

# County of Brunswick

PO Box 249  
Bolivia, NC 28422-0249

## LELAND, NC

Client Project# NORTHWEST WATER PLANT  
Samples Received: 6/21/2024

### Analytical Report 0624-817

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

Report Issue Date: 7/23/2024

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 29 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:



Amanda Valois, QA Associate



Enthalpy Analytical, LLC – Wilmington  
Brittany Neff, Project Manager  
brneff@montrose-env.com / www.enthalpy.com  
O: (910)876-6894  
2714 Exchange Drive, Wilmington, NC 28405

# Summary of Results

## Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

### Summary

	Compound	CAS	062124-SO1 ng/L	062124-EO1 ng/L	
Acids	PFBA	375-22-4	4.72	3.41	
	PFPeA	2706-90-3	7.41	6.77	
	PFHxA	307-24-4	6.32	6.97	
	PFHpA	375-85-9	2.38	2.43	
	PFOA	335-67-1	5.25	4.96	
	PFNA	375-95-1	0.657	0.573	
	PFDA	335-76-2	0.366 J	0.282 J	
	PFUnDA	2058-94-8	ND U	0.0133 L	
	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	5.27	4.26
PFPeS		2706-91-4	0.795	0.484 J	
PFHxS		355-46-4	3.86	3.84	
PFHpS		375-92-8	0.0962 L	0.122 L	
PFOS		1763-23-1	11.9	10.6	
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	0.294 J	0.456 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	ND U	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	5.30	5.85	
Hydro-EVE Acid		773804-62-9	0.0410 L	0.0198 L	
NFDHA		151772-58-6	ND U	ND U	
PEPA		267239-61-2	4.49	3.62	
PFECA-G		801212-59-9	ND U	ND U	
PFMOAA		674-13-5	11.5	14.1	
PFMOBA		863090-89-5	ND U	ND U	
PFMOPrA		377-73-1	ND U	ND U	
PFO2HxA		39492-88-1	7.53	8.13	
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	9.19	9.68	
R-EVE		2416366-22-6	4.25	3.15	
PFESAs		11Cl-PF3OUds	763051-92-9	ND U	ND U
		9Cl-PF3ONS	756426-58-1	ND U	ND U
	Hydrolyzed PSDA	2416366-19-1	2.20	2.75	
	Nafion Byproduct 1 (PS Acid)	29311-67-9	ND U	ND U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	0.369 L	0.351 L	
	NVHOS	1132933-86-8	ND U	ND U	
	PFEESA	113507-82-7	ND U	ND U	
	R-PSDA	2416366-18-0	3.09	2.43	
R-PSDCA	2416366-21-5	ND U	ND U		

## Enthalpy Analytical

Job No.: 0624-817-2 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

### Summary

	Compound	CAS	062124-SO1 ng/L	062124-EO1 ng/L
Acids	PFPrA	422-64-0	128 B	143 B

# Detailed Results

# Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0624-817-001-1	Prep Batch	EU17708	Sample Vol (mL)	288.9
Sample Name	062124-SO1	Prep Date	2024-07-02 15:25	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-07-04 09:57	Split Factor	N/A
Sampling Date	2024-06-21 13:30	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-06-21	Instrument	Sauron	Sample Type	Sample
		Bottle ID	A		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	S030724061	4.72	0.220	0.554				
	PFPeA	2706-90-3	S030724061	7.41	0.158	0.554				
	PFHxA	307-24-4	S030724061	6.32	0.185	0.554				
	PFHpA	375-85-9	S030724061	2.38	0.194	0.554				
	PFOA	335-67-1	S030724061	5.25	0.127	0.554				
	PFNA	375-95-1	S030724061	0.657	0.125	0.554				
	PFDA	335-76-2	S030724061	0.366	0.158	0.554			J	
	PFUnDA	2058-94-8	S030724061	ND	0.125	0.554			U	
	PFDoDA	307-55-1	S030724061	ND	0.225	0.554			U	
	PFTrDA	72629-94-8	S030724061	ND	0.183	0.554			U	
	PFTeDA	376-06-7	S030724061	ND	0.211	0.554			U	
	PFHxDA	67905-19-5	S090724051	ND	0.294	0.554			U	
	Sulfonates	PFBS	375-73-5	S030724061	5.27	0.294	0.554			
		PFPeS	2706-91-4	S030724061	0.795	0.114	0.522			
PFHxS		355-46-4	S030724061	3.86	0.427	0.507				
PFHpS		375-92-8	S090724051	0.0962	0.268	0.528			L	
PFOS		1763-23-1	S090724051	11.9	0.292	0.513				
PFNS		68259-12-1	S090724051	ND	0.172	0.533			U	
PFDS		335-77-3	S090724051	ND	0.291	0.533			U	
4:2 FTS		757124-72-4	S090724051	ND	0.0718	0.519			U	
6:2 FTS		27619-97-2	S090724051	ND	0.261	0.528			U	
8:2 FTS		39108-34-4	S090724051	ND	0.124	0.531			U	
10:2 FTS	120226-60-0	S090724051	ND	0.424	0.554			U		
Sulfonamidos	FBSA	30334-69-1	S030724061	0.294	0.263	0.554			J	
	N-EtFOSA	4151-50-2	S030724061	ND	0.343	0.554			U	
	N-EtFOSAA	2991-50-6	S090724051	ND	0.225	0.554			U	
	N-EtFOSE	1691-99-2	S030724061	ND	0.848	2.49			U	
	N-MeFOSA	31506-32-8	S030724061	ND	0.228	0.554			U	
	N-MeFOSAA	2355-31-9	S090724051	ND	0.156	0.554			U	
	N-MeFOSE	24448-09-7	S030724061	ND	0.526	2.49			U	
	PFOSA	754-91-6	S090724051	ND	0.0777	0.554			U	
PFECAs	ADONA	919005-14-4	S030724061	ND	0.150	0.525			U	
	EVE Acid	69087-46-3	S030724061	ND	0.177	1.25			U	
	HFPO-DA	13252-13-6	S030724061	5.30	0.0587	0.554				
	Hydro-EVE Acid	773804-62-9	S030724061	0.0410	0.182	0.554			L	
	NFDHA	151772-58-6	S030724061	ND	0.116	0.554			U	
	PEPA	267239-61-2	S030724061	4.49	0.104	0.554				
	PFECA-G	801212-59-9	S030724061	ND	0.0739	0.554			U	
	PFMOAA	674-13-5	S090724051	11.5	0.280	0.554				
	PFMOBA	863090-89-5	S030724061	ND	0.929	1.25			U	
	PFMOPrA	377-73-1	S030724061	ND	0.197	0.554			U	
	PFO2HxA	39492-88-1	S030724061	7.53	0.178	0.554				
	PFO3OA	39492-89-2	S030724061	ND	0.254	0.554			U	
	PFO4DA	39492-90-5	S030724061	ND	0.438	2.77			U	
	PFO5DA	39492-91-6	S030724061	ND	0.443	2.77			U	
	PMPA	13140-29-9	S030724061	9.19	0.130	0.554				
	R-EVE	2416366-22-6	S030724061	4.25	0.919	1.25				
PFESAs	11Cl-PF3OUhS	763051-92-9	S090724051	ND	0.261	0.522			U	
	9Cl-PF3ONS	756426-58-1	S090724051	ND	0.355	0.516			U	
	Hydrolyzed PSDA	2416366-19-1	S030724061	2.20	0.369	0.554				
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S030724061	ND	0.296	0.554			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S030724061	0.369	0.459	0.554			L	
	NVHOS	1132933-86-8	S030724061	ND	0.0853	0.554			U	
	PFEESA	113507-82-7	S030724061	ND	0.166	0.554			U	
	R-PSDA	2416366-18-0	S030724061	3.09	2.44	2.44				
R-PSDCA	2416366-21-5	S030724061	ND	0.234	0.554			U		
ES	MPFBA		S030724061				20-150%	104.5%		
	M5PFPeA		S030724061				20-150%	210.5%	Q	
	M3PFBS		S030724061				20-150%	205.6%	Q	
	M2-4:2 FTS		S090724051				20-150%	130.5%		
	M5PFHxA		S030724061				20-150%	94.5%		
	M3HFPO-DA		S030724061				20-150%	99.7%		
M4PFHpA		S030724061				20-150%	91.8%			

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Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S030724061			20-150%	103.2%	
	M2-6:2 FTS		S090724051			20-150%	93.2%	
	M8PFOA		S030724061			20-150%	99.2%	
	M9PFNA		S030724061			20-150%	107.0%	
	M8PFOS		S090724051			20-150%	96.3%	
	M2-8:2 FTS		S090724051			20-150%	91.6%	
	M8FOSA-I		S030724061			20-150%	50.0%	
	M6PFDA		S030724061			20-150%	97.7%	
	d3-N-MeFOSAA		S090724051			20-150%	99.7%	
	d5-N-EtFOSAA		S090724051			20-150%	87.4%	
	M7PFUdA		S030724061			20-150%	75.8%	
	MPFDoA		S030724061			20-150%	60.5%	
	M2PFTeDA		S030724061			20-150%	15.4%	Q
	d3-N-MeFOSA		S030724061			10-200%	0.4%	Q
	d5-N-EtFOSA		S030724061			10-200%	0.3%	Q
	d7-N-MeFOSE		S030724061			10-200%	23.8%	
	d9-N-EtFOSE		S030724061			10-200%	21.2%	

# Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0624-817-002-1	Prep Batch	EU17708	Sample Vol (mL)	292.28
Sample Name	062124-EO1	Prep Date	2024-07-02 15:25	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-07-04 10:20	Split Factor	N/A
Sampling Date	2024-06-21 13:30	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-06-21	Instrument	Sauron	Sample Type	Sample
		Bottle ID	A		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	S030724062	3.41	0.217	0.547				
	PFPeA	2706-90-3	S030724062	6.77	0.157	0.547				
	PFHxA	307-24-4	S030724062	6.97	0.183	0.547				
	PFHpA	375-85-9	S030724062	2.43	0.192	0.547				
	PFOA	335-67-1	S030724062	4.96	0.125	0.547				
	PFNA	375-95-1	S030724062	0.573	0.124	0.547				
	PFDA	335-76-2	S030724062	0.282	0.157	0.547			J	
	PFUnDA	2058-94-8	S030724062	0.0133	0.124	0.547			L	
	PFDoDA	307-55-1	S030724062	ND	0.222	0.547			U	
	PFTrDA	72629-94-8	S030724062	ND	0.181	0.547			U	
	PFTeDA	376-06-7	S030724062	ND	0.209	0.547			U	
	PFHxDA	67905-19-5	S090724052	ND	0.291	0.547			U	
	Sulfonates	PFBS	375-73-5	S030724062	4.26	0.291	0.547			
		PFPeS	2706-91-4	S030724062	0.484	0.112	0.516			J
PFHxS		355-46-4	S030724062	3.84	0.423	0.501				
PFHpS		375-92-8	S090724052	0.122	0.265	0.521			L	
PFOS		1763-23-1	S090724052	10.6	0.289	0.507				
PFNS		68259-12-1	S090724052	ND	0.170	0.527			U	
PFDS		335-77-3	S090724052	ND	0.287	0.527			U	
4:2 FTS		757124-72-4	S090724052	ND	0.0710	0.513			U	
6:2 FTS		27619-97-2	S090724052	ND	0.258	0.521			U	
8:2 FTS		39108-34-4	S090724052	ND	0.123	0.524			U	
10:2 FTS	120226-60-0	S090724052	ND	0.419	0.547			U		
Sulfonamidos	FBSA	30334-69-1	S030724062	0.456	0.260	0.547			J	
	N-EtFOSA	4151-50-2	S030724062	ND	0.339	0.547			U	
	N-EtFOSAA	2991-50-6	S090724052	ND	0.222	0.547			U	
	N-EtFOSE	1691-99-2	S030724062	ND	0.838	2.46			U	
	N-MeFOSA	31506-32-8	S030724062	ND	0.226	0.547			U	
	N-MeFOSAA	2355-31-9	S090724052	ND	0.154	0.547			U	
	N-MeFOSE	24448-09-7	S030724062	ND	0.520	2.46			U	
	PFOSA	754-91-6	S090724052	ND	0.0768	0.547			U	
PFECAs	ADONA	919005-14-4	S030724062	ND	0.148	0.519			U	
	EVE Acid	69087-46-3	S030724062	ND	0.174	1.23			U	
	HFPO-DA	13252-13-6	S030724062	5.85	0.0580	0.547				
	Hydro-EVE Acid	773804-62-9	S030724062	0.0198	0.180	0.547			L	
	NFDHA	151772-58-6	S030724062	ND	0.115	0.547			U	
	PEPA	267239-61-2	S030724062	3.62	0.103	0.547				
	PFECA-G	801212-59-9	S030724062	ND	0.0730	0.547			U	
	PFMOAA	674-13-5	S090724052	14.1	0.277	0.547				
	PFMOBA	863090-89-5	S030724062	ND	0.919	1.23			U	
	PFMOPrA	377-73-1	S030724062	ND	0.195	0.547			U	
	PFO2HxA	39492-88-1	S030724062	8.13	0.176	0.547				
	PFO3OA	39492-89-2	S030724062	ND	0.251	0.547			U	
	PFO4DA	39492-90-5	S030724062	ND	0.433	2.74			U	
	PFO5DA	39492-91-6	S030724062	ND	0.438	2.74			U	
	PMPA	13140-29-9	S030724062	9.68	0.129	0.547				
	R-EVE	2416366-22-6	S030724062	3.15	0.908	1.23				
	PFESAs	11Cl-PF3OUhS	763051-92-9	S090724052	ND	0.258	0.516			U
9Cl-PF3ONS		756426-58-1	S090724052	ND	0.351	0.510			U	
Hydrolyzed PSDA		2416366-19-1	S030724062	2.75	0.364	0.547				
Nafion Byproduct 1 (PS Acid)		29311-67-9	S030724062	ND	0.293	0.547			U	
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	S030724062	0.351	0.453	0.547			L	
NVHOS		1132933-86-8	S030724062	ND	0.0843	0.547			U	
PFEESA		113507-82-7	S030724062	ND	0.165	0.547			U	
R-PSDA		2416366-18-0	S030724062	2.43	2.41	2.41				
R-PSDCA		2416366-21-5	S030724062	ND	0.231	0.547			U	
ES	MPFBA		S030724062				20-150%	106.1%		
	M5PFPeA		S030724062				20-150%	167.1%	Q	
	M3PFBS		S030724062				20-150%	183.2%	Q	
	M2-4:2 FTS		S090724052				20-150%	124.3%		
	M5PFHxA		S030724062				20-150%	73.7%		
	M3HFPO-DA		S030724062				20-150%	88.0%		
M4PFHpA		S030724062				20-150%	81.3%			

## Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S030724062			20-150%	93.7%	
	M2-6:2 FTS		S090724052			20-150%	84.1%	
	M8PFOA		S030724062			20-150%	89.5%	
	M9PFNA		S030724062			20-150%	88.3%	
	M8PFOS		S090724052			20-150%	85.8%	
	M2-8:2 FTS		S090724052			20-150%	87.5%	
	M8FOSA-I		S030724062			20-150%	66.4%	
	M6PFDA		S030724062			20-150%	85.7%	
	d3-N-MeFOSAA		S090724052			20-150%	90.0%	
	d5-N-EtFOSAA		S090724052			20-150%	83.9%	
	M7PFUdA		S030724062			20-150%	76.8%	
	MPFDaA		S030724062			20-150%	66.0%	
	M2PFTeDA		S030724062			20-150%	24.3%	
	d3-N-MeFOSA		S030724062			10-200%	1.8%	Q
	d5-N-EtFOSA		S030724062			10-200%	1.9%	Q
	d7-N-MeFOSE		S030724062			10-200%	27.9%	
	d9-N-EtFOSE		S030724062			10-200%	29.1%	

# Enthalpy Analytical

Job No.: 0624-817-2 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

## Details

Sample Name	062124-SO1		
Sampling Site			
Enthalpy ID	0624-817-001-1A	Prep Batch	EU17708A
Matrix	aqueous	Analyst	hallen
Sampling Date	2024-06-21 13:30	Instrument	Samwise
Received Date	2024-06-21	Sample Vol mL	288.9
Prep Date	2024-07-02 15:25	Extract Vol mL	0.4
AnalysisDate	2024-07-09 20:00	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	SW090724-07091600	128	0.485	1.06			B
ES	13C3-PFPrA		SW090724-07091600				20-150%	10.7%	Q

# Enthalpy Analytical

Job No.: 0624-817-2 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

## Details

Sample Name 062124-EO1  
Sampling Site  
Enthalpy ID 0624-817-002-1A Prep Batch EU17708A  
Matrix aqueous Analyst hallen  
Sampling Date 2024-06-21 13:30 Instrument Samwise  
Received Date 2024-06-21 Sample Vol mL 292.28  
Prep Date 2024-07-02 15:25 Extract Vol mL 0.4  
AnalysisDate 2024-07-09 20:24 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	SW090724-07091624	143	0.479	1.04			B
ES	13C3-PFPrA		SW090724-07091624				20-150%	14.8%	Q

# QC Data

# Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	MB_17708_PFAS	Prep Batch	EU17708	Sample Vol (mL)	250
Sample Name	MB_17708_PFAS	Prep Date	2024-07-02 15:25	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-07-04 03:32	Split Factor	N/A
Sampling Date		Analyst	hallen	Method Code	EU-047-NPW
Received Date		Instrument	Sauron	Sample Type	Blank
		Bottle ID	-		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags	
Acids	PFBA	375-22-4	S030724044	ND	0.254	0.640			U	
	PFPeA	2706-90-3	S030724044	ND	0.183	0.640			U	
	PFHxA	307-24-4	S030724044	ND	0.214	0.640			U	
	PFHpA	375-85-9	S030724044	ND	0.224	0.640			U	
	PFOA	335-67-1	S030724044	ND	0.146	0.640			U	
	PFNA	375-95-1	S030724044	ND	0.145	0.640			U	
	PFDA	335-76-2	S030724044	ND	0.183	0.640			U	
	PFUnDA	2058-94-8	S030724044	ND	0.145	0.640			U	
	PFDoDA	307-55-1	S030724044	ND	0.260	0.640			U	
	PFTrDA	72629-94-8	S030724044	ND	0.212	0.640			U	
	PFTeDA	376-06-7	S030724044	ND	0.244	0.640			U	
	PFHxDA	67905-19-5	S090724034	ND	0.340	0.640			U	
	Sulfonates	PFBS	375-73-5	S030724044	ND	0.340	0.640			U
		PFPeS	2706-91-4	S030724044	ND	0.131	0.603			U
		PFHxS	355-46-4	S030724044	ND	0.494	0.586			U
PFHpS		375-92-8	S090724034	ND	0.310	0.610			U	
PFOS		1763-23-1	S090724034	ND	0.338	0.593			U	
PFNS		68259-12-1	S090724034	ND	0.199	0.616			U	
PFDS		335-77-3	S090724034	ND	0.336	0.616			U	
4:2 FTS		757124-72-4	S090724034	ND	0.0830	0.600			U	
6:2 FTS		27619-97-2	S090724034	ND	0.302	0.610			U	
8:2 FTS		39108-34-4	S090724034	ND	0.143	0.613			U	
10:2 FTS	120226-60-0	S090724034	ND	0.490	0.640			U		
Sulfonamidos	FBSA	30334-69-1	S030724044	ND	0.304	0.640			U	
	N-EtFOSA	4151-50-2	S030724044	ND	0.396	0.640			U	
	N-EtFOSAA	2991-50-6	S090724034	ND	0.260	0.640			U	
	N-EtFOSE	1691-99-2	S030724044	ND	0.980	2.88			U	
	N-MeFOSA	31506-32-8	S030724044	ND	0.264	0.640			U	
	N-MeFOSAA	2355-31-9	S090724034	ND	0.180	0.640			U	
	N-MeFOSE	24448-09-7	S030724044	ND	0.608	2.88			U	
	PFOSA	754-91-6	S090724034	ND	0.0898	0.640			U	
PFECAs	ADONA	919005-14-4	S030724044	ND	0.173	0.606			U	
	EVE Acid	69087-46-3	S030724044	ND	0.204	1.44			U	
	HFPO-DA	13252-13-6	S030724044	ND	0.0678	0.640			U	
	Hydro-EVE Acid	773804-62-9	S030724044	ND	0.210	0.640			U	
	NFDHA	151772-58-6	S030724044	ND	0.135	0.640			U	
	PEPA	267239-61-2	S030724044	ND	0.120	0.640			U	
	PFECA-G	801212-59-9	S030724044	ND	0.0854	0.640			U	
	PFMOA	674-13-5	S090724034	ND	0.324	0.640			U	
	PFMOBA	863090-89-5	S030724044	ND	1.07	1.44			U	
	PFMOPrA	377-73-1	S030724044	ND	0.228	0.640			U	
	PFO2HxA	39492-88-1	S030724044	ND	0.206	0.640			U	
	PFO3OA	39492-89-2	S030724044	ND	0.294	0.640			U	
	PFO4DA	39492-90-5	S030724044	ND	0.506	3.20			U	
	PFO5DA	39492-91-6	S030724044	ND	0.512	3.20			U	
	PMPA	13140-29-9	S030724044	ND	0.151	0.640			U	
	R-EVE	2416366-22-6	S030724044	ND	1.06	1.44			U	
	PFESAs	11Cl-PF3OUHs	763051-92-9	S090724034	ND	0.302	0.603			U
9Cl-PF3ONS		756426-58-1	S090724034	ND	0.410	0.596			U	
Hydrolyzed PSDA		2416366-19-1	S030724044	ND	0.426	0.640			U	
Nafion Byproduct 1 (PS Acid)		29311-67-9	S030724044	ND	0.342	0.640			U	
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	S030724044	ND	0.530	0.640			U	
NVHOS		1132933-86-8	S030724044	ND	0.0986	0.640			U	
PFEESA		113507-82-7	S030724044	ND	0.192	0.640			U	
R-PSDA		2416366-18-0	S030724044	ND	2.82	2.82			U	
R-PSDCA		2416366-21-5	S030724044	ND	0.270	0.640			U	
ES		MPFBA		S030724044				20-150%	91.0%	
	M5PFPeA		S030724044				20-150%	88.1%		
	M3PFBS		S030724044				20-150%	84.9%		
	M2-4:2 FTS		S090724034				20-150%	103.4%		
	M5PFHxA		S030724044				20-150%	73.9%		
	M3HFPO-DA		S030724044				20-150%	88.7%		
M4PFHpA		S030724044				20-150%	81.4%			

## Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S030724044			20-150%	82.1%	
	M2-6:2 FTS		S090724034			20-150%	91.4%	
	M8PFOA		S030724044			20-150%	85.3%	
	M9PFNA		S030724044			20-150%	84.2%	
	M8PFOS		S090724034			20-150%	83.3%	
	M2-8:2 FTS		S090724034			20-150%	74.0%	
	M8FOSA-I		S030724044			20-150%	39.8%	
	M6PFDA		S030724044			20-150%	82.7%	
	d3-N-MeFOSAA		S090724034			20-150%	76.2%	
	d5-N-EtFOSAA		S090724034			20-150%	69.7%	
	M7PFUdA		S030724044			20-150%	61.2%	
	MPFDoA		S030724044			20-150%	40.6%	
	M2PFTeDA		S030724044			20-150%	7.8%	Q
	d3-N-MeFOSA		S030724044			10-200%	0.1%	Q
	d5-N-EtFOSA		S030724044			10-200%	0.0%	Q
	d7-N-MeFOSE		S030724044			10-200%	24.1%	
	d9-N-EtFOSE		S030724044			10-200%	20.9%	

# Enthalpy Analytical

Job No.: 0624-817-1 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	OPR_17708_PFAS	Prep Batch	EU17708	Sample Vol (mL)	250
Sample Name	OPR_17708_PFAS	Prep Date	2024-07-02 15:25	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-07-04 03:54	Split Factor	N/A
Sampling Date		Analyst	hallen	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	S030724045	18.2	0.254	0.640	69.1-122%	91.1%	
	PFPeA	2706-90-3	S030724045	20.3	0.183	0.640	68.5-121%	101.4%	
	PFHxA	307-24-4	S030724045	22.3	0.214	0.640	68.3-121%	111.7%	
	PFHpA	375-85-9	S030724045	18.3	0.224	0.640	62.4-128%	91.4%	
	PFOA	335-67-1	S030724045	18.2	0.146	0.640	66.3-124%	91.2%	
	PFNA	375-95-1	S030724045	18.6	0.145	0.640	70.5-120%	93.1%	
	PFDA	335-76-2	S030724045	18.0	0.183	0.640	68.9-117%	89.8%	
	PFUnDA	2058-94-8	S030724045	19.8	0.145	0.640	58.1-132%	98.8%	
	PFDoDA	307-55-1	S030724045	19.2	0.260	0.640	52.1-140%	96.0%	
	PFTrDA	72629-94-8	S030724045	38.7	0.212	0.640	65-144%	193.4%	Q
	PFTeDA	376-06-7	S030724045	21.1	0.244	0.640	36.1-161%	105.6%	
Sulfonates	PFBS	375-73-5	S030724045	17.4	0.340	0.640	67.5-111.6%	97.9%	
	PFPeS	2706-91-4	S030724045	17.9	0.131	0.603	51.8-142%	95.4%	
	PFHxS	355-46-4	S030724045	16.0	0.494	0.586	59.6-128%	87.3%	
	PFHpS	375-92-8	S090724035	20.4	0.310	0.610	46.9-157%	106.8%	
	PFOS	1763-23-1	S090724035	18.0	0.338	0.593	59.2-132%	96.7%	
	PFNS	68259-12-1	S090724035	13.6	0.199	0.616	53.9-133%	70.6%	
	PFDS	335-77-3	S090724035	5.80	0.336	0.616	38.1-142%	30.0%	Q
	4:2 FTS	757124-72-4	S090724035	18.2	0.0830	0.600	61.9-131%	96.9%	
	6:2 FTS	27619-97-2	S090724035	18.3	0.302	0.610	62.3-129%	96.0%	
8:2 FTS	39108-34-4	S090724035	20.3	0.143	0.613	37.5-159%	106.0%		
Sulfonamidos	N-EtFOSAA	2991-50-6	S090724035	18.9	0.260	0.640	61.5-133%	94.3%	
	N-MeFOSAA	2355-31-9	S090724035	19.0	0.180	0.640	57.3-138%	95.1%	
	PFOSA	754-91-6	S090724035	16.3	0.0898	0.640	49.1-143%	81.7%	
PFECAs	HFPO-DA	13252-13-6	S030724045	18.1	0.0678	0.640	57.2-130%	90.3%	
ES	MPFBA		S030724045				20-150%	88.0%	
	M5PFPeA		S030724045				20-150%	91.6%	
	M3PFBS		S030724045				20-150%	82.6%	
	M2-4:2 FTS		S090724035				20-150%	102.3%	
	M5PFHxA		S030724045				20-150%	77.1%	
	M3HFPO-DA		S030724045				20-150%	93.3%	
	M4PFHpA		S030724045				20-150%	85.1%	
	M3PFHxS		S030724045				20-150%	92.1%	
	M2-6:2 FTS		S090724035				20-150%	93.4%	
	M8PFOA		S030724045				20-150%	91.2%	
	M9PFNA		S030724045				20-150%	90.5%	
	M8PFOS		S090724035				20-150%	80.4%	
	M2-8:2 FTS		S090724035				20-150%	67.9%	
	M8FOSA-I		S030724045				20-150%	39.2%	
	M6PFDA		S030724045				20-150%	81.6%	
	d3-N-MeFOSAA		S090724035				20-150%	58.8%	
	d5-N-EtFOSAA		S090724035				20-150%	46.6%	
	M7PFUDa		S030724045				20-150%	49.9%	
	MPFDa		S030724045				20-150%	23.6%	
	M2PFTeDA		S030724045				20-150%	2.9%	Q

# Enthalpy Analytical

Job No.: 0624-817-2 PFAS by Isotope Dilution (non-potable water)  
 County of Brunswick NORTHWEST WATER PLANT LELAND, NC

## Details

Sample Name	MBA_17708_PFAS	Prep Batch	EU17708A
Sampling Site		Analyst	hallen
Enthalpy ID	MBA_17708_PFAS	Instrument	Samwise
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2024-07-02 15:25	Method Code	EU-047-NPW
AnalysisDate	2024-07-09 19:35		
SampleType	Blank		
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	SW090724-07091535	180	0.560	1.22			
ES	13C3-PFPrA		SW090724-07091535				20-150%	14.9%	Q

# Enthalpy Analytical

Job No.: 0624-817-2 PFAS by Isotope Dilution (non-potable water)

County of Brunswick NORTHWEST WATER PLANT LELAND, NC

## Details

Sample Name	OPRA_17708_PFAS		
Sampling Site			
Enthalpy ID	OPRA_17708_PFAS	Prep Batch	EU17708A
Matrix	aqueous	Analyst	hallen
Sampling Date		Instrument	Samwise
Received Date		Sample Vol mL	250
Prep Date	2024-07-02 15:25	Extract Vol mL	0.4
AnalysisDate	2024-07-09 19:48	Split Factor	N/A
SampleType	Control	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	PFPrA	422-64-0	SW090724-07091548	234	0.560	1.22	40-150%	292.2%	BQ
ES	13C3-PFPrA		SW090724-07091548				20-150%	12.3%	Q

# Narrative Summary

# Enthalpy Analytical Narrative Summary

Company	County of Brunswick
Job No.	0624-817
Client ID.	NORTHWEST WATER PLANT Site: LELAND, NC

## 1. Custody

Cherith McCullagh received the samples at 10.4 °C after being relinquished by County of Brunswick.

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
0624-817-001-1	062124-SO1	aqueous	2024-06-21
0624-817-001-1A	062124-SO1	aqueous	2024-06-21
0624-817-002-1	062124-EO1	aqueous	2024-06-21
0624-817-002-1A	062124-EO1	aqueous	2024-06-21

## 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	Custom List	ENVI-Carb

## 3. Analysis

The samples were analyzed using Waters Acquity UPLC equipped with Xevo TQ MS (LC/MS/MS "Sauron") and Sciex Triple Quad 7500 (LC/MS/MS "Samwise").

The samples were analyzed in more than one analytical sequence in order to include all of the analytes of interest and to meet method acceptance criteria.

## 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

Company	County of Brunswick
Job No.	0624-817
Client ID.	NORTHWEST WATER PLANT Site: LELAND, NC

## 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.

PFTTrDA exceeded method recovery criteria in the ongoing precision recovery (OPR) QC sample but was not detected >LOQ in the samples. Data is reported without adverse impact.

PFDS did not meet method control limits in the OPR, but met DOD QSM 5.4 criteria; therefore, the data is reportable without adverse impact.

In the OPR, analyte(s) yielding values less than 10 times the extract amount in the MB were notated with a B qualifier. Where analyte recovery exceeds the method control limits in the OPR, analyte concentrations detected in the samples may be biased high.

Select extraction standards (ES) fell outside method recovery criteria in the QC samples. Target analytes are quantified based on their ratio to their labeled standard analogs. 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.

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 in the sample analyses fell 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. The data have been accepted and reported with no further actions.

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>		
~ PFPrA	422-64-0	2,2,3,3,3-Pentafluoropropionic acid
*, ^ 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
*, # PFTrDA (PFTriA)	72629-94-8	Perfluorotridecanoic acid
*, #, ^ PFTeDA (PFTA)	376-06-7	Perfluorotetradecanoic acid
~ PFPrS (PFPS)	423-41-6	Perfluoropropanesulfonic 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-EtFOSAA	2991-50-6	N-ethyl perfluorooctane sulfonamido acetic acid
*, #, ^ 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-dioxaheptanoic acid
*, ^ PFMOPrA (PFMPA)	377-73-1	Perfluoro-3-methoxypropanoic acid
~ PFMOAA	674-13-5	Perfluoro-2-methoxyacetic acid
~ PFO2HxA	39492-88-1	Perfluoro (3,5-dioxaheptanoic) 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
*, N-EtFOSA	4151-50-2	N-ethylperfluoro-1-octanesulfonamide
*, N-EtFOSE	1691-99-2	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol
*, N-MeFOSA	31506-32-8	N-methylperfluoro-1-octanesulfonamide
*, N-MeFOSE	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol

PFAS Compound Acronym List		
Acronym	CAS #	Compound Name
<b>* accredited for SOP EU047 / EPA method 1633 # Method 537.1 Accredited ^ Method 533 Accredited ~EPA 1633 extended list</b>		
~ 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-(1,1,2,2-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

# Sample Custody

0624-817



# 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 [Gndy.James@enthalpy.com](mailto:Gndy.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 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		
062124-SO1	6/21/2024	1330PM	250 ml	G	NW	2												X	Please Add PFPrA and	
062124-EO1	6/21/2024	1330PM	250 ml	G	DW	2													X	PFHpA To The Testing.
																				Mark Hager Knows About
																				This If you Have Questions

Relinquished By:	Date: <u>6/21/2024</u>	Received By:	Date: <u>6/21/24</u>	Time: <u>1438</u>	Sample Temperature Upon Receipt:
<b>BILLY BENTON</b>					<input checked="" type="checkbox"/> Iced <input type="checkbox"/> Ambient °C <u>10.4</u>
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient °C _____

JOB ID: 0624-817      Date / Time: 6/21/24 14:38      Initials: C.A.M  
 OR  
 Client: Brunswick County Utilities

Cooler  of

Temp °C: 10.4      Thermometer ID: T16

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

Comment:

Cooler  of

Temp °C:       Thermometer ID:

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

Comment:

Cooler  of

Temp °C:       Thermometer ID:

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

Comment:

**This Is The Last Page  
Of This Report.**