

Brunswick County Public Utilities - NC

PO Box 249
Bolivia, NC 28422-0249

LELAND N.C.

Client Project# NORHWEST WATER PLANT
Samples Received: 5/16/2025

Analytical Report 0525-1219

PFAS by Isotope Dilution (non-potable water)

Report Issue Date: 6/17/2025

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 33 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.	0525-1219-1
Client ID.	NORHWEST WATER PLANT Site: LELAND N.C.

1. Custody

Meredith Curtis received the samples at 7.6 °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
0525-1219-001-1	051625-SO1	aqueous	2025-05-16
0525-1219-001-1A	051625-SO1	aqueous	2025-05-16
0525-1219-001-2	051625-SO1	aqueous	2025-05-16
0525-1219-002-1	051625-EO1	aqueous	2025-05-16
0525-1219-002-1A	051625-EO1	aqueous	2025-05-16
0525-1219-002-2	051625-EO1	aqueous	2025-05-16

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 using Waters Acquity UPLC equipped with Xevo TQ MS (LC/MS/MS "Pippin" and "Sauron").

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

Samples were prepped for direct injection and analyzed using Sciex Triple Quad 7500 (LC/MS/MS "Bumblebee") for PFPrA.

4. Calibration

In the initial calibration, the reported analytes exhibited R^2 of ≥ 0.99 . The reported analytes in the calibration standards, Initial Calibration Verification (ICV) and continuing calibration (concal) met the accuracy criterion for native analytes, except as noted below.

Enthalpy Analytical Narrative Summary

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The Standards that did not were:

- SID BM67 (PEPA, PFO2HxA, PFO4DA, PFO5DA, PMPA)
- SID BM68 (10:2 FTS, PEPA, PFO2HxA, PFO4DA, PFO5DA, PMPA)

When analyte(s) exceed method control limits in the concals but are not detected >LOQ in the samples, the data is reported without adverse impact. Where an impacted analyte was detected >LOQ, the sample was reinjected to meet method criteria.

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_118122_PFAS (M2PFTeDA, d3-N-MeFOSA, d5-N-EtFOSA)
- MB_118160_PFAS (d3-N-MeFOSA, d5-N-EtFOSA)
- OPR_118122_PFAS (PFTrDA, M2PFTeDA, d3-N-MeFOSA, d5-N-EtFOSA)
- OPR_118160_PFAS (d3-N-MeFOSA, d5-N-EtFOSA)

PFTrDA meets marginal exceedance guidelines for reporting with no adverse impact in OPR_118122_PFAS.

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.

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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*
Target Analytes								
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, PFTrDA)	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, 2,2,3,3,3-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-pentaaxadodecanoic) 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.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Summary

	Compound	CAS	051625-SO1 ng/L	051625-EO1 ng/L
Acids	PFPrA	422-64-0	271 L	262 L
	PFBA	375-22-4	2.27	3.63
	PFPeA	2706-90-3	2.36	4.83
	PFHxA	307-24-4	2.71	5.13
	PFHpA	375-85-9	1.36	2.23
	PFOA	335-67-1	2.49	4.37
	PFNA	375-95-1	0.502 J	0.599
	PFDA	335-76-2	0.198 J	0.172 J
	PFUnDA	2058-94-8	0.0285 L	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	0.971
PFPeS		2706-91-4	0.180 J	0.537
PFHxS		355-46-4	1.36	3.44
PFHpS		375-92-8	0.0610 L	0.243 L
PFOS		1763-23-1	5.67	11.0
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	ND U	ND U
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	ND U	0.509 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	0.819	ND U
	PFECAs	ADONA	919005-14-4	ND U
EVE Acid		69087-46-3	ND U	ND U
HFPO-DA		13252-13-6	1.01	0.964
Hydro-EVE Acid		773804-62-9	0.0206 L	0.0280 L
NFDHA		151772-58-6	ND U	ND U
PEPA		267239-61-2	ND U	0.559
PFECA-G		801212-59-9	ND U	ND U
PFMOAA		674-13-5	3.06	3.27
PFMOBA		863090-89-5	ND U	ND U
PFMOPrA		377-73-1	ND U	ND U
PFO2HxA		39492-88-1	0.341 J	0.725
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	0.845	1.47
R-EVE		2416366-22-6	2.06	1.88
PFESAs	11Cl-PF3OUds	763051-92-9	ND U	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U
	Hydrolyzed PSDA	2416366-19-1	ND U	0.308 L
	Nafion Byproduct 1 (PS Acid)	29311-67-9	ND U	ND U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	ND U	ND U
	NVHOS	1132933-86-8	ND U	ND U
	PFEESA	113507-82-7	ND U	ND U
	R-PSDA	2416366-18-0	ND U	0.991 L
	R-PSDCA	2416366-21-5	ND U	ND U

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Details

Sample Name	051625-SO1	Prep Batch	EU118122
Sampling Site		Analyst	rappelle
Enthalpy ID	0525-1219-001-1	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	307.16
Sampling Date	2025-05-16 13:35	Extract Vol mL	0.4
Received Date	2025-05-16	Split Factor	N/A
Prep Date	2025-05-28 11:57	Method Code	EU-047-NPW
AnalysisDate	2025-05-29 21:52		
SampleType	Sample		
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	P290525028	2.27	0.207	0.521			
	PFPeA	2706-90-3	P290525028	2.36	0.149	0.521			
	PFHxA	307-24-4	P290525028	2.71	0.174	0.521			
	PFHpA	375-85-9	P290525028	1.36	0.182	0.521			
	PFOA	335-67-1	P290525028	2.49	0.119	0.521			
	PFNA	375-95-1	P290525028	0.502	0.118	0.521			J
	PFDA	335-76-2	P290525028	0.198	0.149	0.521			J
	PFUnDA	2058-94-8	P290525028	0.0285	0.118	0.521			L
	PFDaDA	307-55-1	P290525028	ND	0.212	0.521			U
	PFTrDA	72629-94-8	P290525028	ND	0.173	0.521			U
	PFTeDA	376-06-7	P290525028	ND	0.199	0.521			U
	PFHxDA	67905-19-5	P290525028	ND	0.277	0.521			U
	Sulfonates	PFBS	375-73-5	P290525028	0.971	0.277	0.521		
PFPeS		2706-91-4	P290525028	0.180	0.107	0.491			J
PFHxS		355-46-4	P290525028	1.36	0.402	0.477			
PFHpS		375-92-8	P290525028	0.0610	0.252	0.496			L
PFOS		1763-23-1	P290525028	5.67	0.275	0.483			
PFNS		68259-12-1	P290525028	ND	0.162	0.502			U
PFDS		335-77-3	P290525028	ND	0.273	0.502			U
4:2 FTS		757124-72-4	P290525028	ND	0.0676	0.488			U
6:2 FTS		27619-97-2	P290525028	ND	0.246	0.496			U
8:2 FTS		39108-34-4	P290525028	ND	0.117	0.499			U
10:2 FTS	120226-60-0	P290525028	ND	0.399	0.521			U	
Sulfonamidos	FBSA	30334-69-1	P290525028	ND	0.247	0.521			U
	N-EiFOSAA	2991-50-6	P290525028	ND	0.212	0.521			U
	N-EiFOSE	1691-99-2	P290525028	ND	0.798	2.34			U
	N-MeFOSAA	2355-31-9	P290525028	ND	0.146	0.521			U
	N-MeFOSE	24448-09-7	P290525028	ND	0.495	2.34			U
	PFOSA	754-91-6	S300525069	0.819	0.0731	0.521			
PFECAs	ADONA	919005-14-4	P290525028	ND	0.141	0.493			U
	EVE Acid	69087-46-3	P290525028	ND	0.166	1.17			U
	HFPO-DA	13252-13-6	P290525028	1.01	0.0552	0.521			
	Hydro-EVE Acid	773804-62-9	P290525028	0.0206	0.171	0.521			L
	NFDHA	151772-58-6	P290525028	ND	0.110	0.521			U
	PEPA	267239-61-2	P290525028	ND	0.0977	0.521			U
	PFECA-G	801212-59-9	P290525028	ND	0.0695	0.521			U
	PFMOAA	674-13-5	P290525028	3.06	0.264	0.521			
	PFMOBA	863090-89-5	P290525028	ND	0.874	1.17			U
	PFMOPrA	377-73-1	P290525028	ND	0.186	0.521			U
	PFO2HxA	39492-88-1	P020625003	0.341	0.168	0.521			J
	PFO3OA	39492-89-2	P290525028	ND	0.239	0.521			U
	PFO4DA	39492-90-5	P290525028	ND	0.412	2.60			U
	PFO5DA	39492-91-6	P290525028	ND	0.417	2.60			U
	PMPA	13140-29-9	P020625003	0.845	0.123	0.521			
R-EVE	2416366-22-6	P290525028	2.06	0.864	1.17				
PFESAs	11Cl-PF3OUdS	763051-92-9	P290525028	ND	0.246	0.491			U
	9Cl-PF3ONS	766426-58-1	P290525028	ND	0.334	0.485			U
	Hydrolyzed PSDA	2416366-19-1	P290525028	ND	0.347	0.521			U
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P290525028	ND	0.278	0.521			U
	Nafion Byproduct 2 (hydro-PS Acid)	749836-20-2	P290525028	ND	0.431	0.521			U
	NVHOS	1132933-86-8	P290525028	ND	0.0803	0.521			U
	PFEEESA	113507-82-7	P290525028	ND	0.157	0.521			U
	R-PSDA	2416366-18-0	P290525028	ND	2.30	2.30			U
	R-PSDCA	2416366-21-5	P290525028	ND	0.220	0.521			U
ES	MPFBA		P290525028				20-150%	95.9%	
	M5PFPeA		P290525028				20-150%	213%	Q
	M3PFBS		P290525028				20-150%	44.7%	Ac
	M2-4:2 FTS		P290525028				20-150%	146%	
	M5PFHxA		P290525028				20-150%	74.1%	
	M3HFPO-DA		P290525028				20-150%	115%	
	M4PFHpA		P290525028				20-150%	92.7%	
	M3PFHxS		P290525028				20-150%	124%	
	M2-6:2 FTS		P290525028				20-150%	98.4%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-SO1		
Sampling Site			
Enthalpy ID	0525-1219-001-1	Prep Batch	EU118122
Matrix	aqueous	Analyst	rappelle
Sampling Date	2025-05-16 13:35	Instrument	Sauron
Received Date	2025-05-16	Sample Vol mL	307.16
Prep Date	2025-05-28 11:57	Extract Vol mL	0.4
AnalysisDate	2025-05-29 21:52	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
M8PFOA		P290525028				20-150%	90.7%	
M9PFNA		P290525028				20-150%	73.6%	
M8PFOS		P290525028				20-150%	94.8%	
M2-8:2 FTS		P290525028				20-150%	57.8%	
M8FOSA-I		S300525069				20-150%	19.0%	Q
M6PFDA		P290525028				20-150%	95.1%	
d3-N-MeFOSAA		P290525028				20-150%	61.0%	
d5-N-EtFOSAA		P290525028				20-150%	50.4%	
M7PFUdA		P290525028				20-150%	75.5%	
MPPFD _o A		P290525028				20-150%	52.5%	
M2PFTeDA		P290525028				20-150%	14.3%	Q
d7-N-MeFOSE		P290525028				10-200%	11.1%	
d9-N-EtFOSE		P290525028				10-200%	13.1%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-SO1		
Sampling Site			
Enthalpy ID	0525-1219-001-1A	Prep Batch	EU118160
Matrix	aqueous	Analyst	jacksullivan
Sampling Date	2025-05-16 13:35	Instrument	Pippin
Received Date	2025-05-16	Sample Vol mL	60
Prep Date	2025-06-04 13:55	Extract Vol mL	0.4
AnalysisDate	2025-06-05 18:57	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	B		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Sulfonamidos	N-EtFOSA	4151-50-2	P050625011	ND	1.65	2.67			U
	N-MeFOSA	31506-32-8	P050625011	ND	1.10	2.67			U
ES	d3-N-MeFOSA		P050625011				10-200%	6.82%	Q
	d5-N-EtFOSA		P050625011				10-200%	6.62%	Q

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-SO1		
Sampling Site			
Enthalpy ID	0525-1219-001-2	Prep Batch	EU118127
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-05-16 13:35	Instrument	Bumblebee
Received Date	2025-05-16	Sample Vol mL	0.1
Prep Date	2025-05-30 06:16	Extract Vol mL	0.2
AnalysisDate	2025-05-30 10:51	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	B		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B300525-05301051	271	700	1530			L
ES	13C3-PFPrA		B300525-05301051				20-150%	125%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Details

Sample Name	051625-EO1	Prep Batch	EU118122
Sampling Site		Analyst	rappelle
Enthalpy ID	0525-1219-002-1	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	306.02
Sampling Date	2025-05-16 13:35	Extract Vol mL	0.4
Received Date	2025-05-16	Split Factor	N/A
Prep Date	2025-05-28 11:57	Method Code	EU-047-NPW
AnalysisDate	2025-05-29 22:15		
SampleType	Sample		
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	P290525029	3.63	0.208	0.523			
	PFPeA	2706-90-3	P290525029	4.83	0.150	0.523			
	PFHxA	307-24-4	P290525029	5.13	0.175	0.523			
	PFHpA	375-85-9	P290525029	2.23	0.183	0.523			
	PFOA	335-67-1	P290525029	4.37	0.120	0.523			
	PFNA	375-95-1	P290525029	0.599	0.118	0.523			
	PFDA	335-76-2	P290525029	0.172	0.150	0.523			J
	PFUnDA	2058-94-8	P290525029	ND	0.118	0.523			U
	PFDoDA	307-55-1	P290525029	ND	0.212	0.523			U
	Sulfonates	PFBS	375-73-5	P290525029	2.15	0.278	0.523		
PFPeS		2706-91-4	P290525029	0.537	0.107	0.493			
PFHxS		355-46-4	P290525029	3.44	0.404	0.479			
PFHpS		375-92-8	P290525029	0.243	0.253	0.498			L
PFOs		1763-23-1	P290525029	11.0	0.276	0.484			
PFNS		68259-12-1	P290525029	ND	0.162	0.504			U
PFDS		335-77-3	P290525029	ND	0.274	0.504			U
4:2 FTS		757124-72-4	P290525029	ND	0.0678	0.490			U
6:2 FTS		27619-97-2	P290525029	ND	0.247	0.498			U
8:2 FTS		39108-34-4	P290525029	ND	0.117	0.501			U
10:2 FTS	120226-60-0	P290525029	ND	0.400	0.523			U	
Sulfonamidos	FBSA	30334-69-1	P290525029	0.509	0.248	0.523			J
	N-EtFOSA	4151-50-2	P290525029	ND	0.324	0.523			U
	N-EtFOSAA	2991-50-6	P290525029	ND	0.212	0.523			U
	N-EtFOSE	1691-99-2	P290525029	ND	0.801	2.35			U
	N-MeFOSA	31506-32-8	P290525029	ND	0.216	0.523			U
	N-MeFOSAA	2355-31-9	P290525029	ND	0.147	0.523			U
	N-MeFOSE	24448-09-7	P290525029	ND	0.497	2.35			U
	PFOSA	754-91-6	S300525070	ND	0.0734	0.523			U
PFECAs	ADONA	919005-14-4	P290525029	ND	0.142	0.495			U
	EVE Acid	69087-46-3	P290525029	ND	0.167	1.18			U
	HFPO-DA	13252-13-6	P290525029	0.964	0.0554	0.523			
	Hydro-EVE Acid	773804-62-9	P290525029	0.0280	0.172	0.523			L
	NFDHA	151772-58-6	P290525029	ND	0.110	0.523			U
	PEPA	267239-61-2	P020625004	0.559	0.0980	0.523			
	PFECA-G	801212-59-9	P290525029	ND	0.0698	0.523			U
	PFMOAA	674-13-5	P290525029	3.27	0.265	0.523			
	PFMOBA	863090-89-5	P290525029	ND	0.877	1.18			U
	PFMOPrA	377-73-1	P290525029	ND	0.186	0.523			U
	PFO2HxA	39492-88-1	P020625004	0.725	0.168	0.523			
	PFO3OA	39492-89-2	P290525029	ND	0.240	0.523			U
	PFO4DA	39492-90-5	P290525029	ND	0.413	2.61			U
	PFO5DA	39492-91-6	P290525029	ND	0.418	2.61			U
	PMPA	13140-29-9	P020625004	1.47	0.123	0.523			
R-EVE	2416366-22-6	P290525029	1.88	0.868	1.18				
PFESAs	11Cl-PF3OUdS	763051-92-9	P290525029	ND	0.247	0.493			U
	9Cl-PF3ONS	756426-58-1	P290525029	ND	0.335	0.487			U
	Hydrolyzed PSDA	2416366-19-1	P290525029	0.308	0.348	0.523			L
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P290525029	ND	0.279	0.523			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	P290525029	ND	0.433	0.523			U
	NVHOS	1132933-86-8	P290525029	ND	0.0806	0.523			U
	PFEESA	113507-82-7	P290525029	ND	0.157	0.523			U
	R-PSDA	2416366-18-0	P290525029	0.991	2.30	2.30			L
	R-PSDCA	2416366-21-5	P290525029	ND	0.221	0.523			U
	ES	MPFBA		P290525029				20-150%	88.6%
M5PFPeA			P290525029				20-150%	152%	Q
M3PFBS			P290525029				20-150%	328%	Q
M2-4:2 FTS			P290525029				20-150%	161%	Q
M5PFHxA			P290525029				20-150%	82.4%	
M3HFPO-DA			P290525029				20-150%	119%	
M4PFHpA			P290525029				20-150%	98.2%	
M3PFHxS			P290525029				20-150%	123%	
M2-6:2 FTS			P290525029				20-150%	115%	
M8PFOA			P290525029				20-150%	92.5%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-EO1		
Sampling Site			
Enthalpy ID	0525-1219-002-1	Prep Batch	EU118122
Matrix	aqueous	Analyst	rappelle
Sampling Date	2025-05-16 13:35	Instrument	Sauron
Received Date	2025-05-16	Sample Vol mL	306.02
Prep Date	2025-05-28 11:57	Extract Vol mL	0.4
AnalysisDate	2025-05-29 22:15	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
M9PFNA		P290525029				20-150%	67.5%	
M8PFOS		P290525029				20-150%	69.8%	
M2-8:2 FTS		P290525029				20-150%	35.3%	
M8FOSA-I		S300525070				20-150%	24.7%	
M6PFDA		P290525029				20-150%	56.5%	
d3-N-MeFOSAA		P290525029				20-150%	22.9%	
d5-N-EtFOSAA		P290525029				20-150%	15.4%	Q
M7PFUdA		P290525029				20-150%	18.9%	Q
MPFDoA		P290525029				20-150%	6.75%	Q
d3-N-MeFOSA		P290525029				10-200%	1.48%	Q
d5-N-EtFOSA		P290525029				10-200%	0.404%	Q
d7-N-MeFOSE		P290525029				10-200%	18.7%	
d9-N-EtFOSE		P290525029				10-200%	11.9%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-EO1		
Sampling Site			
Enthalpy ID	0525-1219-002-1A	Prep Batch	EU118160
Matrix	aqueous	Analyst	jacksullivan
Sampling Date	2025-05-16 13:35	Instrument	Pippin
Received Date	2025-05-16	Sample Vol mL	302.57
Prep Date	2025-06-04 13:55	Extract Vol mL	0.4
AnalysisDate	2025-06-05 19:20	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	B		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFTrDA	72629-94-8	P050625012	ND	0.175	0.529			U
	PFTeDA	376-06-7	P050625012	ND	0.202	0.529			U
	PFHxDA	67905-19-5	P050625012	ND	0.281	0.529			U
ES	M2PFTeDA		P050625012				20-150%	15.6%	Q

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	051625-EO1		
Sampling Site			
Enthalpy ID	0525-1219-002-2	Prep Batch	EU118127
Matrix	aqueous	Analyst	jogres
Sampling Date	2025-05-16 13:35	Instrument	Bumblebee
Received Date	2025-05-16	Sample Vol mL	0.1
Prep Date	2025-05-30 06:16	Extract Vol mL	0.2
AnalysisDate	2025-05-30 11:03	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	B		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	8300525-05301103	262	700	1530			L
ES	13C3-PFPrA		8300525-05301103				20-150%	125%	

QC Data

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Details

Sample Name	MB_118122_PFAS	Prep Batch	EU118122
Sampling Site		Analyst	rappelle
Enthalpy ID	MB_118122_PFAS	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-05-28 11:57	Method Code	EU-047-NPW
AnalysisDate	2025-05-29 15:49		
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	P290525012	0.0373	0.254	0.640			L	
	PFPeA	2706-90-3	P290525012	ND	0.183	0.640			U	
	PFHxA	307-24-4	P290525012	ND	0.214	0.640			U	
	PFFHpA	375-85-9	P290525012	ND	0.224	0.640			U	
	PFOA	335-67-1	P290525012	ND	0.146	0.640			U	
	PFNA	375-95-1	P290525012	ND	0.145	0.640			U	
	PFDA	335-76-2	P290525012	ND	0.183	0.640			U	
	PFUnDA	2058-94-8	P290525012	ND	0.145	0.640			U	
	PFDODA	307-55-1	P290525012	ND	0.260	0.640			U	
	PFTrDA	72629-94-8	P290525012	ND	0.212	0.640			U	
	PFTeDA	376-06-7	P290525012	ND	0.244	0.640			U	
	PFFHxDA	67905-19-5	P290525012	ND	0.340	0.640			U	
	Sulfonates	PFBS	375-73-5	P290525012	ND	0.340	0.640			U
		PFPeS	2706-91-4	P290525012	ND	0.131	0.603			U
		PFFHxS	355-46-4	P290525012	ND	0.494	0.586			U
PFFHpS		375-92-8	P290525012	ND	0.310	0.610			U	
PFOS		1763-23-1	P290525012	ND	0.338	0.593			U	
PFNS		68259-12-1	P290525012	ND	0.199	0.616			U	
PFDS		335-77-3	P290525012	ND	0.336	0.616			U	
4:2 FTS		757124-72-4	P290525012	ND	0.0830	0.600			U	
6:2 FTS		27619-97-2	P290525012	ND	0.302	0.610			U	
8:2 FTS		39108-34-4	P290525012	ND	0.143	0.613			U	
10:2 FTS	120226-60-0	P290525012	ND	0.490	0.640			U		
Sulfonamidos	FBSA	30334-69-1	P290525012	ND	0.304	0.640			U	
	N-EiFOSA	4151-50-2	P290525012	ND	0.396	0.640			U	
	N-EiFOSAA	2991-50-6	P290525012	ND	0.260	0.640			U	
	N-EiFOSE	1691-99-2	P290525012	ND	0.980	2.88			U	
	N-MeFOSA	31506-32-8	P290525012	ND	0.264	0.640			U	
	N-MeFOSAA	2355-31-9	P290525012	ND	0.180	0.640			U	
	N-MeFOSE	24448-09-7	P290525012	ND	0.608	2.88			U	
	PFOSA	754-91-6	S300525053	ND	0.0898	0.640			U	
	PFECAs	ADONA	919005-14-4	P290525012	ND	0.173	0.606			U
		EVE Acid	69087-46-3	P290525012	ND	0.204	1.44			U
HFPO-DA		13252-13-6	P290525012	ND	0.0678	0.640			U	
Hydro-EVE Acid		773804-62-9	P290525012	ND	0.210	0.640			U	
NFDHA		151772-58-6	P290525012	ND	0.135	0.640			U	
PEPA		267239-61-2	P290525012	ND	0.120	0.640			U	
PFECA-G		801212-59-9	P290525012	ND	0.0854	0.640			U	
PFMOAA		674-13-5	P290525012	ND	0.324	0.640			U	
PFMOBA		863090-89-5	P290525012	ND	1.07	1.44			U	
PFMOPrA		377-73-1	P290525012	ND	0.228	0.640			U	
PFO2HxA		39492-88-1	P290525012	ND	0.206	0.640			U	
PFO3OA		39492-89-2	P290525012	ND	0.294	0.640			U	
PFO4DA		39492-90-5	P290525012	ND	0.506	3.20			U	
PFO5DA		39492-91-6	P290525012	ND	0.512	3.20			U	
PMPA		13140-29-9	P290525012	ND	0.151	0.640			U	
R-EVE		2416366-22-6	P290525012	ND	1.06	1.44			U	
PFESAs		11CI-PF3OUdS	763051-92-9	P290525012	ND	0.302	0.603			U
		9CI-PF3ONS	756426-58-1	P290525012	ND	0.410	0.596			U
	Hydrolyzed PSDA	2416366-19-1	P290525012	ND	0.426	0.640			U	
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P290525012	ND	0.342	0.640			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	P290525012	ND	0.530	0.640			U	
	NVHOS	1132933-86-8	P290525012	ND	0.0986	0.640			U	
	PFEESA	113507-82-7	P290525012	ND	0.192	0.640			U	
	R-PSDA	2416366-18-0	P290525012	ND	2.82	2.82			U	
	R-PSDCA	2416366-21-5	P290525012	ND	0.270	0.640			U	
	ES	MPFBA		P290525012				20-150%	92.2%	
M5PFPeA			P290525012				20-150%	57.7%		
M3PFBS			P290525012				20-150%	92.3%		
M2-4:2 FTS			P290525012				20-150%	101%		
M5PFFHxA			P290525012				20-150%	85.3%		
M3HFPO-DA			P290525012				20-150%	138%		
M4PFFHpA			P290525012				20-150%	99.5%		

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	MB_118122_PFAS	Prep Batch	EU118122
Sampling Site		Analyst	rappelle
Enthalpy ID	MB_118122_PFAS	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-05-28 11:57	Method Code	EU-047-NPW
AnalysisDate	2025-05-29 15:49		
SampleType	Blank		
Bottle ID	-		

Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
M3PFHxS		P290525012				20-150%	113%	
M2-6:2 FTS		P290525012				20-150%	85.6%	
M8PFOA		P290525012				20-150%	99.0%	
M9PFNA		P290525012				20-150%	82.3%	
M8PFOS		P290525012				20-150%	98.7%	
M2-8:2 FTS		P290525012				20-150%	60.0%	
M8FOSA-I		S300525053				20-150%	34.2%	
M6PFDA		P290525012				20-150%	97.8%	
d3-N-MeFOSAA		P290525012				20-150%	58.5%	
d5-N-EtFOSAA		P290525012				20-150%	50.7%	
M7PFUdA		P290525012				20-150%	70.4%	
MPFDoA		P290525012				20-150%	47.4%	
M2PFTeDA		P290525012				20-150%	18.7%	Q
d3-N-MeFOSA		P290525012				10-200%	0.289%	Q
d5-N-EtFOSA		P290525012				10-200%	0.155%	Q
d7-N-MeFOSE		P290525012				10-200%	33.6%	
d9-N-EtFOSE		P290525012				10-200%	30.3%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)
 Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND N.C.

Details

Sample Name	MB_118127_PFAS	Prep Batch	EU118127
Sampling Site		Analyst	jogres
Enthalpy ID	MB_118127_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	2025-05-30 06:16	Method Code	EU-047-NPW
AnalysisDate	2025-05-30 09:30		
SampleType	Blank		
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	8300525-05300930	261	700	1530			L
ES	13C3-PFPrA		8300525-05300930				20-150%	128%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Details

Sample Name	MB_118160_PFAS	Prep Batch	EU118160
Sampling Site		Analyst	jacksullivan
Enthalpy ID	MB_118160_PFAS	Instrument	Pippin
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2025-06-04 13:55	Method Code	EU-047-NPW
AnalysisDate	2025-06-05 17:26		
SampleType	Blank		
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFTeDA	72629-94-8	P050625007	ND	0.212	0.640			U
	PFTeDA	376-06-7	P050625007	ND	0.244	0.640			U
	PFHxDA	67905-19-5	P050625007	ND	0.340	0.640			U
Sulfonamidos	N-EtFOSA	4151-50-2	P050625007	ND	0.396	0.640			U
	N-MeFOSA	31506-32-8	P050625007	ND	0.264	0.640			U
ES	M2PFTeDA		P050625007				20-150%	31.7%	
	d3-N-MeFOSA		P050625007				10-200%	2.11%	Q
	d5-N-EtFOSA		P050625007				10-200%	2.18%	Q

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_118122_PFAS	Prep Batch	EU118122	Sample Vol (mL)	250
Sample Name	OPR_118122_PFAS	Prep Date	2025-05-28 11:57	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2025-05-29 16:12	Split Factor	N/A
Sampling Date		Analyst	rappelle	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	P290525013	18.8	0.254	0.640	47.9-144%	94.0%	
	PFPeA	2706-90-3	P290525013	18.1	0.183	0.640	41.7-159%	90.3%	
	PFHxA	307-24-4	P290525013	18.5	0.214	0.640	43.2-154%	92.5%	
	PFHpA	375-85-9	P290525013	17.5	0.224	0.640	42.1-155%	87.7%	
	PFOA	335-67-1	P290525013	17.9	0.146	0.640	51.1-148%	89.7%	
	PFNA	375-95-1	P290525013	18.4	0.145	0.640	51.6-153%	91.9%	
	PFDA	335-76-2	P290525013	16.7	0.183	0.640	44.5-156%	83.5%	
	PFUnDA	2058-94-8	P290525013	16.9	0.145	0.640	40.3-156%	84.6%	
	PFDoDA	307-55-1	P290525013	16.9	0.260	0.640	40.4-158%	84.3%	
	PFTrDA	72629-94-8	P290525013	45.4	0.212	0.640	42.2-201%	227%	Q
	PFTeDA	376-06-7	P290525013	16.7	0.244	0.640	43-162%	83.6%	
	Sulfonates	PFBS	375-73-5	P290525013	15.1	0.340	0.640	42.7-155%	85.0%
PFPeS		2706-91-4	P290525013	18.7	0.131	0.603	40.3-152%	99.3%	
PFHxS		355-46-4	P290525013	15.9	0.494	0.586	45-148%	87.1%	
PFHpS		375-92-8	P290525013	18.4	0.310	0.610	39.8-166%	96.3%	
PFOS		1763-23-1	P290525013	16.9	0.338	0.593	59.2-132%	90.8%	
PFNS		68259-12-1	P290525013	13.6	0.199	0.616	38.1-153%	70.5%	
PFDS		335-77-3	P290525013	9.93	0.336	0.616	28.6-148%	51.5%	
4:2 FTS		757124-72-4	P290525013	16.5	0.0830	0.600	41.5-157%	88.0%	
6:2 FTS		27619-97-2	P290525013	18.5	0.302	0.610	44.5-160%	97.4%	
8:2 FTS		39108-34-4	P290525013	17.5	0.143	0.613	39.4-166%	91.1%	
Sulfonamidos	N-EtFOSA	4151-50-2	P290525013	19.7	0.396	0.640	26.7-172%	98.4%	
	N-EtFOSAA	2991-50-6	P290525013	20.3	0.260	0.640	42.8-156%	101%	
	N-EtFOSE	1691-99-2	P290525013	78.6	0.980	2.88	38.9-161%	87.3%	
	N-MeFOSA	31506-32-8	P290525013	18.8	0.264	0.640	26.4-183%	94.1%	
	N-MeFOSAA	2355-31-9	P290525013	19.9	0.180	0.640	42-155%	99.3%	
	N-MeFOSE	24448-09-7	P290525013	93.1	0.608	2.88	37.6-155%	103%	
	PFOSA	754-91-6	S300525054	19.6	0.0898	0.640	39.1-158%	98.2%	
PFECAs	ADONA	919005-14-4	P290525013	21.1	0.173	0.606	32.2-151%	105%	
	HFPO-DA	13252-13-6	P290525013	18.5	0.0678	0.640	61.8-131%	92.3%	
PFESAs	11Cl-PF3OUdS	763051-92-9	P290525013	11.7	0.302	0.603	21.8-141%	58.6%	
	9Cl-PF3ONS	756426-58-1	P290525013	17.6	0.410	0.596	37.6-146%	87.9%	
ES	MPFBA		P290525013				20-150%	94.5%	
	M5PFPeA		P290525013				20-150%	75.2%	
	M3PFBS		P290525013				20-150%	118%	
	M2-4:2 FTS		P290525013				20-150%	108%	
	M5PFHxA		P290525013				20-150%	93.3%	
	M3HFPO-DA		P290525013				20-150%	147%	
	M4PFHpA		P290525013				20-150%	99.0%	
	M3PFHxS		P290525013				20-150%	119%	
	M2-6:2 FTS		P290525013				20-150%	84.9%	
	M8PFOA		P290525013				20-150%	93.9%	
	M9PFNA		P290525013				20-150%	76.5%	
	M8PFOS		P290525013				20-150%	88.8%	
	M2-8:2 FTS		P290525013				20-150%	53.5%	
	M8FOSA-I		S300525054				20-150%	57.0%	
	M6PFDA		P290525013				20-150%	86.8%	
	d3-N-MeFOSAA		P290525013				20-150%	55.6%	
	d5-N-EtFOSAA		P290525013				20-150%	48.9%	
	M7PFUDa		P290525013				20-150%	65.6%	
	MPFDoA		P290525013				20-150%	46.6%	
	M2PFTeDA		P290525013				20-150%	12.5%	Q
	d3-N-MeFOSA		P290525013				10-200%	0.347%	Q
	d5-N-EtFOSA		P290525013				10-200%	0.251%	Q
	d7-N-MeFOSE		P290525013				10-200%	59.3%	
d9-N-EtFOSE		P290525013				10-200%	58.2%		

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_118127_PFAS	Prep Batch	EU118127	Sample Vol (mL)	0.1
Sample Name	OPR_118127_PFAS	Prep Date	2025-05-30 06:16	Extract Vol (mL)	0.2
Matrix	aqueous	Analysis Date	2025-05-30 09:42	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	B300525-0530942	24800	700	1530	40-150%	124%	
ES	13C3-PFPrA		B300525-0530942				20-150%	129%	

Enthalpy Analytical

Job No.: 0525-1219-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_118160_PFAS	Prep Batch	EU118160	Sample Vol (mL)	250
Sample Name	OPR_118160_PFAS	Prep Date	2025-06-04 13:55	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2025-06-05 17:49	Split Factor	N/A
Sampling Date		Analyst	jacksullivan	Method Code	EU-047-NPW
Received Date		Instrument	Pippin	Sample Type	Control
		Bottle ID	-		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFTeDA	72629-94-8	P050625008	36.1	0.212	0.640	42.2-201%	180%	
	PFTeDA	376-06-7	P050625008	20.4	0.244	0.640	43-162%	102%	
Sulfonamidos	N-EtFOSA	4151-50-2	P050625008	22.9	0.396	0.640	26.7-172%	115%	
	N-MeFOSA	31506-32-8	P050625008	20.2	0.264	0.640	26.4-183%	101%	
ES	M2PFTeDA		P050625008				20-150%	29.7%	
	d3-N-MeFOSA		P050625008				10-200%	6.47%	Q
	d5-N-EtFOSA		P050625008				10-200%	5.99%	Q

Sample Custody

JOB ID: Date / Time: 5/16/25 14:40 Initials: M.A.C.
 OR
 Client: BRUNSWICK COUNTY UTILITIES

Temp °C: 7.6 Thermometer ID: T16

Cooler 1 of 1

Received via

FedEx

UPS

DHL

USPS

Courier

Other

<i>Check one</i>	On ice: <input checked="" type="checkbox"/>	<i>Check one</i>	in a Box: <input type="checkbox"/>	Yes	No
	Melted ice: <input type="checkbox"/>		in a Cooler: <input checked="" type="checkbox"/>	Cooler seals: <input type="checkbox"/>	<input checked="" type="checkbox"/>
	Ambient: <input type="checkbox"/>		Cooler in Box: <input type="checkbox"/>	Sample seals: <input type="checkbox"/>	<input checked="" type="checkbox"/>
				Good condition: <input checked="" type="checkbox"/>	<input type="checkbox"/>

Comment:

Temp °C: Thermometer ID:

Cooler of

Received via

FedEx

UPS

DHL

USPS

Courier

Other

<i>Check one</i>	On ice: <input type="checkbox"/>	<i>Check one</i>	in a Box: <input type="checkbox"/>	Yes	No
	Melted ice: <input type="checkbox"/>		in a Cooler: <input type="checkbox"/>	Cooler seals: <input type="checkbox"/>	<input type="checkbox"/>
	Ambient: <input type="checkbox"/>		Cooler in Box: <input type="checkbox"/>	Sample seals: <input type="checkbox"/>	<input type="checkbox"/>
				Good condition: <input type="checkbox"/>	<input type="checkbox"/>

Comment:

Temp °C: Thermometer ID:

Cooler of

Received via

FedEx

UPS

DHL

USPS

Courier

Other

<i>Check one</i>	On ice: <input type="checkbox"/>	<i>Check one</i>	in a Box: <input type="checkbox"/>	Yes	No
	Melted ice: <input type="checkbox"/>		in a Cooler: <input type="checkbox"/>	Cooler seals: <input type="checkbox"/>	<input type="checkbox"/>
	Ambient: <input type="checkbox"/>		Cooler in Box: <input type="checkbox"/>	Sample seals: <input type="checkbox"/>	<input type="checkbox"/>
				Good condition: <input type="checkbox"/>	<input type="checkbox"/>

Comment: