CI-PF3ONS	756426-58-1	S011025011	ND	0.365	0.531			U	
	Hydrolyzed PSDA	2416366-19-1	S011025011	6.28	0.379	0.570				
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S011025011	ND	0.305	0.570			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S011025011	0.346	0.472	0.570			L	
	NVHOS	1132933-86-8	S011025011	ND	0.0878	0.570			U	
	PFEESA	113507-82-7	S011025011	ND	0.171	0.570			U	
	R-PSDA	2416366-18-0	S011025011	9.69	2.51	2.51				
ES	R-PSDCA	2416366-21-5	S011025011	ND	0.240	0.570			U	
	MPFBA		S011025011				20-150%	75.8%		
	M5PFPeA		S011025011				20-150%	129%		
	M3PFBS		S011025011				20-150%	211%	Q	
	M2-4:2 FTS		S011025011				20-150%	124%		
	M5PFFhxA		S011025011				20-150%	88.8%		
	M3HFPO-DA		S011025011				20-150%	85.4%		
M4PFFHpA		S011025011				20-150%	96.6%			

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	010325-E01		
Sampling Site			
Enthalpy ID	0125-704-002-2	Prep Batch	eu18780
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-01-03 07:30	Instrument	Sauron
Received Date	2025-01-03	Sample Vol mL	280.75
Prep Date	2025-01-09 13:39	Extract Vol mL	0.4
AnalysisDate	2025-01-10 14:36	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		S011025011				20-150%	80.6%	
M2-6:2 FTS		S011025011				20-150%	66.1%	
M8PFOA		S011025011				20-150%	81.1%	
M9PFNA		S011025011				20-150%	93.4%	
M8PFOS		S011025011				20-150%	83.1%	
M2-8:2 FTS		S011025011				20-150%	59.0%	
M8FOSA-I		S011025011				20-150%	61.0%	
M6PFDA		S011025011				20-150%	82.1%	
d3-N-MeFOSAA		S011025011				20-150%	78.4%	
d5-N-EtFOSAA		S011025011				20-150%	82.3%	
M7PFUdA		S011025011				20-150%	76.9%	
MPFDoA		S011025011				20-150%	62.0%	
M2PFTeDA		S011025011				20-150%	50.4%	
d3-N-MeFOSA		S011025011				10-200%	10.5%	
d5-N-EtFOSA		S011025011				10-200%	11.1%	
d7-N-MeFOSE		S011025011				10-200%	49.7%	
d9-N-EtFOSE		S011025011				10-200%	49.9%	

# QC Data

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_18780_PFAS	Prep Batch	eu18780
Sampling Site		Analyst	jogres
Enthalpy ID	MB_18780_PFAS	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-01-09 13:39	Method Code	EU-047-NPW
AnalysisDate	2025-01-10 11:35		
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	S011025003	ND	0.254	0.640			U	
	PFPeA	2706-90-3	S011025003	ND	0.183	0.640			U	
	PFHxA	307-24-4	S011025003	ND	0.214	0.640			U	
	PFFHpA	375-85-9	S011025003	ND	0.224	0.640			U	
	PFOA	335-67-1	S011025003	ND	0.146	0.640			U	
	PFNA	375-95-1	S011025003	ND	0.145	0.640			U	
	PFDA	335-76-2	S011025003	ND	0.183	0.640			U	
	PFUnDA	2058-94-8	S011025003	ND	0.145	0.640			U	
	PFDODA	307-55-1	S011025003	ND	0.260	0.640			U	
	PFTrDA	72629-94-8	S011025003	ND	0.212	0.640			U	
	PFTeDA	376-06-7	S011025003	ND	0.244	0.640			U	
	PFFHxDA	67905-19-5	S011025003	ND	0.340	0.640			U	
	Sulfonates	PFBS	375-73-5	S011025003	ND	0.340	0.640			U
		PFPeS	2706-91-4	S011025003	ND	0.131	0.603			U
PFFHxS		355-46-4	S011025003	ND	0.494	0.586			U	
PFFHpS		375-92-8	S011025003	ND	0.310	0.610			U	
PFOS		1763-23-1	S011025003	ND	0.338	0.593			U	
PFNS		68259-12-1	S011025003	ND	0.199	0.616			U	
PFDS		335-77-3	S011025003	ND	0.336	0.616			U	
4:2 FTS		757124-72-4	S011025003	ND	0.0830	0.600			U	
6:2 FTS		27619-97-2	S011025003	ND	0.302	0.610			U	
8:2 FTS		39108-34-4	S011025003	0.00259	0.143	0.613			L	
10:2 FTS	120226-60-0	S011025003	ND	0.490	0.640			U		
Sulfonamidos	FBSA	30334-69-1	S011025003	ND	0.304	0.640			U	
	N-EiFOSA	4151-50-2	S011025003	ND	0.396	0.640			U	
	N-EiFOSAA	2991-50-6	S011025003	ND	0.260	0.640			U	
	N-EiFOSE	1691-99-2	S011025003	ND	0.980	2.88			U	
	N-MeFOSA	31506-32-8	S011025003	ND	0.264	0.640			U	
	N-MeFOSAA	2355-31-9	S011025003	ND	0.180	0.640			U	
	N-MeFOSE	24448-09-7	S011025003	ND	0.608	2.88			U	
	PFOSA	754-91-6	S011025003	ND	0.0898	0.640			U	
	PFECAs	ADONA	919005-14-4	S011025003	ND	0.173	0.606			U
		EVE Acid	69087-46-3	S011025003	ND	0.204	1.44			U
HFPO-DA		13252-13-6	S011025003	ND	0.0678	0.640			U	
Hydro-EVE Acid		773804-62-9	S011025003	ND	0.210	0.640			U	
NFDHA		151772-58-6	S011025003	ND	0.135	0.640			U	
PEPA		267239-61-2	S011025003	ND	0.120	0.640			U	
PFECA-G		801212-59-9	S011025003	ND	0.0854	0.640			U	
PFMOAA		674-13-5	S011025003	ND	0.324	0.640			U	
PFMOBA		863090-89-5	S011025003	ND	1.07	1.44			U	
PFMOPrA		377-73-1	S011025003	ND	0.228	0.640			U	
PFO2HxA		39492-88-1	S011025003	ND	0.206	0.640			U	
PFO3OA		39492-89-2	S011025003	ND	0.294	0.640			U	
PFO4DA		39492-90-5	S011025003	ND	0.506	3.20			U	
PFO5DA		39492-91-6	S011025003	ND	0.512	3.20			U	
PMPA		13140-29-9	S011025003	ND	0.151	0.640			U	
R-EVE		2416366-22-6	S011025003	ND	1.06	1.44			U	
PFESAs		11CI-PF3OUdS	763051-92-9	S011025003	ND	0.302	0.603			U
		9CI-PF3ONS	756426-58-1	S011025003	ND	0.410	0.596			U
	Hydrolyzed PSDA	2416366-19-1	S011025003	ND	0.426	0.640			U	
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S011025003	ND	0.342	0.640			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S011025003	ND	0.530	0.640			U	
	NVHOS	1132933-86-8	S011025003	ND	0.0986	0.640			U	
	PFEESA	113507-82-7	S011025003	ND	0.192	0.640			U	
	R-PSDA	2416366-18-0	S011025003	ND	2.82	2.82			U	
	R-PSDCA	2416366-21-5	S011025003	ND	0.270	0.640			U	
	ES	MPFBA		S011025003				20-150%	82.6%	
M5PFPeA			S011025003				20-150%	74.6%		
M3PFBS			S011025003				20-150%	77.5%		
M2-4:2 FTS			S011025003				20-150%	92.9%		
M5PFFHxA			S011025003				20-150%	101%		
M3HFPO-DA			S011025003				20-150%	103%		
M4PFFHpA			S011025003				20-150%	97.3%		

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_18780_PFA5		
Sampling Site			
Enthalpy ID	MB_18780_PFA5	Prep Batch	eu18780
Matrix	aqueous	Analyst	jogres
Sampling Date		Instrument	Sauron
Received Date		Sample Vol mL	250
Prep Date	2025-01-09 13:39	Extract Vol mL	0.4
AnalysisDate	2025-01-10 11:35	Split Factor	N/A
SampleType	Blank	Method Code	EU-047-NPW
Bottle ID	-		

Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
M3PFHxS		S011025003				20-150%	94.1%	
M2-6:2 FTS		S011025003				20-150%	75.1%	
M8PFOA		S011025003				20-150%	83.9%	
M9PFNA		S011025003				20-150%	86.0%	
M8PFOS		S011025003				20-150%	85.9%	
M2-8:2 FTS		S011025003				20-150%	59.5%	
M8FOSA-I		S011025003				20-150%	61.5%	
M6PFDA		S011025003				20-150%	86.0%	
d3-N-MeFOSAA		S011025003				20-150%	78.2%	
d5-N-EtFOSAA		S011025003				20-150%	77.8%	
M7PFUdA		S011025003				20-150%	83.7%	
MPFDoA		S011025003				20-150%	68.1%	
M2PFTeDA		S011025003				20-150%	48.3%	
d3-N-MeFOSA		S011025003				10-200%	13.2%	
d5-N-EtFOSA		S011025003				10-200%	13.0%	
d7-N-MeFOSE		S011025003				10-200%	64.6%	
d9-N-EtFOSE		S011025003				10-200%	69.6%	

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)  
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

## Details

Sample Name	MB_18792_PFAS		
Sampling Site			
Enthalpy ID	MB_18792_PFAS	Prep Batch	eu18792
Matrix	aqueous	Analyst	jogres
Sampling Date		Instrument	Bumblebee
Received Date		Sample Vol mL	0.1
Prep Date	2025-01-08 07:00	Extract Vol mL	0.2
AnalysisDate	2025-01-09 09:25	Split Factor	N/A
SampleType	Blank	Method Code	EU-047-NPW
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPfA	422-64-0	B090125-01090925	ND	700	1530			U
ES	13C3-PFPfA		B090125-01090925				20-150%	137%	

# Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_18780_PFAS	Prep Batch	eu18780	Sample Vol (mL)	250
Sample Name	OPR_18780_PFAS	Prep Date	2025-01-09 13:39	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2025-01-10 11:58	Split Factor	N/A
Sampling Date		Analyst	jogres	Method Code	EU-047-NPW
Received Date		Instrument	Sauron	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	S011025004	23.9	0.254	0.640	47.9-144%	119%	
	PFPeA	2706-90-3	S011025004	22.5	0.183	0.640	41.7-159%	112%	
	PFHxA	307-24-4	S011025004	22.5	0.214	0.640	43.2-154%	113%	
	PFHpA	375-85-9	S011025004	27.8	0.224	0.640	42.1-155%	139%	
	PFOA	335-67-1	S011025004	24.4	0.146	0.640	51.1-148%	122%	
	PFNA	375-95-1	S011025004	23.0	0.145	0.640	51.6-153%	115%	
	PFDA	335-76-2	S011025004	24.7	0.183	0.640	44.5-156%	124%	
	PFUnDA	2058-94-8	S011025004	23.2	0.145	0.640	40.3-156%	116%	
	PFDoDA	307-55-1	S011025004	26.6	0.260	0.640	40.4-158%	133%	
	PFTrDA	72629-94-8	S011025004	34.0	0.212	0.640	42.2-201%	170%	
	PFTeDA	376-06-7	S011025004	31.6	0.244	0.640	43-162%	158%	
	Sulfonates	PFBS	375-73-5	S011025004	22.4	0.340	0.640	42.7-155%	126%
PFPeS		2706-91-4	S011025004	24.1	0.131	0.603	40.3-152%	128%	
PFHxS		355-46-4	S011025004	21.2	0.494	0.586	45-148%	116%	
PFHpS		375-92-8	S011025004	23.8	0.310	0.610	39.8-166%	125%	
PFOS		1763-23-1	S011025004	23.1	0.338	0.593	59.2-132%	124%	
PFNS		68259-12-1	S011025004	24.4	0.199	0.616	38.1-153%	127%	
PFDS		335-77-3	S011025004	20.7	0.336	0.616	28.6-148%	107%	
4:2 FTS		757124-72-4	S011025004	22.9	0.0830	0.600	41.5-157%	122%	
6:2 FTS		27619-97-2	S011025004	22.6	0.302	0.610	44.5-160%	119%	
8:2 FTS	39108-34-4	S011025004	24.3	0.143	0.613	39.4-166%	127%		
Sulfonamidos	N-EtFOSAA	2991-50-6	S011025004	21.7	0.260	0.640	42.8-156%	108%	
	N-MeFOSAA	2355-31-9	S011025004	22.5	0.180	0.640	42-155%	113%	
	PFOSA	754-91-6	S011025004	25.1	0.0898	0.640	39.1-158%	125%	
PFECAs	ADONA	919005-14-4	S011025004	24.9	0.173	0.606	32.2-151%	124%	
	HFPO-DA	13252-13-6	P140125009	26.3	0.0678	0.640	61.8-131%	132%	Q
PFESAs	11Cl-PF3OUdS	763051-92-9	S011025004	17.6	0.302	0.603	21.8-141%	88.2%	
	9Cl-PF3ONS	756426-58-1	S011025004	20.4	0.410	0.596	37.6-146%	102%	
ES	MPFBA		S011025004				20-150%	80.5%	
	M5PFPeA		S011025004				20-150%	70.3%	
	M3PFBS		S011025004				20-150%	68.2%	
	M2-4:2 FTS		S011025004				20-150%	85.5%	
	M5PFHxA		S011025004				20-150%	97.1%	
	M3HFPO-DA		P140125009				20-150%	64.3%	
	M4PFHpA		S011025004				20-150%	95.3%	
	M3PFHxS		S011025004				20-150%	92.4%	
	M2-6:2 FTS		S011025004				20-150%	74.6%	
	M8PFOA		S011025004				20-150%	82.2%	
	M9PFNA		S011025004				20-150%	89.1%	
	M8PFOS		S011025004				20-150%	83.1%	
	M2-8:2 FTS		S011025004				20-150%	59.0%	
	M8FOSA-I		S011025004				20-150%	63.9%	
	M6PFDA		S011025004				20-150%	83.5%	
	d3-N-MeFOSAA		S011025004				20-150%	77.0%	
	d5-N-EtFOSAA		S011025004				20-150%	78.1%	
	M7PFUdA		S011025004				20-150%	78.4%	
	MPFDoA		S011025004				20-150%	58.6%	
	M2PFTeDA		S011025004				20-150%	41.4%	

## Enthalpy Analytical

Job No.: 0125-704-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_18792_PFAS	Prep Batch	eu18792	Sample Vol (mL)	0.08
Sample Name	OPR_18792_PFAS	Prep Date	2025-01-08 07:00	Extract Vol (mL)	0.2
Matrix	aqueous	Analysis Date	2025-01-09 09:37	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	B090125-01090937	24600	875	1910	40-150%	98.5%	
ES	<sup>13</sup> C3-PFPrA		B090125-01090937				20-150%	123%	

# Sample Custody



0125-704  
122-\*

# Chain of Custody Record

Enthalpy Ultratrace Job#: \_\_\_\_\_ COC Page 1 of 1

**Special Handling:**

- Standard Turn Around Time
- Rush Turn Around Time -- Date Needed \_\_\_\_\_
- All Fast TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Samples Disposed of After 6 months Unless Otherwise Instructed.

Enthalpy Analytical-Wilmington, NC has added enhancements to standard methods to improve accuracy, precision and permit an assessment of laboratory performance in the context of your specific data needs. For more information email [Cindy.James@enthalpy.com](mailto:Cindy.James@enthalpy.com).

Client Name: BRUNSWICK COUNTY UTILITIES  
 Project Manager: GLENN WALKER  
 Report To: SAME

Project Number: \_\_\_\_\_  
 Site Name: NORTHWEST WATER PLANT  
 Location: LELAND N.C.

PO#: \_\_\_\_\_  
 Telephone#: \_\_\_\_\_  
 Email: \_\_\_\_\_

This Chain of Custody is applicable to Non-Air samples. Standard TAT differ per analysis and are provided by request.

Client Special Instructions:

Matrix: GW-Groundwater, WW-Wastewater, NW-Non-Potable Water, DW-Drinking Water, S-Soil, SL-Sludge, BT-Biological Tissue, O-Other  
 Type: G=Grab C=Composite Q=Quality Control

**Sample Containers**      **Analyses:**

Sample ID	Date	Time	Sample Volume	Type	Matrix	Sample Containers				Analyses							Notes:			
						# of Bottles	# of Jars	# of Bags	# Other	Method 1613	Method 8290	Method 1668A/B/C PCE	PFAS by LC/MS/MS	PAHs by HRGC/HRMS	Sample on Hold	Method 23		ALL PFAS		
010325-S01	1/3/2025	7:30 AM	250 ml	G	NW	2												X	Please Add PFPrA and	
010325-E01	1/3/2025	7:30 AM	250 ml	G	DW	2													X	PFHpA To The Testing
																				Mark Hager Knows About
																				This If you Have Questions
																				* MAC. TE
																				1/3/25

Relinquished By:	Date:	Received By:	Date:	Time:	Sample Temperature Upon Receipt:
PHIL MCCULLOCH	1/3/2025	Meredith Curtis	1/3/24	14:45	<input checked="" type="checkbox"/> Iced <input type="checkbox"/> Ambient °C <u>1.3</u>
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient °C _____

JOB ID: 0125-704

Date / Time: 11/3/25 14:45

Initials: M.A.C.

OR

Client: Brunswick County Public Utilities

Cooler 1 of 1

Temp °C: 1.3

Thermometer ID: T15

Received via

- FedEx
- UPS
- DHL
- USPS
- Courier
- Other

*Check one*

On ice:

Melted ice:

Ambient:

*Check one*

in a Box:

in a Cooler:

Cooler in Box:

	Yes	No
Cooler seals:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample seals:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Good condition:	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comment:

[Empty comment box]

Temp °C: [ ]

Thermometer ID: [ ]

Cooler [ ] of [ ]

Received via

- FedEx
- UPS
- DHL
- USPS
- Courier
- Other

*Check one*

On ice:

Melted ice:

Ambient:

*Check one*

in a Box:

in a Cooler:

Cooler in Box:

	Yes	No
Cooler seals:	<input type="checkbox"/>	<input type="checkbox"/>
Sample seals:	<input type="checkbox"/>	<input type="checkbox"/>
Good condition:	<input type="checkbox"/>	<input type="checkbox"/>

Comment:

[Empty comment box]

Temp °C: [ ]

Thermometer ID: [ ]

Cooler [ ] of [ ]

Received via

- FedEx
- UPS
- DHL
- USPS
- Courier
- Other

*Check one*

On ice:

Melted ice:

Ambient:

*Check one*

in a Box:

in a Cooler:

Cooler in Box:

	Yes	No
Cooler seals:	<input type="checkbox"/>	<input type="checkbox"/>
Sample seals:	<input type="checkbox"/>	<input type="checkbox"/>
Good condition:	<input type="checkbox"/>	<input type="checkbox"/>

Comment:

[Empty comment box]