

Brunswick County Public Utilities - NC

PO Box 249
Bolivia, NC 28422-0249

LELAND, NC

Client Project# NORTHWEST WATER PLANT
Samples Received: 5/24/2024

Analytical Report 0524-869

PFAS by Isotope Dilution (non-potable water)

Brunswick List + PFPrA

Report Issue Date: 6/26/2024

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 28 pages. This report shall not be reproduced except in full without approval of the laboratory. This will provide assurance that parts of the report are not taken out of context.

Amendment(s):

Signature:



Laura Boivin, QA Associate II



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Summary of Results

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Summary

	Compound	CAS	052424-SO1 ng/L	052424-EO1 ng/L	
Acids	PFBA	375-22-4	ND U	ND U	
	PFPeA	2706-90-3	3.39	4.46	
	PFHxA	307-24-4	5.37	5.76	
	PFHpA	375-85-9	2.49	2.41	
	PFOA	335-67-1	5.62	5.49	
	PFNA	375-95-1	0.768	0.772	
	PFDA	335-76-2	0.397 J	0.320 J	
	PFUnDA	2058-94-8	0.0346 L	0.0509 L	
	PFDODA	307-55-1	ND U	ND U	
	PFTriDA	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	3.37	3.70
		PFPeS	2706-91-4	0.526	0.573
		PFHxS	355-46-4	2.45	3.02
		PFHpS	375-92-8	0.0722 L	0.114 L
PFOS		1763-23-1	12.7	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	0.0741 L	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	0.270 J	0.370 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	0.00616 L	
	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	1.00	0.589	
Hydro-EVE Acid		773804-62-9	ND U	ND U	
NFDHA		151772-58-6	ND U	ND U	
PEPA		267239-61-2	ND U	ND U	
PFECA-G		801212-59-9	ND U	ND U	
PFMOAA		674-13-5	3.54	2.53	
PFMOBA		863090-89-5	ND U	ND U	
PFMOPrA		377-73-1	ND U	ND U	
PFO2HxA		39492-88-1	ND U	ND U	
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	1.37	0.844	
R-EVE		2416366-22-6	0.984 J	0.575 L	
PFESAs		11Cl-PF3OUds	763051-92-9	ND U	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U	
	Hydrolyzed PSDA	2416366-19-1	0.0104 L	0.00952 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	0.557 L	0.285 L	
	R-PSDCA	241636-21-5	ND U	ND U	

Enthalpy Analytical

Job No.: 0524-869-3 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Summary

	Compound	CAS	052424-SO1 ng/L	052424-EO1 ng/L
Acids	PFPrA	422-64-0	3.42	5.13

Detailed Results

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0524-869-001-1	Prep Batch	EU17494	Sample Vol (mL)	289.21
Sample Name	052424-SO1	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-05-30 06:14	Split Factor	N/A
Sampling Date	2024-05-24 14:05	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-05-24	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	S290524054	ND	0.220	0.553			U	
	PFPeA	2706-90-3	S290524054	3.39	0.158	0.553				
	PFFhA	307-24-4	S290524054	5.37	0.185	0.553				
	PFFHpA	375-85-9	S290524054	2.49	0.194	0.553				
	PFOA	335-67-1	S290524054	5.62	0.127	0.553				
	PFNA	375-95-1	S290524054	0.768	0.125	0.553				
	PFDA	335-76-2	S290524054	0.397	0.158	0.553			J	
	PFUnDA	2058-94-8	S290524054	0.0346	0.125	0.553			L	
	PFDoDA	307-55-1	S290524054	ND	0.225	0.553			U	
	PFTrDA	72629-94-8	S290524054	ND	0.183	0.553			U	
	PFTeDA	376-06-7	S290524054	ND	0.211	0.553			U	
	PFFhDA	67905-19-5	S290524054	ND	0.294	0.553			U	
	Sulfonates	PFBS	375-73-5	S290524054	3.37	0.294	0.553			
		PFPeS	2706-91-4	S290524054	0.526	0.114	0.521			
PFFhS		355-46-4	S290524054	2.45	0.427	0.507				
PFFHpS		375-92-8	S290524054	0.0722	0.268	0.527			L	
PFOS		1763-23-1	S290524054	12.7	0.292	0.512				
PFNS		68259-12-1	S290524054	ND	0.172	0.533			U	
PFDS		335-77-3	S290524054	ND	0.290	0.533			U	
4:2 FTS		757124-72-4	S290524054	ND	0.0717	0.518			U	
6:2 FTS		27619-97-2	S290524054	0.0741	0.261	0.527			L	
8:2 FTS		39108-34-4	S290524054	ND	0.124	0.530			U	
10:2 FTS	120226-60-0	S290524054	ND	0.424	0.553			U		
Sulfonamidos	FBSA	30334-69-1	S290524054	0.270	0.263	0.553			J	
	N-EtFOSA	4151-50-2	S290524054	ND	0.342	0.553			U	
	N-EtFOSAA	2991-50-6	S290524054	ND	0.225	0.553			U	
	N-EtFOSE	1691-99-2	S290524054	ND	0.847	2.49			U	
	N-MeFOSA	31506-32-8	S290524054	ND	0.228	0.553			U	
	N-MeFOSAA	2355-31-9	S290524054	ND	0.155	0.553			U	
	N-MeFOSE	24448-09-7	S290524054	ND	0.526	2.49			U	
	PFOSA	754-91-6	S290524054	ND	0.0776	0.553			U	
PFECAs	ADONA	919005-14-4	S290524054	ND	0.150	0.524			U	
	EVE Acid	69087-46-3	S290524054	ND	0.176	1.24			U	
	HFPO-DA	13252-13-6	S290524054	1.00	0.0586	0.553				
	Hydro-EVE Acid	773804-62-9	S290524054	ND	0.182	0.553			U	
	NFDHA	151772-58-6	S290524054	ND	0.116	0.553			U	
	PEPA	267239-61-2	S290524054	ND	0.104	0.553			U	
	PFECA-G	801212-59-9	S290524054	ND	0.0738	0.553			U	
	PFMOAA	674-13-5	S290524054	3.54	0.280	0.553				
	PFMOBA	863090-89-5	S290524054	ND	0.928	1.24			U	
	PFMOPrA	377-73-1	S290524054	ND	0.197	0.553			U	
	PFO2HxA	39492-88-1	S290524054	ND	0.178	0.553			U	
	PFO3OA	39492-89-2	S290524054	ND	0.254	3.46			U	
	PFO4DA	39492-90-5	S290524054	ND	0.437	17.29			U	
	PFO5DA	39492-91-6	S290524054	ND	0.443	2.77			U	
	PMPA	13140-29-9	S290524054	1.37	0.130	0.553				
	R-EVE	2416366-22-6	S290524054	0.984	0.918	1.24			J	
PFESAs	11Cl-PF3OUhS	763051-92-9	S290524054	ND	0.261	0.521			U	
	9Cl-PF3ONS	756426-58-1	S290524054	ND	0.354	0.515			U	
	Hydrolyzed PSDA	2416366-19-1	S220624109	0.0104	0.368	0.553			L	
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S290524054	ND	0.296	0.553			U	
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S290524054	ND	0.458	0.553			U	
	NVHOS	1132933-86-8	S290524054	ND	0.0852	0.553			U	
	PFEESA	113507-82-7	S290524054	ND	0.166	0.553			U	
	R-PSDA	2416366-18-0	S290524054	0.557	2.44	2.44			L	
R-PSDCA	241636-21-5	S290524054	ND	0.233	0.553			U		
ES	MPFBA		S290524054				20-150%	202.5%	Q	
	M5PFPeA		S290524054				20-150%	246.3%	Q	
	M3PFBS		S290524054				20-150%	160.6%	Q	
	M2-4:2 FTS		S290524054				20-150%	274.7%	Q	
	M5PFFhA		S290524054				20-150%	213.8%	Q	
	M3HFPO-DA		S290524054				20-150%	179.4%	Q	
	M4PFFHpA		S290524054				20-150%	205.8%	Q	

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Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S290524054			20-150%	201.4%	Q
	M2-6:2 FTS		S290524054			20-150%	169.8%	Q
	M8PFOA		S290524054			20-150%	204.8%	Q
	M9PFNA		S290524054			20-150%	198.0%	Q
	M8PFOS		S290524054			20-150%	174.0%	Q
	M2-8:2 FTS		S290524054			20-150%	193.4%	Q
	M8FOSA-I		S290524054			20-150%	171.1%	Q
	M6PFDA		S290524054			20-150%	183.0%	Q
	d3-N-MeFOSAA		S290524054			20-150%	180.5%	Q
	d5-N-EtFOSAA		S290524054			20-150%	181.0%	Q
	M7PFUdA		S290524054			20-150%	138.5%	
	MPFDoA		S290524054			20-150%	122.1%	
	M2PFTeDA		S290524054			20-150%	92.7%	
	d3-N-MeFOSA		S290524054			10-200%	40.4%	
	d5-N-EtFOSA		S290524054			10-200%	39.3%	
	d7-N-MeFOSE		S290524054			10-200%	114.8%	
	d9-N-EtFOSE		S290524054			10-200%	62.5%	

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0524-869-002-1	Prep Batch	EU17494	Sample Vol (mL)	291.62
Sample Name	052424-EO1	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-05-30 06:59	Split Factor	N/A
Sampling Date	2024-05-24 14:05	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-05-24	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	S290524056	ND	0.218	0.549			U	
	PFPeA	2706-90-3	S290524056	4.46	0.157	0.549				
	PFHxA	307-24-4	S290524056	5.76	0.183	0.549				
	PFHpA	375-85-9	S290524056	2.41	0.192	0.549				
	PFOA	335-67-1	S290524056	5.49	0.126	0.549				
	PFNA	375-95-1	S290524056	0.772	0.124	0.549				
	PFDA	335-76-2	S290524056	0.320	0.157	0.549			J	
	PFUnDA	2058-94-8	S290524056	0.0509	0.124	0.549			L	
	PFDoDA	307-55-1	S290524056	ND	0.223	0.549			U	
	PFTTrDA	72629-94-8	S290524056	ND	0.182	0.549			U	
	PFTeDA	376-06-7	S290524056	ND	0.209	0.549			U	
	PFHxDA	67905-19-5	S290524056	ND	0.291	0.549			U	
	Sulfonates	PFBS	375-73-5	S290524056	3.70	0.291	0.549			
		PFPeS	2706-91-4	S290524056	0.573	0.113	0.517			
PFHxS		355-46-4	S290524056	3.02	0.423	0.502				
PFHpS		375-92-8	S290524056	0.114	0.266	0.523			L	
PFOS		1763-23-1	S290524056	11.0	0.290	0.508				
PFNS		68259-12-1	S290524056	ND	0.170	0.528			U	
PFDS		335-77-3	S290524056	ND	0.288	0.528			U	
4:2 FTS		757124-72-4	S290524056	ND	0.0712	0.514			U	
6:2 FTS		27619-97-2	S290524056	ND	0.259	0.523			U	
8:2 FTS		39108-34-4	S290524056	ND	0.123	0.526			U	
10:2 FTS		120226-60-0	S290524056	ND	0.420	0.549			U	
Sulfonamidos	FBSA	30334-69-1	S290524056	0.370	0.261	0.549			J	
	N-EtFOSA	4151-50-2	S290524056	ND	0.339	0.549			U	
	N-EtFOSAA	2991-50-6	S290524056	ND	0.223	0.549			U	
	N-EtFOSE	1691-99-2	S290524056	ND	0.840	2.47			U	
	N-MeFOSA	31506-32-8	S290524056	ND	0.226	0.549			U	
	N-MeFOSAA	2355-31-9	S290524056	0.00616	0.154	0.549			L	
	N-MeFOSE	24448-09-7	S290524056	ND	0.521	2.47			U	
	PFOSA	754-91-6	S290524056	ND	0.0770	0.549			U	
PFECAs	ADONA	919005-14-4	S290524056	ND	0.149	0.520			U	
	EVE Acid	69087-46-3	S290524056	ND	0.175	1.23			U	
	HFPO-DA	13252-13-6	S290524056	0.589	0.0581	0.549				
	Hydro-EVE Acid	773804-62-9	S290524056	ND	0.180	0.549			U	
	NFDHA	151772-58-6	S290524056	ND	0.115	0.549			U	
	PEPA	267239-61-2	S290524056	ND	0.103	0.549			U	
	PFECA-G	801212-59-9	S290524056	ND	0.0732	0.549			U	
	PFMOAA	674-13-5	S290524056	2.53	0.278	0.549				
	PFMOBA	863090-89-5	S290524056	ND	0.921	1.23			U	
	PFMOPrA	377-73-1	S290524056	ND	0.195	0.549			U	
	PFO2HxA	39492-88-1	S290524056	ND	0.177	0.549			U	
	PFO3OA	39492-89-2	S290524056	ND	0.252	3.46			U	
	PFO4DA	39492-90-5	S290524056	ND	0.434	17.15			U	
	PFO5DA	39492-91-6	S290524056	ND	0.439	2.74			U	
	PMPA	13140-29-9	S290524056	0.844	0.129	0.549				
	R-EVE	2416366-22-6	S290524056	0.575	0.910	1.23			L	
	PFESAs	11Cl-PF3OUhS	763051-92-9	S290524056	ND	0.259	0.517			U
9Cl-PF3ONS		756426-58-1	S290524056	ND	0.351	0.511			U	
Hydrolyzed PSDA		2416366-19-1	S220624110	0.00952	0.365	0.549			L	
Nafion Byproduct 1 (PS Acid)		29311-67-9	S290524056	ND	0.293	0.549			U	
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	S290524056	ND	0.454	0.549			U	
NVHOS		1132933-86-8	S290524056	ND	0.0845	0.549			U	
PFEESA		113507-82-7	S290524056	ND	0.165	0.549			U	
R-PSDA		2416366-18-0	S290524056	0.285	2.42	2.42			L	
R-PSDCA		241636-21-5	S290524056	ND	0.231	0.549			U	
ES		MPFBA		S290524056				20-150%	163.1%	Q
	M5PFPeA		S290524056				20-150%	159.4%	Q	
	M3PFBS		S290524056				20-150%	134.9%		
	M2-4:2 FTS		S290524056				20-150%	181.5%	AcQ	
	M5PFHxA		S290524056				20-150%	179.6%	Q	
	M3HFPO-DA		S290524056				20-150%	163.5%	Q	
	M4PFHpA		S290524056				20-150%	186.2%	Q	

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S290524056			20-150%	175.9%	Q
	M2-6:2 FTS		S290524056			20-150%	202.0%	Q
	M8PFOA		S290524056			20-150%	179.0%	Q
	M9PFNA		S290524056			20-150%	194.2%	Q
	M8PFOS		S290524056			20-150%	174.0%	Q
	M2-8:2 FTS		S290524056			20-150%	189.5%	Q
	M8FOSA-I		S290524056			20-150%	142.7%	
	M6PFDA		S290524056			20-150%	168.2%	Q
	d3-N-MeFOSAA		S290524056			20-150%	184.7%	Q
	d5-N-EtFOSAA		S290524056			20-150%	166.4%	Q
	M7PFUDa		S290524056			20-150%	129.1%	
	MPFDaA		S290524056			20-150%	122.2%	
	M2PFTeDA		S290524056			20-150%	72.1%	
	d3-N-MeFOSA		S290524056			10-200%	5.1%	Q
	d5-N-EtFOSA		S290524056			10-200%	6.8%	Q
	d7-N-MeFOSE		S290524056			10-200%	113.3%	
	d9-N-EtFOSE		S290524056			10-200%	73.7%	

Enthalpy Analytical

Job No.: 0524-869-3 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0524-869-001-1A	Prep Batch	EU17494A	Sample Vol (mL)	289.21
Sample Name	052424-SO1	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-06-12 17:18	Split Factor	N/A
Sampling Date	2024-05-24 14:05	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-05-24	Instrument	Bumblebee	Sample Type	Sample
		Bottle ID	A		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B120624-06121318	3.42	0.484	1.06			
ES	13C3-PFPrA		B120624-06121318				20-150%	29.8%	

Enthalpy Analytical

Job No.: 0524-869-3 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	0524-869-002-1A	Prep Batch	EU17494A	Sample Vol (mL)	291.62
Sample Name	052424-EO1	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-06-12 17:29	Split Factor	N/A
Sampling Date	2024-05-24 14:05	Analyst	hallen	Method Code	EU-047-NPW
Received Date	2024-05-24	Instrument	Bumblebee	Sample Type	Sample
		Bottle ID	A		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B120624-06121329	5.13	0.480	1.05			
ES	13C3-PFPrA		B120624-06121329				20-150%	63.8%	

QC Data

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	MB_17494_PFAS	Prep Batch	EU17494	Sample Vol (mL)	250
Sample Name	MB_17494_PFAS	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-05-30 02:04	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	S290524043	ND	0.254	0.640			U	
	PFPeA	2706-90-3	S290524043	ND	0.183	0.640			U	
	PFHxA	307-24-4	S290524043	ND	0.214	0.640			U	
	PFHpA	375-85-9	S290524043	ND	0.224	0.640			U	
	PFOA	335-67-1	S290524043	ND	0.146	0.640			U	
	PFNA	375-95-1	S290524043	ND	0.145	0.640			U	
	PFDA	335-76-2	S290524043	ND	0.183	0.640			U	
	PFUnDA	2058-94-8	S290524043	ND	0.145	0.640			U	
	PFDoDA	307-55-1	S290524043	ND	0.260	0.640			U	
	PFTriDA	72629-94-8	S290524043	ND	0.212	0.640			U	
	PFTeDA	376-06-7	S290524043	ND	0.244	0.640			U	
	PFHxDA	67905-19-5	S290524043	ND	0.340	0.640			U	
	Sulfonates	PFBS	375-73-5	S290524043	ND	0.340	0.640			U
		PFPeS	2706-91-4	S290524043	ND	0.131	0.603			U
		PFHxS	355-46-4	S290524043	ND	0.494	0.586			U
PFHpS		375-92-8	S290524043	ND	0.310	0.610			U	
PFOS		1763-23-1	S290524043	ND	0.338	0.593			U	
PFNS		68259-12-1	S290524043	ND	0.199	0.616			U	
PFDS		335-77-3	S290524043	ND	0.336	0.616			U	
4:2 FTS		757124-72-4	S290524043	ND	0.0830	0.600			U	
6:2 FTS		27619-97-2	S290524043	ND	0.302	0.610			U	
8:2 FTS		39108-34-4	S290524043	ND	0.143	0.613			U	
10:2 FTS	120226-60-0	S290524043	ND	0.490	0.640			U		
Sulfonamidos	FBSA	30334-69-1	S290524043	ND	0.304	0.640			U	
	N-EtFOSA	4151-50-2	S290524043	ND	0.396	0.640			U	
	N-EtFOSAA	2991-50-6	S290524043	ND	0.260	0.640			U	
	N-EtFOSE	1691-99-2	S290524043	ND	0.980	2.88			U	
	N-MeFOSA	31506-32-8	S290524043	ND	0.264	0.640			U	
	N-MeFOSAA	2355-31-9	S290524043	ND	0.180	0.640			U	
	N-MeFOSE	24448-09-7	S290524043	ND	0.608	2.88			U	
	PFOSA	754-91-6	S290524043	ND	0.0898	0.640			U	
PFECAs	ADONA	919005-14-4	S290524043	ND	0.173	0.606			U	
	EVE Acid	69087-46-3	S290524043	ND	0.204	1.44			U	
	HFPO-DA	13252-13-6	S290524043	ND	0.0678	0.640			U	
	Hydro-EVE Acid	773804-62-9	S290524043	ND	0.210	0.640			U	
	NFDHA	151772-58-6	S290524043	ND	0.135	0.640			U	
	PEPA	267239-61-2	S290524043	ND	0.120	0.640			U	
	PFECA-G	801212-59-9	S290524043	ND	0.0854	0.640			U	
	PFMOAA	674-13-5	S290524043	ND	0.324	0.640			U	
	PFMOBA	863090-89-5	S290524043	ND	1.07	1.44			U	
	PFMOPrA	377-73-1	S290524043	ND	0.228	0.640			U	
	PFO2HxA	39492-88-1	S290524043	ND	0.206	0.640			U	
	PFO3OA	39492-89-2	S290524043	ND	0.294	4			U	
	PFO4DA	39492-90-5	S290524043	ND	0.506	20			U	
	PFO5DA	39492-91-6	S290524043	ND	0.512	3.20			U	
	PMPA	13140-29-9	S290524043	ND	0.151	0.640			U	
	R-EVE	2416366-22-6	S290524043	ND	1.06	1.44			U	
	PFESAs	11Cl-PF3OUtS	763051-92-9	S290524043	ND	0.302	0.603			U
		9Cl-PF3ONS	756426-58-1	S290524043	ND	0.410	0.596			U
Hydrolyzed PSDA		2416366-19-1	S220624107	ND	0.426	0.640			U	
Nafion Byproduct 1 (PS Acid)		29311-67-9	S290524043	ND	0.342	0.640			U	
Nafion Byproduct 2 (Hydro-PS Acid)		749836-20-2	S290524043	ND	0.530	0.640			U	
NVHOS		1132933-86-8	S290524043	ND	0.0986	0.640			U	
PFEESA		113507-82-7	S290524043	ND	0.192	0.640			U	
R-PSDA		2416366-18-0	S290524043	ND	2.82	2.82			U	
R-PSDCA		241636-21-5	S290524043	ND	0.270	0.640			U	
ES	MPFBA		S290524043				20-150%	179.8%	Q	
	M5PFPeA		S290524043				20-150%	167.4%	Q	
	M3PFBS		S290524043				20-150%	103.4%		
	M2-4:2 FTS		S290524043				20-150%	236.0%	Q	
	M5PFHxA		S290524043				20-150%	243.8%	Q	
	M3HFPO-DA		S290524043				20-150%	230.5%	Q	
	M4PFHpA		S290524043				20-150%	243.2%	Q	

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

ES	M3PFHxS		S290524043			20-150%	223.1%	Q
	M2-6:2 FTS		S290524043			20-150%	209.9%	Q
	M8PFOA		S290524043			20-150%	218.3%	Q
	M9PFNA		S290524043			20-150%	225.3%	Q
	M8PFOS		S290524043			20-150%	215.1%	Q
	M2-8:2 FTS		S290524043			20-150%	237.9%	Q
	M8FOSA-I		S290524043			20-150%	210.3%	Q
	M6PFDA		S290524043			20-150%	219.2%	Q
	d3-N-MeFOSAA		S290524043			20-150%	235.2%	Q
	d5-N-EtFOSAA		S290524043			20-150%	237.0%	Q
	M7PFUDa		S290524043			20-150%	173.8%	Q
	MPFDaA		S290524043			20-150%	192.0%	Q
	M2PFTeDA		S290524043			20-150%	120.4%	
	d3-N-MeFOSA		S290524043			10-200%	52.4%	
	d5-N-EtFOSA		S290524043			10-200%	51.9%	
	d7-N-MeFOSE		S290524043			10-200%	186.8%	
	d9-N-EtFOSE		S290524043			10-200%	114.9%	

Enthalpy Analytical

Job No.: 0524-869-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	OPR_17494_PFAS	Prep Batch	EU17494	Sample Vol (mL)	250
Sample Name	OPR_17494_PFAS	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-05-30 02:27	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	S290524044	18.3	0.254	0.640	69.1-122%	91.4%		
	PFPeA	2706-90-3	S290524044	16.9	0.183	0.640	68.5-121%	84.5%		
	PFHxA	307-24-4	S290524044	17.9	0.214	0.640	68.3-121%	89.5%		
	PFHpA	375-85-9	S290524044	17.4	0.224	0.640	62.4-128%	87.0%		
	PFOA	335-67-1	S290524044	17.3	0.146	0.640	66.3-124%	86.6%		
	PFNA	375-95-1	S290524044	16.6	0.145	0.640	70.5-120%	82.9%		
	PFDA	335-76-2	S290524044	16.4	0.183	0.640	68.9-117%	81.9%		
	PFUnDA	2058-94-8	S290524044	17.3	0.145	0.640	58.1-132%	86.3%		
	PFDoDA	307-55-1	S290524044	17.7	0.260	0.640	52.1-140%	88.4%		
	PFTrDA	72629-94-8	S290524044	25.1	0.212	0.640	65-144%	125.7%		
	PFTeDA	376-06-7	S290524044	16.6	0.244	0.640	36.1-161%	82.9%		
	Sulfonates	PFBS	375-73-5	S290524044	16.3	0.340	0.640	67.5-111.6%	92.0%	
		PFPeS	2706-91-4	S290524044	18.3	0.131	0.603	51.8-142%	97.1%	
PFHxS		355-46-4	S290524044	14.9	0.494	0.586	59.6-128%	81.8%		
PFHpS		375-92-8	S290524044	16.5	0.310	0.610	46.9-157%	86.7%		
PFOS		1763-23-1	S290524044	17.6	0.338	0.593	59.2-132%	95.0%		
PFNS		68259-12-1	S290524044	19.2	0.199	0.616	53.9-133%	99.8%		
PFDS		335-77-3	S290524044	16.7	0.336	0.616	38.1-142%	86.8%		
4:2 FTS		757124-72-4	S290524044	15.3	0.0830	0.600	61.9-131%	81.5%		
6:2 FTS		27619-97-2	S290524044	18.2	0.302	0.610	62.3-129%	95.6%		
8:2 FTS	39108-34-4	S290524044	16.1	0.143	0.613	37.5-159%	84.1%			
Sulfonamidos	N-EtFOSAA	2991-50-6	S290524044	19.6	0.260	0.640	61.5-133%	98.1%		
	N-MeFOSAA	2355-31-9	S290524044	20.0	0.180	0.640	57.3-138%	100.2%		
	PFOSA	754-91-6	S290524044	13.6	0.0898	0.640	49.1-143%	67.9%		
PFECAs	HFPO-DA	13252-13-6	S290524044	17.2	0.0678	0.640	57.2-130%	86.0%		
ES	MPFBA		S290524044				20-150%	207.7%	Q	
	M5PFPeA		S290524044				20-150%	210.4%	Q	
	M3PFBS		S290524044				20-150%	128.5%		
	M2-4:2 FTS		S290524044				20-150%	227.1%	Q	
	M5PFHxA		S290524044				20-150%	220.2%	Q	
	M3HFPO-DA		S290524044				20-150%	214.2%	Q	
	M4PFHpA		S290524044				20-150%	222.8%	Q	
	M3PFHxS		S290524044				20-150%	213.5%	Q	
	M2-6:2 FTS		S290524044				20-150%	196.8%	Q	
	M8PFOA		S290524044				20-150%	211.5%	Q	
	M9PFNA		S290524044				20-150%	217.5%	Q	
	M8PFOS		S290524044				20-150%	199.8%	Q	
	M2-8:2 FTS		S290524044				20-150%	235.3%	Q	
	M8FOSA-I		S290524044				20-150%	191.1%	Q	
	M6PFDA		S290524044				20-150%	217.6%	Q	
	d3-N-MeFOSAA		S290524044				20-150%	235.6%	Q	
	d5-N-EtFOSAA		S290524044				20-150%	208.3%	Q	
	M7PFUDa		S290524044				20-150%	182.4%	Q	
	MPFDa		S290524044				20-150%	186.2%	Q	
	M2PFTeDA		S290524044				20-150%	117.3%		

Enthalpy Analytical

Job No.: 0524-869-3 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, NC

Enthalpy ID	MBA_17494_PFAS	Prep Batch	EU17494A	Sample Vol (mL)	250
Sample Name	MBA_17494_PFAS	Prep Date	2024-05-29 11:03	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-06-12 16:54	Split Factor	N/A
Sampling Date		Analyst	hallen	Method Code	EU-047-NPW
Received Date		Instrument	Bumblebee	Sample Type	Blank
		Bottle ID	-		

	Compound	CAS	InjFileName	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	B120624-06121254	ND	0.560	1.22			U
ES	13C3-PFPrA		B120624-06121254				20-150%	49.5%	

Narrative Summary



Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0524-869
Client ID.	NORTHWEST WATER PLANT Site: LELAND, NC

1. Custody

Cherith McCullagh received the samples at 15.1 °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
0524-869-001-1	052424-SO1	aqueous	2024-05-24
0524-869-001-1A	052424-SO1	aqueous	2024-05-24
0524-869-002-1	052424-EO1	aqueous	2024-05-24
0524-869-002-1A	052424-EO1	aqueous	2024-05-24

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 Waters Acquity UPLC equipped with Xevo TQ MS (LC/MS/MS "Sauron") and Sciex Triple Quad 7500 (LC/MS/MS "Bumblebee").

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 ≥ 0.99 . The reported analytes in the calibration standards, Initial Calibration Verification (ICV) and continuing calibration (concal) met the accuracy criterion for native analytes.

5. QC Notes

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

Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0524-869
Client ID.	NORTHWEST WATER PLANT Site: LELAND, NC

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

Most ES compounds recovered above the upper acceptance limit. The results from the OPR indicate that this phenomenon is caused by an injection standard (JS) solution concentration lower than expected. The recovery of native analytes within normal acceptance ranges verifies that extraction standards were spiked correctly. The results of this analysis are; therefore, accurate for the target analytes.

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 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
Target Analytes		
* Analyte is not accredited for SOP EU047 # Method 537.1 Accredited ^ Method 533 Accredited		
^ 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
#, ^ 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
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-chloroeicosafluoro-3-oxaundecane-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-methoxybutanic 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	29311-67-9	Nafion Byproduct 1
* Nafion Byproduct 2	749836-20-2	Nafion Byproduct 2
* PEPA	267239-61-2	Perfluoro-2-ethoxypropanoic acid
* PMPA	13140-29-9	Perfluoro-2-methoxypropanoic acid
* 10:2 FTS	120226-60-0	Fluorotelomer sulfonate 10:2
* 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
* 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



PFAS Compound Acronym List		
Acronym	CAS #	Compound Name
Target Analytes		
* Analyte is not accredited for SOP EU047 # Method 537.1 Accredited ^ Method 533 Accredited		
* 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
* 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
* PFOA	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

Sample Custody

JOB ID: 0524-869

Date / Time: 5/24/24 14:59

Initials: C.A.M

OR

Client: Brunswick Co. Utilities

Cooler 1 of 1

Temp °C: 15.1

Thermometer ID: T16

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:

Sample seals:

Good condition:

Comment:

Empty comment box

Cooler of

Temp °C:

Thermometer ID:

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:

Sample seals:

Good condition:

Comment:

Empty comment box

Cooler of

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Cooler seals:

Sample seals:

Good condition:

Comment:

Empty comment box

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