

Regional Water Authority

90 Sargent Drive • New Haven, Connecticut 06511-5966
203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Laboratory Certification IDs

CT: PH-0411, NH: 2239, NY: 11867, PA: 68-05519, RI: LAO00339, MA: M-CT004
See website, www.rwalab.com/rwa-lab-certifications, for certified analyte list.

Client: Paul Hennessy
Randolph-Holbrook Joint Water

275 Pond St
Randolph, MA 02368

781-964-9292
phennessy@holbrookmassachusetts.us

ANALYTICAL REPORT

Project: FEE-RANDOLPHHOLBROOK-23-000013

Report Date: 10/13/2023

This Laboratory is in compliance with the NELAP requirements of procedures used except where indicated. This report contains results for the analysis tested, under the sampling conditions described on the Chain Of Custody (COC), as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

The COC form has been scanned to accompany the analytical report and is an exact copy of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact RWA Client Services at (203) 401-6743 or (877) 894-5773. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Richard Sibley
Laboratory Manager
Technical Representative

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SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300425105	RAW	10/3/2023 1300	10/4/23
300425106	FB - RAW	10/3/2023 1300	10/4/23
300425107	FINISHED	10/3/2023 1300	10/4/23
300425108	FB - FINISHED	10/3/2023 1300	10/4/23

Case Narrative and Comments

All QC passes criteria unless noted in a Comment below.

Samples were received at the appropriate temperature and in accordance with the chain of custody unless noted.

E = Exceeds calibration range ND = Non Detect FB = Field Blank RL = Minimum Reporting Level

MDL = Method Detection Limit SUR = Associated surrogate recovery not met, result suspect.

J = The reported result is below RL but greater than the MDL. The reported result is an estimate.

Massachusetts samples for required water quality sampling are included.

Samples and FBs were received in bottles with preservatives Trizma HCL & Trizma base per method requirements.

"FB" added at beginning/end designates "Field Blank" (Field Reagent Blank) for associated Customer ID sample. Field Blank analytes (unless noted) were shown to be less than 1/3 of the RL as per EPA537 or EPA537.1.

Method EPA537 or EPA537.1 Analyte Results, MDL and RL are adjusted to reflect the actual Final (mL) volume used.

<u>Method</u>	<u>CAS#</u>	<u>PFAS Analyte (Acronym)</u>
537, 537.1	1763-23-1	Perfluorooctanesulfonic acid (PFOS)
537, 537.1	335-67-1	Perfluorooctanoic acid (PFOA)
537, 537.1	355-46-4	Perfluorohexanesulfonic acid (PFHxS)
537, 537.1	375-95-1	Perfluorononanoic acid (PFNA)
537, 537.1	375-85-9	Perfluorohepatanoic acid (PFHpA)
537, 537.1	335-76-2	Perfluorodecanoic acid (PFDA)
537, 537.1	375-73-5	Perfluorobutanesulfonic acid (PFBS)
537, 537.1	307-55-1	Perfluorododecanoic acid (PFDoA)
537, 537.1	307-24-4	Perfluorohexanoic acid (PFHxA)
537, 537.1	376-06-7	Perfluorotetradecanoic acid (PFTA)
537, 537.1	72629-94-8	Perfluorotridecanoic acid (PFTrDA)
537, 537.1	2058-94-8	Perfluoroundecanoic acid (PFUnA)
537, 537.1	2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537, 537.1	2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1	763051-92-9	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	756426-58-1	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)
537.1	919005-14-4	4,8-dioxa-3H-perfluorononanoic acid (ADONA)
537.1	13252-13-6	Hexafluoropropylene oxide dimer acid (HFPO-DA)

PFAS6 (MassDEP) = sum of PFOS, PFOA, PFHxS, PFNA, PFHpA and PFDA (only include Results at or above the RL)

MassDEP has established a maximum contaminant level (MCL) of 20 ng/L for PFAS6.

Sample# 300425105 for EPA 537.1: fails high for 13C3-HFPO-DA surrogate recovery; the associated analyte HFPO-DA is suspect. HFPO-DA was not detected in sample.

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Sample ID: 300425105

Customer ID: RAW

Collection Date: 10/03/2023 13:00

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-23-000013

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.51	0.95	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFHxA	307-24-4	4.72	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0	SUR	EPA537.1	10/10/23 2210	CSS
PFHpA	375-85-9	2.41	0.70	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFHxS	355-46-4	2.74	0.83	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFOA	335-67-1	5.48	0.76	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFOS	1763-23-1	10.18	1.01	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFNA	375-95-1	1.17	0.72	2.0	ng/L	1.0	J	EPA537.1	10/10/23 2210	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2210	CSS
PFAS6 (MassDEP)		20.81	2.00	2.0	ng/L	1.0				
Surrogates					Results	Recovery Limits	Pass/Fail			
13C-PFHxA (SUR) % Recovery					105.30	70 - 130	Pass			
13C3-HFPO-DA (SUR) % Recovery					130.20	70 - 130	Fail			
13C-PFDA (SUR) % Recovery					97.60	70 - 130	Pass			
d5-NEtFOSAA (SUR) % Recovery					71.50	70 - 130	Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300425105	PFAS_537	537_EXT-231006-1	250	10/06/2023

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Sample ID: 300425106

Customer ID: FB - RAW

Collection Date: 10/03/2023 13:00

PWS ID# / LOC ID#: FB - RAW

Project: FEE-RANDOLPHHOLBROOK-23-000013

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.95	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2224	CSS
PFAS6 (MassDEP)		ND	2.00	2.0	ng/L	1.0				
Surrogates					Results	Recovery Limits		Pass/Fail		
					102.20	70 - 130		Pass		
					97.30	70 - 130		Pass		
					86.80	70 - 130		Pass		
					71.00	70 - 130		Pass		

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300425106	PFAS_537	537_EXT-231006-1	250	10/06/2023

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Sample ID: 300425107

Customer ID: FINISHED

Collection Date: 10/03/2023 13:00

PWS ID# / LOC ID#: 4244001 / 10296

Project: FEE-RANDOLPHHOLBROOK-23-000013

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.48	0.95	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFHxA	307-24-4	4.56	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFHpA	375-85-9	2.55	0.70	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFHxS	355-46-4	2.78	0.83	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFOA	335-67-1	5.66	0.76	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFOS	1763-23-1	10.30	1.01	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFNA	375-95-1	1.23	0.72	2.0	ng/L	1.0	J	EPA537.1	10/10/23 2239	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2239	CSS
PFAS6 (MassDEP)		21.29	2.00	2.0	ng/L	1.0				
Surrogates		Results	Recovery Limits		Pass/Fail					
13C-PFHxA (SUR) % Recovery		101.80	70 - 130		Pass					
13C3-HFPO-DA (SUR) % Recovery		115.90	70 - 130		Pass					
13C-PFDA (SUR) % Recovery		97.20	70 - 130		Pass					
d5-NEtFOSAA (SUR) % Recovery		75.00	70 - 130		Pass					

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300425107	PFAS_537	537_EXT-231006-1	250	10/06/2023

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Sample ID: 300425108

Customer ID: FB - FINISHED

Collection Date: 10/03/2023 13:00

PWS ID# / LOC ID#: FB - FINISHED

Project: FEE-RANDOLPHHOLBROOK-23-000013

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.95	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	10/10/23 2253	CSS
PFAS6 (MassDEP)		ND	2.00	2.0	ng/L	1.0				
Surrogates		Results	Recovery Limits		Pass/Fail					
13C-PFHxA (SUR) % Recovery		109.00	70 - 130		Pass					
13C3-HFPO-DA (SUR) % Recovery		115.40	70 - 130		Pass					
13C-PFDA (SUR) % Recovery		100.10	70 - 130		Pass					
d5-NEtFOSAA (SUR) % Recovery		88.80	70 - 130		Pass					

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300425108	PFAS_537	537_EXT-231006-1	250	10/06/2023



90 Sargent Dr, New Haven, CT 06511
 Phone: 203-401-2700
 Fax: 203-401-6799

Chain of Custody Form

Company Name RANDOLPH/HOEBROOK JOINT WATER		Company Address 275 RAND ST. RANDOLPH, MA 02368		State Sample Collected: CT NY Other (specify) MA	
Sampler PAUL HENNESSY		PO Number		Evidence of Cooling (Circle): <input type="radio"/> or <input type="radio"/> N Cooler Temp °C: 5.8	
RWA LIMS Number 300425105 107		Date Collected 10/3/23 10/3/23		Container & Preservative Meet Criteria (Circle): <input checked="" type="radio"/> Yes <input type="radio"/> No	
Time Collected 1PM 1PM		Sample ID / Sample Location ① RAW ② FINISHED		LOT # SLCN1650 LOT # SLCN1665	
Number of Bottles 5 5		Test Requested, Container, & Preservative		PFAS PFA5 14 PFAS PFA5 14 250mL Plastic w/Tris Hydrochloride & Tris (Hydroxymethyl) Aminomethane 250mL Plastic w/Tris Hydrochloride & Tris (Hydroxymethyl) Aminomethane PFAS Poured Field Blank Field Blank # 300125106 108	
Relinquished By (Signature): <i>Paul Hennessy</i>		Relinquished by (Signature):		NOT FOR COMPLIANCE MA DEP COMPLIANCE	
Date & Time: 10/3/23 11:50 AM		Date & Time:		Received at RWA via Fed Ex ^{10/10/23}	
Received By (Signature):		Received By (Signature):		Comments: PFA5 14	
Date & Time: 10/4/23 09:50 AM		Date & Time:		Fee - Randolph/Hoebrook - 23-000013	