County of Brunswick

3954 Clearwell Dr NE
Leland, NC 28451

Northwest Water Plant

Leland, NC
Samples Received: 02/03/22

Analytical Report
0222-726

Isotope Dilution Method

PFAS

Enthalpy Analytical, LLC – Ultratrace

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I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have 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 __26__ pages.

QA Review Performed by: Laura K. Boivin

Report Issued Date: 2/18/2022

ENTHALPY ANALYTICAL

Summary of Results

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Summary

	Compound	CAS	020322-SO1 ng/L	020322-EO1 ng/L
Acids	PFBA	375-22-4	3.87	3.52
	PFPeA	2706-90-3	6.70	6.18
	PFHxA	307-24-4	5.88	6.25
	PFHpA	375-85-9	3.11	3.00
	PFOA	335-67-1	5.52	5.49
	PFNA	375-95-1	0.693	0.668
	PFDA	335-76-2	0.264	0.190 J
	PFUnDA	2058-94-8	0.135 L	0.0692 L
	PFDoDA	307-55-1	0.0328 L	ND U
	PFTrDA	72629-94-8	0.0741 L	0.00601 L
	PFTeDA	376-06-7	0.105 LB	ND U
Sulfonates	PFBS	375-73-5	3.20	3.42
	PFPeS	2706-91-4	0.663	0.803
	PFHxS	355-46-4	3.07	4.17
	PFHpS	375-92-8	0.188 J	ND U
	PFOS	1763-23-1	7.82	6.90
	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	0.150 J	0.0518 L
	8:2 FTS	39108-34-4	ND U	ND U
other	PFOSA	754-91-6	ND U	ND U
	N-MeFOSAA	2355-31-9	ND U	ND U
	N-EtFOSAA	2991-50-6	ND U	ND U
	HFPO-DA	13252-13-6	4.71	4.43
	PFMOAA	674-13-5	31.4	27.0
	PFMOPrA	377-73-1	ND U	ND U
	PFO2HxA	39492-88-1	7.75	7.29
	PFO3OA	39492-89-2	1.11 L	0.757 L
	PFO4DA	39492-90-5	ND U	0.659 L
	Nafion Byproduct 1	29311-67-9	ND U	ND U
	ADONA	919005-14-4	ND U	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U
	11Cl-PF3OUdS	763051-92-9	0.0252 LB	ND U
	10:2 FTS	120226-60-0	ND U	ND U
	EVE Acid	69087-46-3	ND U	0.00755 L
	FBSA	30334-69-1	0.331	ND U
	Hydro-EVE Acid	773804-62-9	0.231 L	0.233 L
	Hydrolyzed PSDA	2416366-19-1	2.64	2.43
	Nafion Byproduct 2	749836-20-2	ND U	ND U
	N-EtFOSA	4151-50-2	ND U	ND U
	N-EtFOSE	1691-99-2	ND U	ND U
	NFDHA	151772-58-6	ND U	ND U
	N-MeFOSA	31506-32-8	ND U	ND U
	N-MeFOSE	24448-09-7	ND U	ND U
	NVHOS	1132933-86-8	2.31	2.48
	PEPA	267239-61-2	ND U	ND U
	PFECA-G	801212-59-9	ND U	ND U
	PFEESA	113507-82-7	0.00250 LB	ND U
	PFHxDA	67905-19-5	ND U	ND U
	PFMOBA	863090-89-5	ND U	ND U
	PFO5DA	39492-91-6	ND U	ND U
	PMPA	13140-29-9	4.63	6.46
	R-EVE	2416366-22-6	8.53	6.91
	R-PSDA	2416366-18-0	5.82	5.43
	R-PSDCA	2416366-21-5	ND U	0.0203 L

Detailed Results

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	0222-726-001-1	Prep Batch	EU12960	Sample Vol (mL)	290.91
Sample Name	020322-SO1	Prep Date	2022-02-04 11:37	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-07 18:12	Split Factor	N/A
Sampling Date	20220203 00:00	Analyst	rappelle	Method Code	WM-026
Received Date	2022-02-03 14:30	Instrument	Kili	Sample Type	Sample

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFUnDA	2058-94-8	98.08	0.135	0.135	0.159	0.261			L
	PFDoDA	307-55-1	23.88	0.0328	0.0328	0.174	0.261			L
	PFTrDA	72629-94-8	53.86	0.0741	0.0741	0.130	0.261			L
	PFTeDA	376-06-7	76.73	0.105	0.105	0.187	0.261			LB
Sulfonates	PFBS	375-73-5	2328.91	3.20	3.20	0.305	0.305			
	PFHpS	375-92-8	136.69	0.188	0.188	0.116	0.249			J
	PFOS	1763-23-1	5689.90	7.82	7.82	0.137	0.242			
	PFNS	68259-12-1	ND	ND	ND	0.0742	0.252			U
	PFDS	335-77-3	ND	ND	ND	0.165	0.252			U
	4:2 FTS	757124-72-4	ND	ND	ND	0.101	0.245			U
	6:2 FTS	27619-97-2	109.05	0.150	0.150	0.0997	0.249			J
	8:2 FTS	39108-34-4	ND	ND	ND	0.147	0.250			U
other	N-MeFOSAA	2355-31-9	ND	ND	ND	0.124	0.261			U
	N-EtFOSAA	2991-50-6	ND	ND	ND	0.0937	0.261			U
	HFPO-DA	13252-13-6	3426.41	4.71	4.71	0.196	0.261			
	PFMOAA	674-13-5	22824.33	31.4	31.4	1.24	1.24			
	PFMOPrA	377-73-1	ND	ND	ND	0.206	0.261			U
	PFO2HxA	39492-88-1	5633.68	7.75	7.75	1.24	1.24			
	PFO4DA	39492-90-5	ND	ND	ND	1.31	1.31			U
	Nafion Byproduct 1	29311-67-9	ND	ND	ND	0.261	0.261			U
	ADONA	919005-14-4	ND	ND	ND	0.103	0.247			U
	9Cl-PF3ONS	756426-58-1	ND	ND	ND	0.103	0.243			U
	11Cl-PF3OUdS	763051-92-9	18.32	0.0252	0.0252	0.103	0.246			LB
	10:2 FTS	120226-60-0	ND	ND	ND	0.206	0.261			U
	EVE Acid	69087-46-3	ND	ND	ND	1.24	1.24			U
	FBSA	30334-69-1	240.83	0.331	0.331	0.206	0.261			
	Hydro-EVE Acid	773804-62-9	168.12	0.231	0.231	1.24	1.24			L
	Hydrolyzed PSDA	2416366-19-1	1920.92	2.64	2.64	1.24	1.24			
	Nafion Byproduct 2	749836-20-2	ND	ND	ND	0.261	0.261			U
	N-EtFOSA	4151-50-2	ND	ND	ND	0.206	0.261			U
	N-EtFOSE	1691-99-2	ND	ND	ND	6.19	6.19			U
	NFDHA	151772-58-6	ND	ND	ND	0.206	0.261			U
	N-MeFOSA	31506-32-8	ND	ND	ND	0.206	0.261			U
	N-MeFOSE	24448-09-7	ND	ND	ND	6.19	6.19			U
	NVHOS	1132933-86-8	1679.43	2.31	2.31	1.24	1.24			
	PEPA	267239-61-2	ND	ND	ND	1.24	1.24			U
	PFECA-G	801212-59-9	ND	ND	ND	0.261	1.24			U
	PFEESA	113507-82-7	1.82	0.00250	0.00250	0.206	0.261			LB
	PFHxDA	67905-19-5	ND	ND	ND	1.24	1.24			U
	PFMOBA	863090-89-5	ND	ND	ND	1.24	1.24			U
	PFO5DA	39492-91-6	ND	ND	ND	1.31	1.31			U
	PMPA	13140-29-9	3369.91	4.63	4.63	1.24	1.24			
	R-EVE	2416366-22-6	6201.08	8.53	8.53	1.24	1.24			
	R-PSDA	2416366-18-0	4232.10	5.82	5.82	1.24	1.24			
	R-PSDCA	2416366-21-5	ND	ND	ND	1.24	1.24			U
ES	MPFBA		4373.76	6.01				20-150%	87.5%	
	M5PFPeA		7132.53	9.81				20-150%	142.7%	
	M3PFBS		8199.85	11.3				20-150%	164.0%	Q
	M2-4:2 FTS		4579.72	6.30				20-150%	91.6%	
	M5PFHxA		4762.25	6.55				20-150%	95.2%	
	M3HFPO-DA		6069.16	8.35				20-150%	121.4%	
	M4PFHpA		4406.60	6.06				20-150%	88.1%	
	M3PFHxS		4351.59	5.98				20-150%	87.0%	
	M2-6:2 FTS		2321.01	3.19				20-150%	46.4%	
	M8PFOA		4572.36	6.29				20-150%	91.4%	
	M9PFNA		4351.63	5.98				20-150%	87.0%	
	M8PFOS		4169.47	5.73				20-150%	83.4%	
	M2-8:2 FTS		2397.11	3.30				20-150%	47.9%	
	M6PFDA		4485.58	6.17				20-150%	89.7%	
	d3-N-MeFOSAA		2631.09	3.62				20-150%	52.6%	
	d5-N-EtFOSAA		2656.29	3.65				20-150%	53.1%	
	M7PFUdA		3681.11	5.06				20-150%	73.6%	
	MPFDoA		2948.05	4.05				20-150%	59.0%	
	M2PFTeDA		1271.08	1.75				20-150%	25.4%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	0222-726-001-2	Prep Batch	EU12987	Sample Vol (mL)	290.07
Sample Name	020322-SO1	Prep Date	2022-02-11 12:51	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-15 02:32	Split Factor	N/A
Sampling Date	20220203 00:00	Analyst	rappelle	Method Code	WM-026
Received Date	2022-02-03 14:30	Instrument	Kili	Sample Type	Sample

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFBA	375-22-4	2807.37	3.87	3.87	0.132	0.262			
	PFPeA	2706-90-3	4858.43	6.70	6.70	0.147	0.262			
	PFHxA	307-24-4	4265.39	5.88	5.88	0.166	0.262			
	PFHpA	375-85-9	2257.80	3.11	3.11	0.105	0.262			
	PFOA	335-67-1	4001.13	5.52	5.52	0.153	0.262			
	PFNA	375-95-1	502.21	0.693	0.693	0.0656	0.262			
	PFDA	335-76-2	191.60	0.264	0.264	0.0728	0.262			
Sulfonates	PFPeS	2706-91-4	480.69	0.663	0.663	0.178	0.247			
	PFHxS	355-46-4	2226.11	3.07	3.07	0.165	0.240			
Other	PFOSA	754-91-6	ND	ND	ND	0.112	0.262			U
	PFO3OA	39492-89-2	808.28	1.11	1.11	1.24	1.24			L
ES	MPFBA		3748.51	5.17				20-150%	75.0%	
	M5PFPeA		7191.58	9.92				20-150%	143.8%	
	M5PFHxA		4471.64	6.17				20-150%	89.4%	
	M4PFHpA		4373.57	6.03				20-150%	87.5%	
	M3PFHxS		4881.10	6.73				20-150%	97.6%	
	M8PFOA		4272.48	5.89				20-150%	85.4%	
	M9PFNA		4150.84	5.72				20-150%	83.0%	
	M8FOSA-I		3597.53	4.96				20-150%	72.0%	
	M6PFDA		3810.99	5.26				20-150%	76.2%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	0222-726-002-1	Prep Batch	EU12960	Sample Vol (mL)	289.24
Sample Name	020322-EO1	Prep Date	2022-02-04 11:37	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-07 18:35	Split Factor	N/A
Sampling Date	20220203 00:00	Analyst	rappelle	Method Code	WM-026
Received Date	2022-02-03 14:30	Instrument	Kili	Sample Type	Sample

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	PFUnDA	2058-94-8	50.05	0.0692	0.0692	0.160	0.263			L
Acids	PFDoDA	307-55-1	ND	ND	ND	0.175	0.263			U
	PFTrDA	72629-94-8	4.35	0.00601	0.00601	0.131	0.263			L
	PFTeDA	376-06-7	ND	ND	ND	0.188	0.263			U
	PFBS	375-73-5	2476.27	3.42	3.42	0.307	0.307			
	PFHpS	375-92-8	ND	ND	ND	0.117	0.250			U
	PFOS	1763-23-1	4991.80	6.90	6.90	0.138	0.243			
Sulfonates	PFNS	68259-12-1	ND	ND	ND	0.0747	0.253			U
	PFDS	335-77-3	ND	ND	ND	0.166	0.253			U
	4:2 FTS	757124-72-4	ND	ND	ND	0.102	0.246			U
	6:2 FTS	27619-97-2	37.42	0.0518	0.0518	0.100	0.250			L
	8:2 FTS	39108-34-4	ND	ND	ND	0.148	0.252			U
	N-MeFOSAA	2355-31-9	ND	ND	ND	0.124	0.263			U
	N-EtFOSAA	2991-50-6	ND	ND	ND	0.0942	0.263			U
	HFPO-DA	13252-13-6	3200.87	4.43	4.43	0.197	0.263			
	PFMOAA	674-13-5	19528.17	27.0	27.0	1.24	1.24			
	PFMOPrA	377-73-1	ND	ND	ND	0.207	0.263			U
	PFO2HxA	39492-88-1	5270.93	7.29	7.29	1.24	1.24			
	PFO4DA	39492-90-5	476.29	0.659	0.659	1.31	1.31			L
	Nafion Byproduct 1	29311-67-9	ND	ND	ND	0.263	0.263			U
	ADONA	919005-14-4	ND	ND	ND	0.104	0.249			U
	9Cl-PF3ONS	756426-58-1	ND	ND	ND	0.104	0.245			U
	11Cl-PF3OUdS	763051-92-9	ND	ND	ND	0.104	0.248			U
	10:2 FTS	120226-60-0	ND	ND	ND	0.207	0.263			U
	EVE Acid	69087-46-3	5.46	0.00755	0.00755	1.24	1.24			L
	FBSA	30334-69-1	ND	ND	ND	0.207	0.263			U
	Hydro-EVE Acid	773804-62-9	168.18	0.233	0.233	1.24	1.24			L
	Hydrolyzed PSDA	2416366-19-1	1757.50	2.43	2.43	1.24	1.24			
other	Nafion Byproduct 2	749836-20-2	ND	ND	ND	0.263	0.263			U
	N-EtFOSA	4151-50-2	ND	ND	ND	0.207	0.263			U
	N-EtFOSE	1691-99-2	ND	ND	ND	6.22	6.22			U
	NFDHA	151772-58-6	ND	ND	ND	0.207	0.263			U
	N-MeFOSA	31506-32-8	ND	ND	ND	0.207	0.263			U
	N-MeFOSE	24448-09-7	ND	ND	ND	6.22	6.22			U
	NVHOS	1132933-86-8	1795.09	2.48	2.48	1.24	1.24			
	PEPA	267239-61-2	ND	ND	ND	1.24	1.24			U
	PFECA-G	801212-59-9	ND	ND	ND	0.263	1.24			U
	PFEESA	113507-82-7	ND	ND	ND	0.207	0.263			U
	PFHxDA	67905-19-5	ND	ND	ND	1.24	1.24			U
	PFMOBA	863090-89-5	ND	ND	ND	1.24	1.24			U
	PFO5DA	39492-91-6	ND	ND	ND	1.31	1.31			U
	PMPA	13140-29-9	4674.23	6.46	6.46	1.24	1.24			
	R-EVE	2416366-22-6	4997.02	6.91	6.91	1.24	1.24			
	R-PSDA	2416366-18-0	3924.78	5.43	5.43	1.24	1.24			
	R-PSDCA	2416366-21-5	14.68	0.0203	0.0203	1.24	1.24			L
	MPFBA		4377.70	6.05				20-150%	87.6%	
	M5PFPeA		7089.16	9.80				20-150%	141.8%	
	M3PFBS		7974.74	11.0				20-150%	159.5%	Q
	M2-4:2 FTS		3983.34	5.51				20-150%	79.7%	
	M5PFHxA		5257.37	7.27				20-150%	105.1%	
	M3HFPO-DA		7052.89	9.75				20-150%	141.1%	
	M4PFHpA		4985.59	6.89				20-150%	99.7%	
	M3PFHxS		4730.70	6.54				20-150%	94.6%	
	M2-6:2 FTS		2484.10	3.44				20-150%	49.7%	
ES	M8PFOA		4733.83	6.55				20-150%	94.7%	
	M9PFNA		4709.73	6.51				20-150%	94.2%	
	M8PFOS		4707.98	6.51				20-150%	94.2%	
	M2-8:2 FTS		2335.56	3.23				20-150%	46.7%	
	M6PFDA		4515.84	6.25				20-150%	90.3%	
	d3-N-MeFOSAA		2849.02	3.94				20-150%	57.0%	
	d5-N-EtFOSAA		3257.24	4.50				20-150%	65.1%	
	M7PFUdA		4385.08	6.06				20-150%	87.7%	
	MPFDoA		4414.56	6.11				20-150%	88.3%	
	M2PFTeDA		3409.09	4.71				20-150%	68.2%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	0222-726-002-2	Prep Batch	EU12987	Sample Vol (mL)	283.1
Sample Name	020322-EO1	Prep Date	2022-02-11 12:51	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-15 02:55	Split Factor	N/A
Sampling Date	20220203 00:00	Analyst	rappelle	Method Code	WM-026
Received Date	2022-02-03 14:30	Instrument	Kili	Sample Type	Sample

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	PFBA	375-22-4	2493.91	3.52	3.52	0.135	0.268			
	PFPeA	2706-90-3	4376.11	6.18	6.18	0.150	0.268			
	PFHxA	307-24-4	4426.95	6.25	6.25	0.170	0.268			
Acids	PFHpA	375-85-9	2124.43	3.00	3.00	0.108	0.268			
	PFOA	335-67-1	3887.39	5.49	5.49	0.156	0.268			
	PFNA	375-95-1	473.05	0.668	0.668	0.0672	0.268			
	PFDA	335-76-2	134.78	0.190	0.190	0.0746	0.268			J
Sulfonates	PFPeS	2706-91-4	568.19	0.803	0.803	0.182	0.253			
	PFHxS	355-46-4	2952.88	4.17	4.17	0.169	0.246			
Other	PFOSA	754-91-6	ND	ND	ND	0.115	0.268			U
	PFO3OA	39492-89-2	535.45	0.757	0.757	1.27	1.27			L
	MPFBA		4203.77	5.94				20-150%	84.1%	
	M5PFPeA		7388.56	10.4				20-150%	147.8%	
	M5PFHxA		4696.65	6.64				20-150%	93.9%	
	M4PFHpA		4462.80	6.31				20-150%	89.3%	
ES	M3PFHxS		4287.28	6.06				20-150%	85.7%	
	M8PFOA		4566.34	6.45				20-150%	91.3%	
	M9PFNA		4310.75	6.09				20-150%	86.2%	
	M8FOSA-I		4035.18	5.70				20-150%	80.7%	
	M6PFDA		4333.61	6.12				20-150%	86.7%	

QC Data

ENTHALPY
ANALYTICAL

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)
County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	MB-12960-PFAS	Prep Batch	EU12960	Sample Vol (mL)	250
Sample Name	MB-12960-PFAS	Prep Date	2022-02-04 11:37	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-07 17:26	Split Factor	N/A
Sampling Date		Analyst	rappelle	Method Code	WM-026
Received Date		Instrument	Kili	Sample Type	Blank

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	PFBA	375-22-4	ND	ND	ND	0.153	0.304			U
	PFPeA	2706-90-3	ND	ND	ND	0.170	0.304			U
	PFHxA	307-24-4	ND	ND	ND	0.193	0.304			U
	PFHpA	375-85-9	17.11	0.0274	0.0274	0.122	0.304			L
	PFOA	335-67-1	39.06	0.0625	0.0625	0.177	0.304			L
Acids	PFNA	375-95-1	12.07	0.0193	0.0193	0.0761	0.304			L
	PFDA	335-76-2	ND	ND	ND	0.0845	0.304			U
	PFUnDA	2058-94-8	ND	ND	ND	0.185	0.304			U
	PFDoDA	307-55-1	ND	ND	ND	0.202	0.304			U
	PFTrDA	72629-94-8	ND	ND	ND	0.151	0.304			U
	PFTeDA	376-06-7	33.13	0.0530	0.0530	0.218	0.304			L
	PFBS	375-73-5	ND	ND	ND	0.355	0.355			U
	PFPeS	2706-91-4	ND	ND	ND	0.206	0.286			U
	PFHxS	355-46-4	ND	ND	ND	0.191	0.278			U
	PFHpS	375-92-8	ND	ND	ND	0.135	0.290			U
	PFOS	1763-23-1	ND	ND	ND	0.160	0.282			U
Sulfonates	PFNS	68259-12-1	ND	ND	ND	0.0864	0.293			U
	PFDS	335-77-3	ND	ND	ND	0.192	0.293			U
	4:2 FTS	757124-72-4	ND	ND	ND	0.118	0.285			U
	6:2 FTS	27619-97-2	ND	ND	ND	0.116	0.290			U
	8:2 FTS	39108-34-4	ND	ND	ND	0.171	0.291			U
	PFOSA	754-91-6	ND	ND	ND	0.130	0.304			U
	N-MeFOSAA	2355-31-9	ND	ND	ND	0.144	0.304			U
	N-EtFOSAA	2991-50-6	ND	ND	ND	0.109	0.304			U
	HFPO-DA	13252-13-6	ND	ND	ND	0.228	0.304			U
	PFMOAA	674-13-5	ND	ND	ND	1.44	1.44			U
	PFMOPrA	377-73-1	ND	ND	ND	0.240	0.304			U
	PFO2HxA	39492-88-1	ND	ND	ND	1.44	1.44			U
	PFO3OA	39492-89-2	ND	ND	ND	1.44	1.44			U
	PFO4DA	39492-90-5	ND	ND	ND	1.52	1.52			U
	Nafion Byproduct 1	29311-67-9	ND	ND	ND	0.304	0.304			U
	ADONA	919005-14-4	ND	ND	ND	0.120	0.288			U
	9Cl-PF3ONS	756426-58-1	9.52	0.0152	0.0152	0.120	0.283			L
	11Cl-PF3OUdS	763051-92-9	23.31	0.0373	0.0373	0.120	0.286			L
	10:2 FTS	120226-60-0	ND	ND	ND	0.240	0.304			U
	EVE Acid	69087-46-3	ND	ND	ND	1.44	1.44			U
	FBSA	30334-69-1	ND	ND	ND	0.240	0.304			U
	Hydro-EVE Acid	773804-62-9	ND	ND	ND	1.44	1.44			U
other	Hydrolyzed PSDA	2416366-19-1	73.81	0.118	0.118	1.44	1.44			L
	Nafion Byproduct 2	749836-20-2	ND	ND	ND	0.304	0.304			U
	N-EtFOSA	4151-50-2	ND	ND	ND	0.240	0.304			U
	N-EtFOSE	1691-99-2	ND	ND	ND	7.20	7.20			U
	NFDHA	151772-58-6	ND	ND	ND	0.240	0.304			U
	N-MeFOSA	31506-32-8	ND	ND	ND	0.240	0.304			U
	N-MeFOSE	24448-09-7	ND	ND	ND	7.20	7.20			U
	NVHOS	1132933-86-8	ND	ND	ND	1.44	1.44			U
	PEPA	267239-61-2	ND	ND	ND	1.44	1.44			U
	PFECA-G	801212-59-9	ND	ND	ND	0.304	1.44			U
	PFEESA	113507-82-7	2.97	0.00476	0.00476	0.240	0.304			L
	PFHxDA	67905-19-5	ND	ND	ND	1.44	1.44			U
	PFMOBA	863090-89-5	ND	ND	ND	1.44	1.44			U
	PFO5DA	39492-91-6	ND	ND	ND	1.52	1.52			U
	PMPA	13140-29-9	ND	ND	ND	1.44	1.44			U
	R-EVE	2416366-22-6	82.45	0.132	0.132	1.44	1.44			L
	R-PSDA	2416366-18-0	ND	ND	ND	1.44	1.44			U
	R-PSDCA	2416366-21-5	ND	ND	ND	1.44	1.44			U
	MPFBA		4524.54	7.24				20-150%	90.5%	
	M5PFPeA		4209.09	6.73				20-150%	84.2%	
	M3PFBS		4014.25	6.42				20-150%	80.3%	
	M2-4:2 FTS		2651.49	4.24				20-150%	53.0%	
	M5PFHxA		5050.58	8.08				20-150%	101.0%	
	M3HFPO-DA		6211.89	9.94				20-150%	124.2%	
	M4PFHpA		4410.58	7.06				20-150%	88.2%	
	M3PFHxS		4560.59	7.30				20-150%	91.2%	
	M2-6:2 FTS		2717.95	4.35				20-150%	54.4%	
ES	M8PFOA		4733.36	7.57				20-150%	94.7%	
	M9PFNA		4637.69	7.42				20-150%	92.8%	
	M8PFOS		4540.96	7.27				20-150%	90.8%	
	M2-8:2 FTS		3299.19	5.28				20-150%	66.0%	
	M6PFDA		4583.05	7.33				20-150%	91.7%	
	d3-N-MeFOSAA		3195.79	5.11				20-150%	63.9%	
	d5-N-EtFOSAA		3295.50	5.27				20-150%	65.9%	
	M7PFUdA		4374.89	7.00				20-150%	87.5%	
	MPFDoA		4370.75	6.99				20-150%	87.4%	
	M2PFTeDA		3382.11	5.41				20-150%	67.6%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	MB-12987-PFAS	Prep Batch	EU12987	Sample Vol (mL)	250
Sample Name	MB-12987-PFAS	Prep Date	2022-02-11 12:51	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-15 00:59	Split Factor	N/A
Sampling Date		Analyst	rappelle	Method Code	WM-026
Received Date		Instrument	Kili	Sample Type	Blank

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFBA	375-22-4	ND	ND	ND	0.153	0.304			U
	PFPeA	2706-90-3	ND	ND	ND	0.170	0.304			U
	PFHxA	307-24-4	ND	ND	ND	0.193	0.304			U
	PFHpA	375-85-9	ND	ND	ND	0.122	0.304			U
	PFOA	335-67-1	ND	ND	ND	0.177	0.304			U
	PFNA	375-95-1	ND	ND	ND	0.0761	0.304			U
	PFDA	335-76-2	ND	ND	ND	0.0845	0.304			U
Sulfonates	PFPeS	2706-91-4	ND	ND	ND	0.206	0.286			U
	PFHxS	355-46-4	ND	ND	ND	0.191	0.278			U
Other	PFOSA	754-91-6	ND	ND	ND	0.130	0.304			U
	PFO3OA	39492-89-2	ND	ND	ND	1.44	1.44			U
ES	MPFBA		4618.15	7.39				20-150%	92.4%	
	M5PFPeA		4769.06	7.63				20-150%	95.4%	
	M5PFHxA		4786.32	7.66				20-150%	95.7%	
	M4PFHpA		4512.95	7.22				20-150%	90.3%	
	M3PFHxS		3941.10	6.31				20-150%	78.8%	
	M8PFOA		4625.14	7.40				20-150%	92.5%	
	M9PFNA		4715.89	7.55				20-150%	94.3%	
	M8FOSA-I		4174.67	6.68				20-150%	83.5%	
	M6PFDA		4390.91	7.03				20-150%	87.8%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	OPR-12960-PFAS	Prep Batch	EU12960	Sample Vol (mL)	250
Sample Name	OPR-12960-PFAS	Prep Date	2022-02-04 11:37	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-07 17:49	Split Factor	N/A
Sampling Date		Analyst	rappelle	Method Code	WM-026
Received Date		Instrument	Kili	Sample Type	Control

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFUnDA	2058-94-8	17261.71	27.6	27.6	0.185	0.304	69-133%	138.1%	Q
	PFDoDA	307-55-1	18420.61	29.5	29.5	0.202	0.304	72-134%	147.4%	Q
	PFTrDA	72629-94-8	23651.03	37.8	37.8	0.151	0.304	65-144%	189.2%	Q
	PFTeDA	376-06-7	17549.09	28.1	28.1	0.218	0.304	71-132%	140.4%	Q
Sulfonates	PFBS	375-73-5	13235.20	21.2	21.2	0.355	0.355	72-134%	119.4%	
	PFHpS	375-92-8	15696.24	25.1	25.1	0.135	0.290	69-134%	131.8%	
	PFOS	1763-23-1	15848.21	25.4	25.4	0.160	0.282	65-140%	136.6%	
	PFNS	68259-12-1	17008.95	27.2	27.2	0.0864	0.293	69-127%	141.4%	Q
	PFDS	335-77-3	15493.45	24.8	24.8	0.192	0.293	53-142%	128.4%	
	4:2 FTS	757124-72-4	18253.28	29.2	29.2	0.118	0.285	63-143%	155.8%	Q
	6:2 FTS	27619-97-2	16177.29	25.9	25.9	0.116	0.290	64-140%	136.1%	
	PFOSA	754-91-6	14784.25	23.7	23.7	0.130	0.304	67-137%	118.3%	
Other	N-MeFOSAA	2355-31-9	18212.29	29.1	29.1	0.144	0.304	65-136%	145.7%	Q
	N-EtFOSAA	2991-50-6	16967.08	27.1	27.1	0.109	0.304	61-135%	135.7%	Q
	HFPO-DA	13252-13-6	15603.15	25.0	25.0	0.228	0.304	70-130%	124.8%	
ES	MPFBA		4901.52	7.84				20-150%	98.0%	
	M5PFPeA		4341.01	6.95				20-150%	86.8%	
	M3PFBS		4042.55	6.47				20-150%	80.9%	
	M2-4:2 FTS		2738.53	4.38				20-150%	54.8%	
	M5PFHxA		5346.10	8.55				20-150%	106.9%	
	M3HFPO-DA		5415.13	8.66				20-150%	108.3%	
	M4PFHpA		4722.21	7.56				20-150%	94.4%	
	M3PFHxS		4354.79	6.97				20-150%	87.1%	
	M2-6:2 FTS		3461.24	5.54				20-150%	69.2%	
	M8PFOA		4762.01	7.62				20-150%	95.2%	
	M9PFNA		4994.13	7.99				20-150%	99.9%	
	M8PFOS		4505.97	7.21				20-150%	90.1%	
	M2-8:2 FTS		2477.90	3.96				20-150%	49.6%	
	M8FOSA-I		462.29	0.740				20-150%	9.2%	Q
	M6PFDA		4902.35	7.84				20-150%	98.0%	
	d3-N-MeFOSAA		2882.18	4.61				20-150%	57.6%	
	d5-N-EtFOSAA		3179.95	5.09				20-150%	63.6%	
	M7PFUdA		4558.26	7.29				20-150%	91.2%	
	MPFDoA		4402.47	7.04				20-150%	88.0%	
	M2PFTeDA		3104.53	4.97				20-150%	62.1%	

Enthalpy Analytical

Job No.: 0222-726-1 PFAS by Isotope Dilution (non-potable water)

County of Brunswick Site: Northwest Water Plant - Leland, NC

Enthalpy ID	OPR-12987-PFAS	Prep Batch	EU12987	Sample Vol (mL)	250
Sample Name	OPR-12987-PFAS	Prep Date	2022-02-11 12:51	Extract Vol (mL)	0.4
Matrix	Aqueous	Analysis Date	2022-02-15 01:23	Split Factor	N/A
Sampling Date		Analyst	rappelle	Method Code	WM-026
Received Date		Instrument	Kili	Sample Type	Control

	Compound	CAS	Extract Concentration ng/L	Sample Concentration ng/L	Formatted Result ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFBA	375-22-4	10602.64	17.0	17.0	0.153	0.304	73-129%	84.8%	
	PFPeA	2706-90-3	10588.43	16.9	16.9	0.170	0.304	72-129%	84.7%	
	PFHxA	307-24-4	9984.03	16.0	16.0	0.193	0.304	72-129%	79.9%	
	PFHpA	375-85-9	11064.36	17.7	17.7	0.122	0.304	72-130%	88.5%	
	PFOA	335-67-1	10597.88	17.0	17.0	0.177	0.304	71-133%	84.8%	
	PFNA	375-95-1	10522.57	16.8	16.8	0.0761	0.304	69-130%	84.2%	
	PFDA	335-76-2	10637.80	17.0	17.0	0.0845	0.304	71-129%	85.1%	
Sulfonates	PFPeS	2706-91-4	9590.90	15.3	15.3	0.206	0.286	71-127%	81.5%	
	PFHxS	355-46-4	10297.82	16.5	16.5	0.191	0.278	68-131%	90.1%	
Other	PFOSA	754-91-6	9718.60	15.5	15.5	0.130	0.304	67-137%	77.7%	
ES	MPFBA		4876.80	7.80				20-150%	97.5%	
	M5PFPeA		5107.68	8.17				20-150%	102.2%	
	M5PFHxA		5174.48	8.28				20-150%	103.5%	
	M4PFHpA		5001.92	8.00				20-150%	100.0%	
	M3PFHxS		4820.94	7.71				20-150%	96.4%	
	M8PFOA		5033.51	8.05				20-150%	100.7%	
	M9PFNA		5001.56	8.00				20-150%	100.0%	
	M8FOSA-I		4935.63	7.90				20-150%	98.7%	
	M6PFDA		5112.17	8.18				20-150%	102.2%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	County of Brunswick
Job No.	0222-726-1 PFAS by Isotope Dilution (non-potable water)
Client ID.	N/A Site: Northwest Water Plant - Leland, NC

1. Custody

Dallas King received the samples on February 03, 2022 at 3.4 °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
0222-726-001-1	020322-SO1	Aqueous
0222-726-001-2		
0222-726-002-1	020322-EO1	Aqueous
0222-726-002-2		

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 PFAS List	ENVI-Carb

3. Analysis

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

For aqueous samples, the sample volume was measured gravimetrically by the laboratory, and spiked with Extraction Standard (ES). The sample was then mixed well and centrifuged, if needed. The samples were then extracted via SPE, and the extracts were cleaned up using ENVI-Carb.

Each final sample extract was transferred to an autosampler vial, spiked with Injection Standard (IS), and brought to a final volume of 400µL prior to analysis.

Due to acquisition requirements for analytes requested, the sample was analyzed in more than one sequence.

Enthalpy Analytical Narrative Summary

Company	County of Brunswick
Job No.	0222-726-1 PFAS by Isotope Dilution (non-potable water)
Client ID.	N/A Site: Northwest Water Plant - Leland, NC

4. Calibration

In the initial calibration, the reported analytes exhibited R^2 of ≥ 0.99. The reported analytes in the calibration standards, continuing calibration (concal) and Initial Calibration Verification (ICV) met the 30% accuracy criterion for native analytes with the following exception.

PFAS 10:2 FTS, PFO4DA, and PFO5DA fell above method criteria in one or more concals. These analytes were not detected or detected below LOD in samples 020322-SO1 and 020322-EO1. The data is reported without adverse impact.

PFAS PFO3OA fell above method criteria in concals and confirmed upon reinjection. Samples were re-extracted and successfully analyzed for this compound.

Supplemental compounds were run using a single point calibration forced through zero.

5. QC Notes

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

QC samples that did not meet method acceptance criteria were:

OPR-12960-PFAS 4:2 FTS, OPR-12960-PFAS 8:2 FTS, OPR-12960-PFAS N-MeFOSAA, OPR-12960-PFAS N-EtFOSAA, OPR-12960-PFAS PFDoDA, OPR-12960-PFAS PFTeDA, OPR-12960-PFAS PFTrDA, OPR-12960-PFAS PFUnDA, and OPR-12960-PFAS PFNS fell above method recovery criteria. These analytes were not detected or detected below LOD in samples 020322-SO1 and 020322-EO1. The data is reported without adverse impact.

OPR-12960-PFAS PFBA,OPR-12960-PFAS PFDA, OPR-12960-PFAS PFHpA, OPR-12960-PFAS PFHxA, OPR-12960-PFAS PFHxS, OPR-12960-PFAS PFNA, OPR-12960-PFAS PFOA, OPR-12960-PFAS PFPeA, and OPR-12960-PFAS PFPeS fell above method criteria and confirmed upon reinjection. Samples were re-extracted and successfully analyzed for these analytes.

OPR-12960-PFAS ES-M8FOSA-I for PFAS PFOSA fell below method recovery criteria. Samples were re-extracted and successfully analyzed for this analyte.

The samples were extracted within the 28-day from collection holding time and analyzed within the 28-day from extraction to analysis holding time required by the method.

6. Reporting Notes

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.

Enthalpy Analytical Narrative Summary

Company	County of Brunswick
Job No.	0222-726-1 PFAS by Isotope Dilution (non-potable water)
Client ID.	N/A Site: Northwest Water Plant - Leland, NC

The results presented in this report are representative of the samples as provided to the laboratory.

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

- 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.
- 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 - 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.
- 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.

General Reporting Notes – Data Qualifiers

- <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.
- R – Indicates a re-extraction of the sample.
- RJ – Indicates a reinjection of the sample extract.

General Reporting Notes – Data Qualifiers

- 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**		
	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-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	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**		
*	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
*	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

Sample Custody

0222-726

Chain of Custody Record

ENTHALPY analytical

Enthalpy Ultratrace Job#: _____ COC Page 1 of 1

Special Handling:

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 CindyJames@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: # of Bottles	# of Jars	# of Bags	# Other	Analyses: Method 1613	Method 8290	Method 1668A/B/C PCB	PFAS by LC/MS/MS	PAHs by HRGC/HRMS	Sample on Hold	Method 23	ALL PFAS	Notes:
020322-SO1	2/3/2022	1:15PM	250 ml	G	NW	2											X	
020322-EO1	2/3/2022	1:15PM	250 ml	G	DW	2											X	

Relinquished By:	Date	Received By:	Date	Time	Sample Temperature Upon Receipt
	2/3/2022		2-3-22	14:30	☑ Iced ☐ Ambient °C 3.4 0 T9
					☐ Iced ☐ Ambient °C_____
					☐ Iced ☐ Ambient °C_____

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

Courier, cooler, on ice, no seals, good condition OK 2/3/22

This Is The Last Page Of This Report.