

Brunswick County Public Utilities - NC

PO Box 249
Bolivia, NC 28422-0249

LELAND, N.C.

Client Project# NORTHWEST WATER PLANT
Samples Received: 6/14/2024

Analytical Report 0624-782

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

Report Issue Date: 7/18/2024

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:



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Summary of Results

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)

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

Summary

	Compound	CAS	061424-SO1 ng/L	061424-EO1 ng/L
Acids	PFBA	375-22-4	4.96	4.36
	PFPeA	2706-90-3	7.19	6.58
	PFHxA	307-24-4	6.06	5.86
	PFHpA	375-85-9	2.78	2.62
	PFOA	335-67-1	5.81	5.57
	PFNA	375-95-1	0.942	0.761
	PFDA	335-76-2	0.786	0.432 J
	PFUnDA	2058-94-8	0.199 J	0.0688 L
	PFDoDA	307-55-1	ND U	ND U
	PFTTrDA	72629-94-8	ND U	ND U
	PFTeDA	376-06-7	ND U	ND U
	PFHxDA	67905-19-5	ND U	0.0246 L
Sulfonates	PFBS	375-73-5	3.98	3.37
	PFPeS	2706-91-4	0.602	0.384 J
	PFHxS	355-46-4	3.48	3.52
	PFHpS	375-92-8	0.212 L	0.189 L
	PFOS	1763-23-1	14.3	10.9
	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	1.03	0.604
	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	4.10	4.51
	Hydro-EVE Acid	773804-62-9	0.0245 L	0.0262 L
	NFDHA	151772-58-6	ND U	ND U
	PEPA	267239-61-2	1.40	1.33
	PFECA-G	801212-59-9	ND U	ND U
	PFMOAA	674-13-5	31.5	27.1
	PFMOBA	863090-89-5	ND U	ND U
	PFMOPrA	377-73-1	ND U	ND U
	PFO2HxA	39492-88-1	5.11	4.69
	PFO3OA	39492-89-2	1.35	0.932
	PFO4DA	39492-90-5	0.938 J	ND U
	PFO5DA	39492-91-6	ND U	ND U
	PMPA	13140-29-9	4.72	5.24
	R-EVE	2416366-22-6	7.21	8.29
PFESAs	11Cl-PF3OUds	763051-92-9	ND U	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U
	Hydrolyzed PSDA	2416366-19-1	1.69	2.91
	Nafion Byproduct 1 (PS Acid)	29311-67-9	ND U	ND U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	0.247 L	0.172 L
	NVHOS	1132933-86-8	ND U	ND U
	PFEESA	113507-82-7	ND U	ND U
	R-PSDA	2416366-18-0	4.40	5.18
	R-PSDCA	241636-21-5	ND U	ND U

Enthalpy Analytical

Job No.: 0624-782-2 PFAS by Isotope Dilution (non-potable water)

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

Summary

	Compound	CAS	061424-SO1 ng/L	061424-EO1 ng/L
Acids	PFPrA	422-64-0	799 J	1540

Detailed Results

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)

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

Details

Sample Name	061424-SO1		
Sampling Site			
Enthalpy ID	0624-782-001-1A	Prep Batch	EU17653
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-06-14 13:35	Instrument	Sauron
Received Date	2024-06-14	Sample Vol mL	285.97
Prep Date	2024-06-25 13:20	Extract Vol mL	0.4
AnalysisDate	2024-06-26 12:30	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFBA	375-22-4	P250624052	4.96	0.222	0.559			
	PFPeA	2706-90-3	P250624052	7.19	0.160	0.559			
	PFHxA	307-24-4	P250624052	6.06	0.187	0.559			
	PFHpA	375-85-9	P250624052	2.78	0.196	0.559			
	PFOA	335-67-1	P250624052	5.81	0.128	0.559			
	PFNA	375-95-1	P250624052	0.942	0.126	0.559			
	PFDA	335-76-2	P250624052	0.786	0.160	0.559			
	PFUnDA	2058-94-8	P250624052	0.199	0.126	0.559			J
	PFDoDA	307-55-1	P250624052	ND	0.227	0.559			U
	PFTiDA	72629-94-8	P250624052	ND	0.185	0.559			U
	PFTeDA	376-06-7	P250624052	ND	0.213	0.559			U
	PFHxDA	67905-19-5	P250624052	ND	0.297	0.559			U
Sulfonates	PFBS	375-73-5	P250624052	3.98	0.297	0.559			
	PFPeS	2706-91-4	P250624052	0.602	0.115	0.527			
	PFHxS	355-46-4	P250624052	3.48	0.432	0.512			
	PFHpS	375-92-8	P250624052	0.212	0.271	0.533			L
	PFOS	1763-23-1	P250624052	14.3	0.295	0.518			
	PFNS	68259-12-1	P250624052	ND	0.174	0.539			U
	PFDS	335-77-3	P250624052	ND	0.294	0.539			U
	4:2 FTS	757124-72-4	P250624052	ND	0.0726	0.524			U
	6:2 FTS	27619-97-2	P250624052	ND	0.264	0.533			U
	8:2 FTS	39108-34-4	P250624052	ND	0.125	0.536			U
Sulfonamidos	10:2 FTS	120226-60-0	P250624052	ND	0.428	0.559			U
	FBSA	30334-69-1	P250624052	1.03	0.266	0.559			
	N-EiFOSA	4151-50-2	P250624052	ND	0.346	0.559			U
	N-EiFOSAA	2991-50-6	P250624052	ND	0.227	0.559			U
	N-EiFOSE	1691-99-2	P250624052	ND	0.857	2.52			U
	N-MeFOSA	31506-32-8	P250624052	ND	0.231	0.559			U
	N-MeFOSAA	2355-31-9	P250624052	ND	0.157	0.559			U
	N-MeFOSE	24448-09-7	P250624052	ND	0.532	2.52			U
	PFOSA	754-91-6	P250624052	ND	0.0785	0.559			U
PFECAs	ADONA	919005-14-4	P250624052	ND	0.152	0.530			U
	EVE Acid	69087-46-3	P250624052	ND	0.178	1.26			U
	HFPO-DA	13252-13-6	P250624052	4.10	0.0593	0.559			
	Hydro-EVE Acid	773804-62-9	P250624052	0.0245	0.184	0.559			L
	NFDHA	151772-58-6	P250624052	ND	0.118	0.559			U
	PEPA	267239-61-2	P250624052	1.40	0.105	0.559			
	PFECA-G	801212-59-9	P250624052	ND	0.0747	0.559			U
	PFMOAA	674-13-5	S270624072	31.5	0.283	0.559			
	PFMOBA	863090-89-5	P250624052	ND	0.939	1.26			U
	PFMOPrA	377-73-1	P250624052	ND	0.199	0.559			U
	PFO2HxA	39492-88-1	S270624072	5.11	0.180	0.559			
	PFO3OA	39492-89-2	P250624052	1.35	0.257	0.559			
	PFO4DA	39492-90-5	P250624052	0.938	0.442	2.80			J
	PFO5DA	39492-91-6	P250624052	ND	0.448	2.80			U
	PMPA	13140-29-9	P250624052	4.72	0.132	0.559			
	R-EVE	2416366-22-6	S270624072	7.21	0.928	1.26			
PFESAs	11CI-PF3OUdS	763051-92-9	P250624052	ND	0.264	0.527			U
	9CI-PF3ONS	756426-58-1	P250624052	ND	0.358	0.521			U
	Hydrolyzed PSDA	2416366-19-1	S270624072	1.69	0.372	0.559			
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P250624052	ND	0.299	0.559			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	P250624052	0.247	0.463	0.559			L
	NVHOS	1132933-86-8	P250624052	ND	0.0862	0.559			U
	PFEESA	113507-82-7	P250624052	ND	0.168	0.559			U
	R-PSDA	2416366-18-0	S270624072	4.40	2.47	2.47			
	R-PSDCA	241636-21-5	P250624052	ND	0.236	0.559			U
ES	MPFBA		P250624052				20-150%	88.7%	
	M5PFPeA		P250624052				20-150%	109.1%	
	M3PFBS		P250624052				20-150%	213.4%	Q
	M2-4:2 FTS		P250624052				20-150%	184.6%	Q
	M5PFHxA		P250624052				20-150%	79.4%	
	M3HFPO-DA		P250624052				20-150%	53.6%	
	M4PFHpA		P250624052				20-150%	86.2%	

Enthalpy Analytical

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

Details

Sample Name	061424-SO1		
Sampling Site			
Enthalpy ID	0624-782-001-1A	Prep Batch	EU17653
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-06-14 13:35	Instrument	Sauron
Received Date	2024-06-14	Sample Vol mL	285.97
Prep Date	2024-06-25 13:20	Extract Vol mL	0.4
AnalysisDate	2024-06-26 12:30	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	M3PFHxS		P250624052				20-150%	105.4%	
	M2-6:2 FTS		P250624052				20-150%	191.2%	Q
	M8PFOA		P250624052				20-150%	93.6%	
	M9PFNA		P250624052				20-150%	89.9%	
	M8PFOS		P250624052				20-150%	90.8%	
	M2-8:2 FTS		P250624052				20-150%	132.2%	
	M8FOSA-I		P250624052				20-150%	86.9%	
	M6PFDA		P250624052				20-150%	91.7%	
	d3-N-MeFOSAA		P250624052				20-150%	121.9%	
	d5-N-EiFOSAA		P250624052				20-150%	112.6%	
	M7PFUdA		P250624052				20-150%	86.9%	
	MPFDaA		P250624052				20-150%	68.4%	
	M2PFTeDA		P250624052				20-150%	26.8%	
	d3-N-MeFOSA		P250624052				10-200%	7.7%	Q
	d5-N-EiFOSA		P250624052				10-200%	7.1%	Q
	d7-N-MeFOSE		P250624052				10-200%	79.0%	
	d9-N-EiFOSE		P250624052				10-200%	60.8%	

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Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	061424-EO1	Prep Batch	EU17653
Sampling Site		Analyst	rappelle
Enthalpy ID	0624-782-002-1A	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	293.54
Sampling Date	2024-06-14 13:35	Extract Vol mL	0.4
Received Date	2024-06-14	Split Factor	N/A
Prep Date	2024-06-25 13:20	Method Code	EU-047-NPW
AnalysisDate	2024-06-26 12:52		
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	P250624053	4.36	0.216	0.545			
	PFPeA	2706-90-3	P250624053	6.58	0.156	0.545			
	PFHxA	307-24-4	P250624053	5.86	0.182	0.545			
	PFHpA	375-85-9	P250624053	2.62	0.191	0.545			
	PFOA	335-67-1	P250624053	5.57	0.125	0.545			
	PFNA	375-95-1	P250624053	0.761	0.123	0.545			
	PFDA	335-76-2	P250624053	0.432	0.156	0.545			J
	PFUnDA	2058-94-8	P250624053	0.0688	0.123	0.545			L
	PFDoDA	307-55-1	P250624053	ND	0.221	0.545			U
	PFTiDA	72629-94-8	P250624053	ND	0.181	0.545			U
	PFTeDA	376-06-7	P250624053	ND	0.208	0.545			U
	PFHxDA	67905-19-5	P250624053	0.0246	0.290	0.545			L
Sulfonates	PFBS	375-73-5	P250624053	3.37	0.290	0.545			
	PFPeS	2706-91-4	P250624053	0.384	0.112	0.514			J
	PFHxS	355-46-4	P250624053	3.52	0.421	0.499			
	PFHpS	375-92-8	P250624053	0.189	0.264	0.519			L
	PFOS	1763-23-1	P250624053	10.9	0.288	0.505			
	PFNS	68259-12-1	P250624053	ND	0.169	0.525			U
	PFDS	335-77-3	P250624053	ND	0.286	0.525			U
	4:2 FTS	757124-72-4	P250624053	ND	0.0707	0.511			U
	6:2 FTS	27619-97-2	P250624053	ND	0.257	0.519			U
	8:2 FTS	39108-34-4	P250624053	ND	0.122	0.522			U
Sulfonamidos	10:2 FTS	120226-60-0	P250624053	ND	0.417	0.545			U
	FBSA	30334-69-1	P250624053	0.604	0.259	0.545			
	N-EiFOSA	4151-50-2	P250624053	ND	0.337	0.545			U
	N-EiFOSAA	2991-50-6	P250624053	ND	0.221	0.545			U
	N-EiFOSE	1691-99-2	P250624053	ND	0.835	2.45			U
	N-MeFOSA	31506-32-8	P250624053	ND	0.225	0.545			U
	N-MeFOSAA	2355-31-9	P250624053	ND	0.153	0.545			U
	N-MeFOSE	24448-09-7	P250624053	ND	0.518	2.45			U
	PFOSA	754-91-6	P250624053	ND	0.0765	0.545			U
PFECAs	ADONA	919005-14-4	P250624053	ND	0.148	0.516			U
	EVE Acid	69087-46-3	P250624053	ND	0.174	1.23			U
	HFPO-DA	13252-13-6	P250624053	4.51	0.0577	0.545			
	Hydro-EVE Acid	773804-62-9	P250624053	0.0262	0.179	0.545			L
	NFDHA	151772-58-6	P250624053	ND	0.115	0.545			U
	PEPA	267239-61-2	P250624053	1.33	0.102	0.545			
	PFECA-G	801212-59-9	P250624053	ND	0.0727	0.545			U
	PFMOAA	674-13-5	S270624074	27.1	0.276	0.545			
	PFMOBA	863090-89-5	P250624053	ND	0.915	1.23			U
	PFMOPiA	377-73-1	P250624053	ND	0.194	0.545			U
	PFO2HxA	39492-88-1	S270624074	4.69	0.175	0.545			
	PFO3OA	39492-89-2	P250624053	0.932	0.250	0.545			
	PFO4DA	39492-90-5	P250624053	ND	0.431	2.73			U
	PFO5DA	39492-91-6	P250624053	ND	0.436	2.73			U
	PMPA	13140-29-9	P250624053	5.24	0.128	0.545			
	R-EVE	2416366-22-6	S270624074	8.29	0.904	1.23			
PFESAs	11CI-PF3OUdS	763051-92-9	P250624053	ND	0.257	0.514			U
	9CI-PF3ONS	756426-58-1	P250624053	ND	0.349	0.508			U
	Hydrolyzed PSDA	2416366-19-1	S270624074	2.91	0.363	0.545			
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P250624053	ND	0.291	0.545			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	P250624053	0.172	0.451	0.545			L
	NVHOS	1132933-86-8	P250624053	ND	0.0840	0.545			U
	PFEESA	113507-82-7	P250624053	ND	0.164	0.545			U
	R-PSDA	2416366-18-0	S270624074	5.18	2.40	2.40			
	R-PSDCA	241636-21-5	P250624053	ND	0.230	0.545			U
ES	MPFBA		P250624053				20-150%	87.8%	
	M5PFPeA		P250624053				20-150%	91.1%	
	M3PFBS		P250624053				20-150%	176.4%	Q
	M2-4:2 FTS		P250624053				20-150%	178.5%	Q
	M5PFHxA		P250624053				20-150%	78.4%	
	M3HFPO-DA		P250624053				20-150%	54.8%	
	M4PFHpA		P250624053				20-150%	85.2%	

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	061424-EO1		
Sampling Site			
Enthalpy ID	0624-782-002-1A	Prep Batch	EU17653
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-06-14 13:35	Instrument	Sauron
Received Date	2024-06-14	Sample Vol mL	293.54
Prep Date	2024-06-25 13:20	Extract Vol mL	0.4
AnalysisDate	2024-06-26 12:52	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
	M3PFHxS		P250624053				20-150%	100.7%	Q
	M2-6:2 FTS		P250624053				20-150%	193.3%	
	M8PFOA		P250624053				20-150%	92.8%	
	M9PFNA		P250624053				20-150%	89.5%	
	M8PFOS		P250624053				20-150%	92.6%	
	M2-8:2 FTS		P250624053				20-150%	133.0%	
	M8FOSA-I		P250624053				20-150%	97.3%	
	M6PFDA		P250624053				20-150%	91.9%	
	d3-N-MeFOSAA		P250624053				20-150%	128.6%	
	d5-N-EiFOSAA		P250624053				20-150%	121.7%	
	M7PFUdA		P250624053				20-150%	88.2%	
	MPFDoA		P250624053				20-150%	70.9%	
	M2PFTeDA		P250624053				20-150%	48.8%	
	d3-N-MeFOSA		P250624053				10-200%	14.8%	
	d5-N-EiFOSA		P250624053				10-200%	14.2%	
	d7-N-MeFOSE		P250624053				10-200%	102.8%	
	d9-N-EiFOSE		P250624053				10-200%	78.3%	

Enthalpy Analytical

Job No.: 0624-782-2 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	061424-SO1		
Sampling Site			
Enthalpy ID	0624-782-001-1B	Prep Batch	EU17693
Matrix	aqueous	Analyst	jogres
Sampling Date	2024-06-14 13:35	Instrument	Samwise
Received Date	2024-06-14	Sample Vol mL	0.1
Prep Date	2024-07-01 09:54	Extract Vol mL	0.2
AnalysisDate	2024-07-09 18:59	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	PFPtA	422-64-0	SW090724-07091459	799	700	1530			J
ES	13C3-PFPtA		SW090724-07091459				20-150%	138.3%	

Enthalpy Analytical

Job No.: 0624-782-2 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	061424-EO1		
Sampling Site			
Enthalpy ID	0624-782-002-1B	Prep Batch	EU17693
Matrix	aqueous	Analyst	jogres
Sampling Date	2024-06-14 13:35	Instrument	Samwise
Received Date	2024-06-14	Sample Vol mL	0.1
Prep Date	2024-07-01 09:54	Extract Vol mL	0.2
AnalysisDate	2024-07-09 19:11	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	PFPtA	422-64-0	SW090724-07091511	1540	700	1530			
ES	13C3-PFPtA		SW090724-07091511				20-150%	140.3%	

QC Data

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	MB_17653_PFAS	Prep Batch	EU17653
Sampling Site		Analyst	rappelle
Enthalpy ID	MB_17653_PFAS	Instrument	Sauron
Matrix	aqueous	Sample Vol mL	250
Sampling Date		Extract Vol mL	0.4
Received Date		Split Factor	N/A
Prep Date	2024-06-25 13:20	Method Code	EU-047-NPW
AnalysisDate	2024-06-26 05:37		
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	P250624034	ND	0.254	0.640			U
	PFPeA	2706-90-3	P250624034	ND	0.183	0.640			U
	PFHxA	307-24-4	P250624034	ND	0.214	0.640			U
	PFHpA	375-85-9	P250624034	ND	0.224	0.640			U
	PFOA	335-67-1	P250624034	ND	0.146	0.640			U
	PFNA	375-95-1	P250624034	ND	0.145	0.640			U
	PFDA	335-76-2	P250624034	ND	0.183	0.640			U
	PFUnDA	2058-94-8	P250624034	ND	0.145	0.640			U
	PFDoDA	307-55-1	P250624034	ND	0.260	0.640			U
	PFTiDA	72629-94-8	P250624034	ND	0.212	0.640			U
	PFTeDA	376-06-7	P250624034	ND	0.244	0.640			U
	PFHxDA	67905-19-5	P250624034	0.0181	0.340	0.640			L
Sulfonates	PFBS	375-73-5	P250624034	ND	0.340	0.640			U
	PFPeS	2706-91-4	P250624034	ND	0.131	0.603			U
	PFHxS	355-46-4	P250624034	ND	0.494	0.586			U
	PFHpS	375-92-8	P250624034	ND	0.310	0.610			U
	PFOS	1763-23-1	P250624034	ND	0.338	0.593			U
	PFNS	68259-12-1	P250624034	ND	0.199	0.616			U
	PFDS	335-77-3	P250624034	ND	0.336	0.616			U
	4:2 FTS	757124-72-4	P250624034	ND	0.0830	0.600			U
	6:2 FTS	27619-97-2	P250624034	ND	0.302	0.610			U
	8:2 FTS	39108-34-4	P250624034	ND	0.143	0.613			U
Sulfonamidos	10:2 FTS	120226-60-0	P250624034	ND	0.490	0.640			U
	FBSA	30334-69-1	P250624034	ND	0.304	0.640			U
	N-EiFOSA	4151-50-2	P250624034	ND	0.396	0.640			U
	N-EiFOSAA	2991-50-6	P250624034	ND	0.260	0.640			U
	N-EiFOSE	1691-99-2	P250624034	ND	0.980	2.88			U
	N-MeFOSA	31506-32-8	P250624034	ND	0.264	0.640			U
	N-MeFOSAA	2355-31-9	P250624034	ND	0.180	0.640			U
	N-MeFOSE	24448-09-7	P250624034	ND	0.608	2.88			U
	PFOSA	754-91-6	P250624034	ND	0.0898	0.640			U
PFECAs	ADONA	919005-14-4	P250624034	ND	0.173	0.606			U
	EVE Acid	69087-46-3	P250624034	ND	0.204	1.44			U
	HFPO-DA	13252-13-6	P250624034	ND	0.0678	0.640			U
	Hydro-EVE Acid	773804-62-9	P250624034	ND	0.210	0.640			U
	NFDHA	151772-58-6	P250624034	ND	0.135	0.640			U
	PEPA	267239-61-2	P250624034	ND	0.120	0.640			U
	PFECA-G	801212-59-9	P250624034	ND	0.0854	0.640			U
	PFMOAA	674-13-5	S270624061	0.473	0.324	0.640			J
	PFMOBA	863090-89-5	P250624034	ND	1.07	1.44			U
	PFMOPrA	377-73-1	P250624034	ND	0.228	0.640			U
	PFO2HxA	39492-88-1	S270624061	ND	0.206	0.640			U
	PFO3OA	39492-89-2	P250624034	ND	0.294	0.640			U
	PFO4DA	39492-90-5	P250624034	ND	0.506	3.20			U
	PFO5DA	39492-91-6	P250624034	ND	0.512	3.20			U
	PMPA	13140-29-9	P250624034	ND	0.151	0.640			U
	R-EVE	2416366-22-6	S270624061	ND	1.06	1.44			U
PFESAs	11CI-PF3OUdS	763051-92-9	P250624034	ND	0.302	0.603			U
	9CI-PF3ONS	756426-58-1	P250624034	ND	0.410	0.596			U
	Hydrolyzed PSDA	2416366-19-1	S270624061	ND	0.426	0.640			U
	Nafion Byproduct 1 (PS Acid)	29311-67-9	P250624034	ND	0.342	0.640			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	P250624034	ND	0.530	0.640			U
	NVHOS	1132933-86-8	P250624034	ND	0.0986	0.640			U
	PFEESA	113507-82-7	P250624034	ND	0.192	0.640			U
	R-PSDA	2416366-18-0	S270624061	ND	2.82	2.82			U
	R-PSDCA	241636-21-5	P250624034	ND	0.270	0.640			U
ES	MPFBA		P250624034				20-150%	87.9%	
	M5PFPeA		P250624034				20-150%	53.9%	
	M3PFBS		P250624034				20-150%	85.0%	
	M2-4:2 FTS		P250624034				20-150%	89.4%	
	M5PFHxA		P250624034				20-150%	77.1%	
	M3HFPO-DA		P250624034				20-150%	58.7%	
	M4PFHpA		P250624034				20-150%	84.7%	

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	MB_17653_PFAS		
Sampling Site			
Enthalpy ID	MB_17653_PFAS	Prep Batch	EU17653
Matrix	aqueous	Analyst	rappelle
Sampling Date		Instrument	Sauron
Received Date		Sample Vol mL	250
Prep Date	2024-06-25 13:20	Extract Vol mL	0.4
AnalysisDate	2024-06-26 05:37	Split Factor	N/A
SampleType	Blank	Method Code	EU-047-NPW
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	M3PFHxS		P250624034				20-150%	95.5%	Q
	M2-6:2 FTS		P250624034				20-150%	166.1%	
	M8PFOA		P250624034				20-150%	89.3%	
	M9PFNA		P250624034				20-150%	82.8%	
	M8PFOS		P250624034				20-150%	89.1%	
	M2-8:2 FTS		P250624034				20-150%	122.4%	
	M8FOSA-I		P250624034				20-150%	90.6%	
	M6PFDA		P250624034				20-150%	88.9%	
	d3-N-MeFOSAA		P250624034				20-150%	112.2%	
	d5-N-EiFOSAA		P250624034				20-150%	107.7%	
	M7PFUdA		P250624034				20-150%	85.1%	
	MPFDoA		P250624034				20-150%	74.3%	
	M2PFTeDA		P250624034				20-150%	52.9%	
	d3-N-MeFOSA		P250624034				10-200%	14.9%	
	d5-N-EiFOSA		P250624034				10-200%	15.0%	
	d7-N-MeFOSE		P250624034				10-200%	96.2%	
	d9-N-EiFOSE		P250624034				10-200%	85.3%	

Enthalpy Analytical

Job No.: 0624-782-1 PFAS by Isotope Dilution (non-potable water)

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

Enthalpy ID	OPR_17653_PFAS	Prep Batch	EU17653	Sample Vol (mL)	250
Sample Name	OPR_17653_PFAS	Prep Date	2024-06-25 13:20	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-06-26 06:00	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	P250624035	20.6	0.254	0.640	69.1-122%	103.1%	
	PFPeA	2706-90-3	P250624035	20.1	0.183	0.640	68.5-121%	100.4%	
	PFHxA	307-24-4	P250624035	20.2	0.214	0.640	68.3-121%	101.2%	
	PFHpA	375-85-9	P250624035	20.0	0.224	0.640	62.4-128%	100.1%	
	PFOA	335-67-1	P250624035	20.5	0.146	0.640	66.3-124%	102.4%	
	PFNA	375-95-1	P250624035	20.6	0.145	0.640	70.5-120%	103.0%	
	PFDA	335-76-2	P250624035	20.5	0.183	0.640	68.9-117%	102.3%	
	PFUnDA	2058-94-8	P250624035	19.5	0.145	0.640	58.1-132%	97.6%	
	PFDoDA	307-55-1	P250624035	21.1	0.260	0.640	52.1-140%	105.6%	
	PFTriDA	72629-94-8	P250624035	26.7	0.212	0.640	65-144%	133.3%	
	PFTeDA	376-06-7	P250624035	20.2	0.244	0.640	36.1-161%	101.2%	
Sulfonates	PFBS	375-73-5	P250624035	16.1	0.340	0.640	67.5-111.6%	90.9%	
	PFPeS	2706-91-4	P250624035	17.5	0.131	0.603	51.8-142%	92.7%	
	PFHxS	355-46-4	P250624035	17.8	0.494	0.586	59.6-128%	97.4%	
	PFHpS	375-92-8	P250624035	17.6	0.310	0.610	46.9-157%	92.1%	
	PFOS	1763-23-1	P250624035	17.6	0.338	0.593	59.2-132%	94.9%	
	PFNS	68259-12-1	P250624035	18.9	0.199	0.616	53.9-133%	98.1%	
	PFDS	335-77-3	P250624035	18.1	0.336	0.616	38.1-142%	93.8%	
	4:2 FTS	757124-72-4	P250624035	18.1	0.0830	0.600	61.9-131%	96.5%	
	6:2 FTS	27619-97-2	P250624035	19.8	0.302	0.610	62.3-129%	104.0%	
	8:2 FTS	39108-34-4	P250624035	19.6	0.143	0.613	37.5-159%	101.8%	
Sulfonamidos	N-EtFOSAA	2991-50-6	P250624035	21.1	0.260	0.640	61.5-133%	105.4%	
	N-MeFOSAA	2355-31-9	P250624035	20.2	0.180	0.640	57.3-138%	100.9%	
	PFOSA	754-91-6	P250624035	19.3	0.0898	0.640	49.1-143%	96.5%	
PFECAs	HFPO-DA	13252-13-6	P250624035	20.1	0.0678	0.640	57.2-130%	100.3%	
ES	MPFBA		P250624035				20-150%	91.0%	
	M5PFPeA		P250624035				20-150%	57.0%	
	M3PFBS		P250624035				20-150%	96.5%	
	M2-4:2 FTS		P250624035				20-150%	116.2%	
	M5PFHxA		P250624035				20-150%	77.9%	
	M3HFPO-DA		P250624035				20-150%	60.7%	
	M4PFHpA		P250624035				20-150%	86.4%	
	M3PFHxS		P250624035				20-150%	98.3%	
	M2-6:2 FTS		P250624035				20-150%	182.6%	Q
	M8PFOA		P250624035				20-150%	93.2%	
	M9PFNA		P250624035				20-150%	86.3%	
	M8PFOS		P250624035				20-150%	93.1%	
	M2-8:2 FTS		P250624035				20-150%	132.0%	
	M8FOSA-I		P250624035				20-150%	96.2%	
	M6PFDA		P250624035				20-150%	91.8%	
	d3-N-MeFOSAA		P250624035				20-150%	120.1%	
	d5-N-EtFOSAA		P250624035				20-150%	111.4%	
	M7PFUDa		P250624035				20-150%	89.7%	
	MPFDaA		P250624035				20-150%	77.1%	
	M2PFTeDA		P250624035				20-150%	54.6%	

Enthalpy Analytical

Job No.: 0624-782-2 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	MB-17693-PFAS		
Sampling Site			
Enthalpy ID	MB-17693-PFAS	Prep Batch	EU17693
Matrix	aqueous	Analyst	jogres
Sampling Date		Instrument	Samwise
Received Date		Sample Vol mL	0.1
Prep Date	2024-07-01 09:54	Extract Vol mL	0.2
AnalysisDate	2024-07-09 18:35	Split Factor	N/A
SampleType	Blank	Method Code	EU-047-NPW
Bottle ID	-		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPtA	422-64-0	SW090724-07091435	ND	700	1530			U
ES	13C3-PFPtA		SW090724-07091435				20-150%	146.2%	

Enthalpy Analytical

Job No.: 0624-782-2 PFAS by Isotope Dilution (non-potable water)
Brunswick County Public Utilities - NC NORTHWEST WATER PLANT LELAND, N.C.

Details

Sample Name	OPR-17693-PFAS		
Sampling Site			
Enthalpy ID	OPR-17693-PFAS	Prep Batch	EU17693
Matrix	aqueous	Analyst	jogres
Sampling Date		Instrument	Samwise
Received Date		Sample Vol mL	0.1
Prep Date	2024-07-01 09:54	Extract Vol mL	0.2
AnalysisDate	2024-07-09 18:47	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	PFPtA	422-64-0	SW090724-07091447	13500	700	1530	40-150%	67.5%	
ES	13C3-PFPtA		SW090724-07091447				20-150%	133.1%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0624-782
Client ID.	NORTHWEST WATER PLANT Site: LELAND, N.C.

1. Custody

Jayson-Shane Santos received the samples at 13.9 °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
0624-782-001-1A	061424-SO1	aqueous	2024-06-14
0624-782-001-1B	061424-SO1	aqueous	2024-06-14
0624-782-002-1A	061424-EO1	aqueous	2024-06-14
0624-782-002-1B	061424-EO1	aqueous	2024-06-14

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 using more than one extraction batch and analytical sequence 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.

Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0624-782
Client ID.	NORTHWEST WATER PLANT Site: LELAND, N.C.

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.

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		
Target Analytes		
~ 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-chloroeicosafuoro-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-dioxahexanoic) acid
~ PFO3OA	39492-89-2	Perfluoro (3,5,7-trioxaoctanoic) acid
~ PFO4DA	39492-90-5	Perfluoro (3,5,7,9-tetraoxadecanoic) acid
~ PFO5DA	39492-91-6	Perfluoro(3,5,7,9,11-pentaoxadodecanoic) acid
~ Nafion Byproduct 1 (PS Acid)	29311-67-9	Nafion Byproduct 1
~ Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	Nafion Byproduct 2
~ PEPA	267239-61-2	Perfluoro-2-ethoxypropanoic acid
~ PMPA	13140-29-9	Perfluoro-2-methoxypropanoic acid
*, 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
* accredited for SOP EU047 / EPA method 1633 # Method 537.1 Accredited ^ Method 533 Accredited ~EPA 1633 extended list		
~ PFECA-G	801212-59-9	4-(Heptafluoroisopropoxy)hexafluorobutanoic acid
~ PFHxDA	67905-19-5	Perfluorohexadecanoic acid
~ R-PSDA (Nafion Byproduct 4)	2416366-18-0	Perfluoro-4-(2-sulfoethoxy)pentanoic acid
~ Hydrolyzed PSDA (Nafion Byproduct 5)	2416366-19-1	2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-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



enthalpy
analytical

Enthalpy Ultratrace Job#: _____ COC Page 1 of 1

X Standard Turn Around Time

☐ Rush Turn Around Time – Date Needed

• All Fast TATs Subject to Approval by Enthalpy Analytical, Inc.

• All Samples Disposed of After 6 months Unless Otherwise Instructed.

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

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

[illegible]

2714 Exchange Drive • Wilmington, NC 28405 • (910) 212-5858 • www.enthalpy.com

JOB ID: 0624-782

Date / Time: 6/14/24 14:36

Initials: S.S.

OR

Client: Brunswick County Utilities

Cooler 1 of 1

Temp °C: 13.9

Thermometer ID: T15

Received via

FedEx ☐UPS ☐DHL ☐USPS ☐Courier ☒Other ☐

Check one

On ice: ☒Melted ice: ☐Ambient: ☐

Check one

in a Box: ☐in a Cooler: ☒Cooler in Box: ☐

Yes

No

Cooler seals: ☐Sample seals: ☐Good condition: ☒

Comment:

Cooler of

Temp °C:

Thermometer ID:

Received via

FedEx ☐UPS ☐DHL ☐USPS ☐Courier ☐Other ☐

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No

Cooler seals: ☐Sample seals: ☐Good condition: ☐

Comment:

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