Brunswick County Public Utilities - NC

PO Box 249
Bolivia, NC 28422-0249

Leland, N.C

Client Project# Northwest Water Plant
Samples Received: 4/12/2024

Analytical Report
0424-806

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

Report Issue Date: 5/8/2024

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 ___24____ 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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2714 Exchange Drive, Wilmington, NC 28405

Summary of Results

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Summary

	Compound	CAS	041224-S01 ng/L	041224-E01 ng/L
Acids	PFPrA	422-64-0	7.33	7.22
	PFBA	375-22-4	3.06	ND U
	PFPeA	2706-90-3	3.57	3.48
	PFHxA	307-24-4	3.92	4.20
	PFHpA	375-85-9	2.08	1.98
	PFOA	335-67-1	4.45	4.38
	PFNA	375-95-1	0.576	0.549 J
	PFDA	335-76-2	0.284 J	0.259 J
	PFUnDA	2058-94-8	0.0214 L	0.0304 L
	PFDoDA	307-55-1	ND U	ND U
	PFTrDA	72629-94-8	ND U	ND U
	PFTeDA	376-06-7	ND U	ND U
	PFHxDA	67905-19-5	0.0401 L	ND U
Sulfonates	PFBS	375-73-5	2.88	2.78
	PFPeS	2706-91-4	0.421 J	0.316 J
	PFHxS	355-46-4	2.61	2.39
	PFHpS	375-92-8	0.0893 L	0.117 L
	PFOS	1763-23-1	9.08	9.20
	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	0.114 L	0.0700 L
	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	0.285 J	0.285 J
	N-EtFOSA	4151-50-2	ND U	ND U
	N-EtFOSAA	2991-50-6	ND U	ND U
	N-EtFOSE	1691-99-2	ND U	ND U
	N-MeFOSA	31506-32-8	ND U	ND U
	N-MeFOSAA	2355-31-9	ND U	ND U
	N-MeFOSE	24448-09-7	ND U	ND U
	PFOSA	754-91-6	ND U	ND U
PFECAs	ADONA	919005-14-4	0.355 J	0.132 L
	EVE Acid	69087-46-3	ND U	ND U
	HFPO-DA	13252-13-6	2.89	2.54
	Hydro-EVE Acid	773804-62-9	0.0466 L	0.0302 L
	NFDHA	151772-58-6	ND U	ND U
	PEPA	267239-61-2	1.53	1.37
	PFECA-G	801212-59-9	ND U	ND U
	PFMOAA	674-13-5	15.9	14.9
	PFMOBA	863090-89-5	ND U	ND U
	PFMOPrA	377-73-1	ND U	ND U
	PFO2HxA	39492-88-1	3.23	3.29
	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	5.40	5.32
	R-EVE	2416366-22-6	4.31	4.52
PFESAs	11Cl-PF3OUdS	763051-92-9	ND U	ND U
	9Cl-PF3ONS	756426-58-1	ND U	ND U
	Hydrolyzed PSDA	2416366-19-1	1.51	1.52
	Nafion Byproduct 1 (PS Acid)	29311-67-9	ND U	ND U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	0.149 L	0.254 L
	NVHOS	1132933-86-8	ND U	ND U
	PFEESA	113507-82-7	ND U	ND U
	R-PSDA	2416366-18-0	2.90	2.80
	R-PSDCA	241636-21-5	ND U	ND U

Detailed Results

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	041224-S01		
Sampling Site			
Enthalpy ID	0424-806-001-1	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-04-12 10:35	Instrument	Sauron
Received Date	2024-04-12	Sample Vol mL	281.55
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 17:35	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	F240424019	7.33	0.497	1.08			
	PFBA	375-22-4	S250424019	3.06	0.226	0.568			
	PFPeA	2706-90-3	S250424019	3.57	0.162	0.568			
	PFHxA	307-24-4	S250424019	3.92	0.190	0.568			
	PFHpA	375-85-9	S250424019	2.08	0.199	0.568			
	PFOA	335-67-1	S250424019	4.45	0.130	0.568			
	PFNA	375-95-1	S250424019	0.576	0.128	0.568			
	PFDA	335-76-2	S250424019	0.284	0.162	0.568			J
	PFUnDA	2058-94-8	S250424019	0.0214	0.128	0.568			L
	PFDoDA	307-55-1	S250424019	ND	0.231	0.568			U
	PFTrDA	72629-94-8	S250424019	ND	0.188	0.568			U
	PFTeDA	376-06-7	S250424019	ND	0.217	0.568			U
	PFHxDA	67905-19-5	S250424019	0.0401	0.302	0.568			L
Sulfonates	PFBS	375-73-5	S250424019	2.88	0.302	0.568			
	PFPeS	2706-91-4	S250424019	0.421	0.117	0.535			J
	PFHxS	355-46-4	S250424019	2.61	0.439	0.520			
	PFHpS	375-92-8	S250424019	0.0893	0.275	0.541			L
	PFOS	1763-23-1	S250424019	9.08	0.300	0.526			
	PFNS	68259-12-1	S250424019	ND	0.176	0.547			U
	PFDS	335-77-3	S250424019	ND	0.298	0.547			U
	4:2 FTS	757124-72-4	S250424019	ND	0.0737	0.532			U
	6:2 FTS	27619-97-2	S250424019	0.114	0.268	0.541			L
	8:2 FTS	39108-34-4	S250424019	ND	0.127	0.544			U
	10:2 FTS	120226-60-0	S250424019	ND	0.435	0.568			U
Sulfonamidos	FBSA	30334-69-1	S250424019	0.285	0.270	0.568			J
	N-EtFOSA	4151-50-2	S250424019	ND	0.352	0.568			U
	N-EtFOSAA	2991-50-6	S250424019	ND	0.231	0.568			U
	N-EtFOSE	1691-99-2	S250424019	ND	0.870	2.56			U
	N-MeFOSA	31506-32-8	S250424019	ND	0.234	0.568			U
	N-MeFOSAA	2355-31-9	S250424019	ND	0.160	0.568			U
	N-MeFOSE	24448-09-7	S250424019	ND	0.540	2.56			U
	PFOSA	754-91-6	S250424019	ND	0.0797	0.568			U
PFECAs	ADONA	919005-14-4	S250424019	0.355	0.154	0.538			J
	EVE Acid	69087-46-3	S250424019	ND	0.181	1.28			U
	HFPO-DA	13252-13-6	S250424019	2.89	0.0602	0.568			
	Hydro-EVE Acid	773804-62-9	S250424019	0.0466	0.186	0.568			L
	NFDHA	151772-58-6	S250424019	ND	0.120	0.568			U
	PEPA	267239-61-2	S250424019	1.53	0.107	0.568			
	PFECA-G	801212-59-9	S250424019	ND	0.0758	0.568			U
	PFMOAA	674-13-5	S250424019	15.9	0.288	0.568			
	PFMOBA	863090-89-5	S250424019	ND	0.954	1.28			U
	PFMOPrA	377-73-1	S250424019	ND	0.202	0.568			U
	PFO2HxA	39492-88-1	S250424019	3.23	0.183	0.568			
	PFO3OA	39492-89-2	S250424019	ND	0.261	0.568			U
	PFO4DA	39492-90-5	S250424019	ND	0.449	2.84			U
	PFO5DA	39492-91-6	S250424019	ND	0.455	2.84			U
	PMPA	13140-29-9	S250424019	5.40	0.134	0.568			
	R-EVE	2416366-22-6	S250424019	4.31	0.943	1.28			
PFESAs	11Cl-PF3OUdS	763051-92-9	S250424019	ND	0.268	0.535			U
	9Cl-PF3ONS	756426-58-1	S250424019	ND	0.364	0.529			U
	Hydrolyzed PSDA	2416366-19-1	S250424019	1.51	0.378	0.568			
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S250424019	ND	0.304	0.568			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S250424019	0.149	0.471	0.568			L
	NVHOS	1132933-86-8	S250424019	ND	0.0876	0.568			U
	PFEESA	113507-82-7	S250424019	ND	0.171	0.568			U
	R-PSDA	2416366-18-0	S250424019	2.90	2.50	2.50			
	R-PSDCA	241636-21-5	S250424019	ND	0.240	0.568			U
ES	MPFBA		S250424019				20-150%	200.1%	Q
	M5PFPeA		S250424019				20-150%	272.2%	Q
	M3PFBS		S250424019				20-150%	355.6%	Q

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	041224-S01		
Sampling Site			
Enthalpy ID	0424-806-001-1	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-04-12 10:35	Instrument	Sauron
Received Date	2024-04-12	Sample Vol mL	281.55
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 17:35	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
	M2-4:2 FTS		S250424019				20-150%	334.8%	Q
	M5PFHxA		S250424019				20-150%	173.4%	Q
	M3HFPO-DA		S250424019				20-150%	169.4%	Q
	M4PFHpA		S250424019				20-150%	183.6%	Q
	M3PFHxS		S250424019				20-150%	202.2%	Q
	M2-6:2 FTS		S250424019				20-150%	167.8%	Q
	M8PFOA		S250424019				20-150%	187.6%	Q
	M9PFNA		S250424019				20-150%	165.5%	Q
	M8PFOS		S250424019				20-150%	192.1%	Q
	M2-8:2 FTS		S250424019				20-150%	162.6%	Q
	M8FOSA-I		S250424019				20-150%	142.2%	
	M6PFDA		S250424019				20-150%	200.0%	Q
	d3-N-MeFOSAA		S250424019				20-150%	143.4%	
	d5-N-EtFOSAA		S250424019				20-150%	143.8%	
	M7PFUdA		S250424019				20-150%	177.1%	Q
	MPFDoA		S250424019				20-150%	156.3%	Q
	M2PFTeDA		S250424019				20-150%	89.9%	
	d3-N-MeFOSA		S250424019				10-200%	60.7%	
	d5-N-EtFOSA		S250424019				10-200%	56.5%	
	d7-N-MeFOSE		S250424019				10-200%	142.4%	
	d9-N-EtFOSE		S250424019				10-200%	96.8%	
	13C3-PFPrA		F240424019				20-150%	11.3%	Q

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	041224-E01		
Sampling Site			
Enthalpy ID	0424-806-002-1	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-04-12 10:35	Instrument	Sauron
Received Date	2024-04-12	Sample Vol mL	281.41
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 18:00	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
Acids	PFPrA	422-64-0	F240424020	7.22	0.497	1.08			
	PFBA	375-22-4	S250424020	ND	0.226	0.569			U
	PFPeA	2706-90-3	S250424020	3.48	0.163	0.569			
	PFHxA	307-24-4	S250424020	4.20	0.190	0.569			
	PFHpA	375-85-9	S250424020	1.98	0.199	0.569			
	PFOA	335-67-1	S250424020	4.38	0.130	0.569			
	PFNA	375-95-1	S250424020	0.549	0.128	0.569			J
	PFDA	335-76-2	S250424020	0.259	0.163	0.569			J
	PFUnDA	2058-94-8	S250424020	0.0304	0.128	0.569			L
	PFDoDA	307-55-1	S250424020	ND	0.231	0.569			U
	PFTrDA	72629-94-8	S250424020	ND	0.188	0.569			U
	PFTeDA	376-06-7	S250424020	ND	0.217	0.569			U
	PFHxDA	67905-19-5	S250424020	ND	0.302	0.569			U
Sulfonates	PFBS	375-73-5	S250424020	2.78	0.302	0.569			
	PFPeS	2706-91-4	S250424020	0.316	0.117	0.536			J
	PFHxS	355-46-4	S250424020	2.39	0.439	0.521			
	PFHpS	375-92-8	S250424020	0.117	0.275	0.542			L
	PFOS	1763-23-1	S250424020	9.20	0.300	0.527			
	PFNS	68259-12-1	S250424020	ND	0.176	0.548			U
	PFDS	335-77-3	S250424020	ND	0.298	0.548			U
	4:2 FTS	757124-72-4	S250424020	ND	0.0737	0.533			U
	6:2 FTS	27619-97-2	S250424020	0.0700	0.268	0.542			L
	8:2 FTS	39108-34-4	S250424020	ND	0.127	0.545			U
	10:2 FTS	120226-60-0	S250424020	ND	0.435	0.569			U
Sulfonamidos	FBSA	30334-69-1	S250424020	0.285	0.270	0.569			J
	N-EtFOSA	4151-50-2	S250424020	ND	0.352	0.569			U
	N-EtFOSAA	2991-50-6	S250424020	ND	0.231	0.569			U
	N-EtFOSE	1691-99-2	S250424020	ND	0.871	2.56			U
	N-MeFOSA	31506-32-8	S250424020	ND	0.235	0.569			U
	N-MeFOSAA	2355-31-9	S250424020	ND	0.160	0.569			U
	N-MeFOSE	24448-09-7	S250424020	ND	0.540	2.56			U
	PFOSA	754-91-6	S250424020	ND	0.0798	0.569			U
PFECAs	ADONA	919005-14-4	S250424020	0.132	0.154	0.539			L
	EVE Acid	69087-46-3	S250424020	ND	0.181	1.28			U
	HFPO-DA	13252-13-6	S250424020	2.54	0.0602	0.569			
	Hydro-EVE Acid	773804-62-9	S250424020	0.0302	0.187	0.569			L
	NFDHA	151772-58-6	S250424020	ND	0.120	0.569			U
	PEPA	267239-61-2	S250424020	1.37	0.107	0.569			
	PFECA-G	801212-59-9	S250424020	ND	0.0759	0.569			U
	PFMOAA	674-13-5	S250424020	14.9	0.288	0.569			
	PFMOBA	863090-89-5	S250424020	ND	0.954	1.28			U
	PFMOPrA	377-73-1	S250424020	ND	0.203	0.569			U
	PFO2HxA	39492-88-1	S250424020	3.29	0.183	0.569			
	PFO3OA	39492-89-2	S250424020	ND	0.261	0.569			U
	PFO4DA	39492-90-5	S250424020	ND	0.450	2.84			U
	PFO5DA	39492-91-6	S250424020	ND	0.455	2.84			U
	PMPA	13140-29-9	S250424020	5.32	0.134	0.569			
	R-EVE	2416366-22-6	S250424020	4.52	0.943	1.28			
PFESAs	11Cl-PF3OUdS	763051-92-9	S250424020	ND	0.268	0.536			U
	9Cl-PF3ONS	756426-58-1	S250424020	ND	0.364	0.530			U
	Hydrolyzed PSDA	2416366-19-1	S250424020	1.52	0.378	0.569			
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S250424020	ND	0.304	0.569			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S250424020	0.254	0.471	0.569			L
	NVHOS	1132933-86-8	S250424020	ND	0.0876	0.569			U
	PFEESA	113507-82-7	S250424020	ND	0.171	0.569			U
	R-PSDA	2416366-18-0	S250424020	2.80	2.51	2.51			
	R-PSDCA	241636-21-5	S250424020	ND	0.240	0.569			U
ES	MPFBA		S250424020				20-150%	187.6%	Q
	M5PFPeA		S250424020				20-150%	257.2%	Q
	M3PFBS		S250424020				20-150%	283.1%	Q

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	041224-E01		
Sampling Site			
Enthalpy ID	0424-806-002-1	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date	2024-04-12 10:35	Instrument	Sauron
Received Date	2024-04-12	Sample Vol mL	281.41
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 18:00	Split Factor	N/A
SampleType	Sample	Method Code	EU-047-NPW
Bottle ID	A		

	Compound	CAS	Injection File Name	Sample Concentration ng/L	LOD ng/L	LOQ ng/L	Recovery Limits	Recovery	Flags
	M2-4:2 FTS		S250424020				20-150%	346.6%	Q
	M5PFHxA		S250424020				20-150%	171.2%	Q
	M3HFPO-DA		S250424020				20-150%	174.0%	Q
	M4PFHpA		S250424020				20-150%	185.2%	Q
	M3PFHxS		S250424020				20-150%	194.0%	Q
	M2-6:2 FTS		S250424020				20-150%	163.4%	Q
	M8PFOA		S250424020				20-150%	192.1%	Q
	M9PFNA		S250424020				20-150%	164.2%	Q
	M8PFOS		S250424020				20-150%	177.3%	Q
	M2-8:2 FTS		S250424020				20-150%	161.3%	Q
	M8FOSA-I		S250424020				20-150%	147.2%	
	M6PFDA		S250424020				20-150%	183.4%	Q
	d3-N-MeFOSAA		S250424020				20-150%	139.2%	
	d5-N-EtFOSAA		S250424020				20-150%	135.5%	
	M7PFUdA		S250424020				20-150%	156.7%	Q
	MPFDoA		S250424020				20-150%	145.0%	
	M2PFTeDA		S250424020				20-150%	97.8%	
	d3-N-MeFOSA		S250424020				10-200%	80.2%	
	d5-N-EtFOSA		S250424020				10-200%	78.2%	
	d7-N-MeFOSE		S250424020				10-200%	151.3%	
	d9-N-EtFOSE		S250424020				10-200%	113.8%	
	13C3-PFPrA		F240424020				20-150%	10.3%	Q

QC Data

ENTHALPY
ANALYTICAL

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	MB-17305-PFAS		
Sampling Site			
Enthalpy ID	MB-17305-PFAS	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date		Instrument	Sauron
Received Date		Sample Vol mL	250
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 16:04	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	PFPrA	422-64-0	F240424015	ND	0.560	1.22			U
	PFBA	375-22-4	S250424015	ND	0.254	0.640			U
	PFPeA	2706-90-3	S250424015	ND	0.183	0.640			U
	PFHxA	307-24-4	S250424015	ND	0.214	0.640			U
	PFHpA	375-85-9	S250424015	ND	0.224	0.640			U
	PFOA	335-67-1	S250424015	ND	0.146	0.640			U
	PFNA	375-95-1	S250424015	ND	0.145	0.640			U
	PFDA	335-76-2	S250424015	ND	0.183	0.640			U
	PFUnDA	2058-94-8	S250424015	ND	0.145	0.640			U
	PFDoDA	307-55-1	S250424015	ND	0.260	0.640			U
	PFTrDA	72629-94-8	S250424015	ND	0.212	0.640			U
	PFTeDA	376-06-7	S250424015	ND	0.244	0.640			U
	PFHxDA	67905-19-5	S250424015	0.0883	0.340	0.640			L
Sulfonates	PFBS	375-73-5	S250424015	ND	0.340	0.640			U
	PFPeS	2706-91-4	S250424015	ND	0.131	0.603			U
	PFHxS	355-46-4	S250424015	ND	0.494	0.586			U
	PFHpS	375-92-8	S250424015	ND	0.310	0.610			U
	PFOS	1763-23-1	S250424015	ND	0.338	0.593			U
	PFNS	68259-12-1	S250424015	ND	0.199	0.616			U
	PFDS	335-77-3	S250424015	ND	0.336	0.616			U
	4:2 FTS	757124-72-4	S250424015	ND	0.0830	0.600			U
	6:2 FTS	27619-97-2	S250424015	ND	0.302	0.610			U
	8:2 FTS	39108-34-4	S250424015	ND	0.143	0.613			U
	10:2 FTS	120226-60-0	S250424015	ND	0.490	0.640			U
Sulfonamidos	FBSA	30334-69-1	S250424015	ND	0.304	0.640			U
	N-EtFOSA	4151-50-2	S250424015	ND	0.396	0.640			U
	N-EtFOSAA	2991-50-6	S250424015	ND	0.260	0.640			U
	N-EtFOSE	1691-99-2	S250424015	ND	0.980	2.88			U
	N-MeFOSA	31506-32-8	S250424015	ND	0.264	0.640			U
	N-MeFOSAA	2355-31-9	S250424015	ND	0.180	0.640			U
	N-MeFOSE	24448-09-7	S250424015	ND	0.608	2.88			U
	PFOSA	754-91-6	S250424015	ND	0.0898	0.640			U
PFECAs	ADONA	919005-14-4	S250424015	ND	0.173	0.606			U
	EVE Acid	69087-46-3	S250424015	ND	0.204	1.44			U
	HFPO-DA	13252-13-6	S250424015	ND	0.0678	0.640			U
	Hydro-EVE Acid	773804-62-9	S250424015	ND	0.210	0.640			U
	NFDHA	151772-58-6	S250424015	ND	0.135	0.640			U
	PEPA	267239-61-2	S250424015	ND	0.120	0.640			U
	PFECA-G	801212-59-9	S250424015	ND	0.0854	0.640			U
	PFMOAA	674-13-5	S250424015	0.727	0.324	0.640			
	PFMOBA	863090-89-5	S250424015	ND	1.07	1.44			U
	PFMOPrA	377-73-1	S250424015	ND	0.228	0.640			U
	PFO2HxA	39492-88-1	S250424015	ND	0.206	0.640			U
	PFO3OA	39492-89-2	S250424015	ND	0.294	0.640			U
	PFO4DA	39492-90-5	S250424015	ND	0.506	3.20			U
	PFO5DA	39492-91-6	S250424015	ND	0.512	3.20			U
	PMPA	13140-29-9	S250424015	ND	0.151	0.640			U
	R-EVE	2416366-22-6	S250424015	ND	1.06	1.44			U
PFESAs	11Cl-PF3OUdS	763051-92-9	S250424015	ND	0.302	0.603			U
	9Cl-PF3ONS	756426-58-1	S250424015	ND	0.410	0.596			U
	Hydrolyzed PSDA	2416366-19-1	S250424015	ND	0.426	0.640			U
	Nafion Byproduct 1 (PS Acid)	29311-67-9	S250424015	ND	0.342	0.640			U
	Nafion Byproduct 2 (Hydro-PS Acid)	749836-20-2	S250424015	ND	0.530	0.640			U
	NVHOS	1132933-86-8	S250424015	ND	0.0986	0.640			U
	PFEESA	113507-82-7	S250424015	ND	0.192	0.640			U
	R-PSDA	2416366-18-0	S250424015	ND	2.82	2.82			U
	R-PSDCA	241636-21-5	S250424015	ND	0.270	0.640			U
ES	MPFBA		S250424015				20-150%	205.9%	Q
	M5PFPeA		S250424015				20-150%	206.0%	Q
	M3PFBS		S250424015				20-150%	176.9%	Q

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Details

Sample Name	MB-17305-PFAS		
Sampling Site			
Enthalpy ID	MB-17305-PFAS	Prep Batch	EU17305
Matrix	aqueous	Analyst	rappelle
Sampling Date		Instrument	Sauron
Received Date		Sample Vol mL	250
Prep Date	2024-04-24 09:40	Extract Vol mL	0.4
AnalysisDate	2024-04-25 16:04	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
	M2-4:2 FTS		S250424015				20-150%	368.7%	Q
	M5PFHxA		S250424015				20-150%	185.5%	Q
	M3HFPO-DA		S250424015				20-150%	180.5%	Q
	M4PFHpA		S250424015				20-150%	192.7%	Q
	M3PFHxS		S250424015				20-150%	205.9%	Q
	M2-6:2 FTS		S250424015				20-150%	178.8%	Q
	M8PFOA		S250424015				20-150%	196.7%	Q
	M9PFNA		S250424015				20-150%	170.8%	Q
	M8PFOS		S250424015				20-150%	198.3%	Q
	M2-8:2 FTS		S250424015				20-150%	171.8%	Q
	M8FOSA-I		S250424015				20-150%	167.1%	Q
	M6PFDA		S250424015				20-150%	199.2%	Q
	d3-N-MeFOSAA		S250424015				20-150%	153.7%	Q
	d5-N-EtFOSAA		S250424015				20-150%	143.7%	
	M7PFUdA		S250424015				20-150%	175.9%	Q
	MPFDoA		S250424015				20-150%	168.7%	Q
	M2PFTeDA		S250424015				20-150%	123.2%	
	d3-N-MeFOSA		S250424015				10-200%	79.2%	
	d5-N-EtFOSA		S250424015				10-200%	82.6%	
	d7-N-MeFOSE		S250424015				10-200%	183.5%	
	d9-N-EtFOSE		S250424015				10-200%	148.2%	
	13C3-PFPrA		F240424015				20-150%	18.2%	Q

Enthalpy Analytical

Job No.: 0424-806-1 PFAS by Isotope Dilution (non-potable water)

Brunswick County Public Utilities - NC Northwest Water Plant Leland, N.C

Enthalpy ID	OPR-17305-PFAS	Prep Batch	EU17305	Sample Vol (mL)	250
Sample Name	OPR-17305-PFAS	Prep Date	2024-04-24 09:40	Extract Vol (mL)	0.4
Matrix	aqueous	Analysis Date	2024-04-24 16:05	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	S250424016	22.0	0.254	0.640	69.1-122%	110.0%	
	PFPeA	2706-90-3	S250424016	21.7	0.183	0.640	68.5-121%	108.3%	
	PFHxA	307-24-4	S250424016	20.4	0.214	0.640	68.3-121%	102.0%	
	PFHpA	375-85-9	S250424016	19.6	0.224	0.640	62.4-128%	98.0%	
	PFOA	335-67-1	S250424016	20.7	0.146	0.640	66.3-124%	103.3%	
	PFNA	375-95-1	S250424016	21.7	0.145	0.640	70.5-120%	108.6%	
	PFDA	335-76-2	S250424016	19.6	0.183	0.640	68.9-117%	97.8%	
	PFUnDA	2058-94-8	S250424016	21.7	0.145	0.640	58.1-132%	108.5%	
	PFDoDA	307-55-1	S250424016	20.6	0.260	0.640	52.1-140%	102.9%	
	PFTrDA	72629-94-8	S250424016	24.6	0.212	0.640	65-144%	123.0%	
	PFTeDA	376-06-7	S250424016	20.2	0.244	0.640	36.1-161%	101.1%	
Sulfonates	PFBS	375-73-5	S250424016	19.6	0.340	0.640	67.5-111.6%	110.7%	
	PFPeS	2706-91-4	S250424016	21.2	0.131	0.603	51.8-142%	112.6%	
	PFHxS	355-46-4	S250424016	18.2	0.494	0.586	59.6-128%	99.5%	
	PFHpS	375-92-8	S250424016	20.4	0.310	0.610	46.9-157%	107.0%	
	PFOS	1763-23-1	S250424016	19.0	0.338	0.593	59.2-132%	102.3%	
	PFNS	68259-12-1	S250424016	20.4	0.199	0.616	53.9-133%	106.1%	
	PFDS	335-77-3	S250424016	19.2	0.336	0.616	38.1-142%	99.5%	
	4:2 FTS	757124-72-4	S250424016	18.5	0.0830	0.600	61.9-131%	98.7%	
	6:2 FTS	27619-97-2	S250424016	20.7	0.302	0.610	62.3-129%	108.8%	
	8:2 FTS	39108-34-4	S250424016	19.7	0.143	0.613	37.5-159%	102.5%	
Sulfonamidos	N-EtFOSAA	2991-50-6	S250424016	21.7	0.260	0.640	61.5-133%	108.7%	
	N-MeFOSAA	2355-31-9	S250424016	21.5	0.180	0.640	57.3-138%	107.4%	
	PFOSA	754-91-6	S250424016	18.6	0.0898	0.640	49.1-143%	92.8%	
PFECAs	HFPO-DA	13252-13-6	S250424016	20.4	0.0678	0.640	57.2-130%	101.8%	
ES	MPFBA		S250424016				20-150%	180.1%	Q
	M5PFPeA		S250424016				20-150%	183.7%	Q
	M3PFBS		S250424016				20-150%	172.7%	Q
	M2-4:2 FTS		S250424016				20-150%	369.7%	Q
	M5PFHxA		S250424016				20-150%	187.4%	Q
	M3HFPO-DA		S250424016				20-150%	189.6%	Q
	M4PFHpA		S250424016				20-150%	197.1%	Q
	M3PFHxS		S250424016				20-150%	206.0%	Q
	M2-6:2 FTS		S250424016				20-150%	174.7%	Q
	M8PFOA		S250424016				20-150%	196.5%	Q
	M9PFNA		S250424016				20-150%	170.0%	Q
	M8PFOS		S250424016				20-150%	195.5%	Q
	M2-8:2 FTS		S250424016				20-150%	177.7%	Q
	M8FOSA-I		S250424016				20-150%	152.9%	Q
	M6PFDA		S250424016				20-150%	196.5%	Q
	d3-N-MeFOSAA		S250424016				20-150%	149.4%	
	d5-N-EtFOSAA		S250424016				20-150%	144.0%	
	M7PFUdA		S250424016				20-150%	176.1%	Q
	MPFDoA		S250424016				20-150%	171.5%	Q
	M2PFTeDA		S250424016				20-150%	121.9%	

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0424-806-1 PFAS by Isotope Dilution (non-potable water)
Client ID.	Northwest Water Plant Site: Leland, N.C

1. Custody

Jack Sullivan received the samples at 9.5 °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.

Samples received above 6 °C, client notified in order acknowledgment documentation.

Table 1 - Sample Inventory

EU Lab Sample ID	Client Sample ID	Matrix	Received
0424-806-001-1	041224-S01	aqueous	2024-04-12
0424-806-002-1	041224-E01	aqueous	2024-04-12

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").

The samples were analyzed on more than one instrument sequence in order to include all of the analytes of interest.

Polar compound PFPrA in the samples, including the method blank (MB) and Ongoing Precision Recovery (OPR) samples, was analyzed at a dilution factor of five (D5).

4. Calibration

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

Enthalpy Analytical Narrative Summary

Company	Brunswick County Public Utilities - NC
Job No.	0424-806-1 PFAS by Isotope Dilution (non-potable water)
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.

Analytes that are detected in a batch method blank (MB) above 1/2 LOQ can result in a high bias when detected above LOQ in sample(s) where the extract concentration is less than ten times that in the MB. PFMOAA was detected > 1/2 LOQ in the MB. This analyte was detected in the samples at greater than ten times the extract concentration in the MB; therefore, the data is reportable without adverse impact.

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.

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

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.

Surrogate (ES) 13C3-PFPrA did not meet the method recovery limit in the 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.

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.

- 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-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 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
*	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

ENTHALPY
ANALYTICAL

0424-806

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 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

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:
041224-S01	4/12/2024	1035AM	250 ml	G	NW	2											X	Please Add PFPrA and
041224-E01	4/12/2024	1035AM	250 ml	G	DW	2											X	PFHpA To The Testing.
																		Mark Hager Knows About
																		This If you Have Questions

Relinquished By	Date	Received By	Date	Time	Sample Temperature Upon Receipt
BILLY BENTON	4/12/2024	Josh Sullivan	4-12-24	11:16	☑ Iced ☐ Ambient °C 9.5
					☐ Iced ☐ Ambient °C
					☐ Iced ☐ Ambient °C

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

JOB ID: 0424-806 Date / Time: 04/12/24 11:16 Initials: J.T.S

OR

Client: Brunswick County Utilities

Cooler 1 of 1

Temp °C: 9.5 Thermometer ID: T12

Received via
- FedEx ☐
- UPS ☐
- DHL ☐
- USPS ☐
- Courier ☑
- Other ☐

Check one		Check one			Yes	No
On ice:	☑	in a Box:	☐	Cooler seals:	☐	☑
Melted ice:	☐	in a Cooler:	☑	Sample seals:	☐	☑
Ambient:	☐	Cooler in Box:	☐	Good condition:	☑	☐

Comment:

Cooler ____ of ____

Temp °C: ____ Thermometer ID: ____

Received via
- FedEx ☐
- UPS ☐
- DHL ☐
- USPS ☐
- Courier ☐
- Other ☐

Check one		Check one			Yes	No
On ice:	☐	in a Box:	☐	Cooler seals:	☐	☐
Melted ice:	☐	in a Cooler:	☐	Sample seals:	☐	☐
Ambient:	☐	Cooler in Box:	☐	Good condition:	☐	☐

Comment:

Cooler ____ of ____

Temp °C: ____ Thermometer ID: ____

Received via
- FedEx ☐
- UPS ☐
- DHL ☐
- USPS ☐
- Courier ☐
- Other ☐

Check one		Check one			Yes	No
On ice:	☐	in a Box:	☐	Cooler seals:	☐	☐
Melted ice:	☐	in a Cooler:	☐	Sample seals:	☐	☐
Ambient:	☐	Cooler in Box:	☐	Good condition:	☐	☐

Comment:

This Is The Last Page Of This Report.