

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-25-000002

Report Date: 3/7/2025

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.

A handwritten signature in black ink, appearing to read "Richard Sibley".

Richard Sibley
Laboratory Manager
Technical Representative

SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300664756	Raw	2/18/2025 1400	2/19/25
300664757	Field Blank - Raw	2/18/2025 1400	2/19/25
300664758	Finished	2/18/2025 1400	2/19/25
300664759	Field Blank - Finished	2/18/2025 1400	2/19/25

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

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.

Method	CAS#	PFAS Analyte (Acronym)
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	Perfluorohexanoic 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-chloroeicosafluoro-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-dioxo-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.

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

90 Sargent Drive • New Haven, Connecticut 06511-5966
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Sample ID: 300664756

Customer ID: Raw

Collection Date: 02/18/2025 14:00

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-25-000002

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	3.70	0.96	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFHxA	307-24-4	4.01	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFHpA	375-85-9	1.94	0.71	2.02	ng/L	1.01	J	EPA537.1	2/25/25 0022	CSS
PFHxS	355-46-4	4.95	0.84	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFOA	335-67-1	4.50	0.77	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFOS	1763-23-1	9.22	1.02	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFNA	375-95-1	0.89	0.73	2.02	ng/L	1.01	J	EPA537.1	2/25/25 0022	CSS
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFDaA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0022	CSS
PFAS6 (MassDEP)		18.67	2.02	2.02	ng/L	1.01				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		100.56		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		92.09		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		94.35		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		91.27		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300664756	PFAS_537	537_EXT-250221-1	248	02/21/2025

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Sample ID: 300664757

Customer ID: Field Blank - Raw

Collection Date: 02/18/2025 14:00

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000002

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.96	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0035	CSS
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			94.90		70 - 130		Pass			
13C3-HFPO-DA (SUR) % Recovery			88.42		70 - 130		Pass			
13C-PFDA (SUR) % Recovery			88.06		70 - 130		Pass			
d5-NEtFOSAA (SUR) % Recovery			89.80		70 - 130		Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300664757	PFAS_537	537_EXT-250221-1	248	02/21/2025

90 Sargent Drive • New Haven, Connecticut 06511-5966
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Sample ID: 300664758

Customer ID: Finished

Collection Date: 02/18/2025 14:00

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-25-000002

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	1.79	0.96	2.02	ng/L	1.01	J	EPA537.1	2/25/25 0049	CSS
PFHxA	307-24-4	5.20	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFHpA	375-85-9	2.30	0.71	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFHxS	355-46-4	4.11	0.84	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFOA	335-67-1	5.10	0.77	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFOS	1763-23-1	8.45	1.02	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFNA	375-95-1	1.00	0.73	2.02	ng/L	1.01	J	EPA537.1	2/25/25 0049	CSS
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0049	CSS
PFAS6 (MassDEP)		19.96	2.02	2.02	ng/L	1.01				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		118.08		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		125.39		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		112.70		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		88.40		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300664758	PFAS_537	537_EXT-250221-1	248	02/21/2025

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Sample ID: 300664759

Customer ID: Field Blank - Finished

Collection Date: 02/18/2025 14:00

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000002

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.96	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA537.1	2/25/25 0102	CSS
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			110.15		70 - 130		Pass			
13C3-HFPO-DA (SUR) % Recovery			91.67		70 - 130		Pass			
13C-PFDA (SUR) % Recovery			104.42		70 - 130		Pass			
d5-NEtFOSAA (SUR) % Recovery			95.15		70 - 130		Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300664759	PFAS_537	537_EXT-250221-1	248	02/21/2025

Client Services Phone: 203-401-6743

[illegible]

South Central Connecticut Regional Water Authority PFAS QA/QC Summary

Extraction Batch QC for: EPA 537.1

MA Lab Cert.#: M-CT004

Extraction Batch Date: 2/21/2025

Sample ID for LFSM/LFSMD: 300664894

Analyte	LFSM %Recovery	LFSMD %Recovery	RPD of LFSM/LFSMD	LRB (MRL is 2)		LFB 60 ng/L %Recovery
	Acceptance Range 70-130%	Acceptance Range 70-130%	Acceptance Limit <30%	Result, ng/L	Meets < 1/3 of MRL criteria?	Acceptance Range 70-130%
PFBS	93.9	85.9	7.3	ND	[Y]	88.4
PFHxA	98.2	108.8	9.2	ND	[Y]	97.2
HFPO-DA	87.4	84.5	3.3	ND	[Y]	83.1
PFHpA	90.6	101.6	10.8	ND	[Y]	92.9
PFHxS	110.0	108.5	1.3	ND	[Y]	92.2
ADONA	97.4	104.8	7.3	ND	[Y]	92.5
PFOA	89.2	98.0	8.2	ND	[Y]	96.2
PFOS	105.2	106.9	1.4	ND	[Y]	90.5
PFNA	90.6	109.4	18.4	ND	[Y]	94.1
9CI-PF3ONS	93.6	108.5	14.7	ND	[Y]	96.8
PFDA	82.5	95.5	14.6	ND	[Y]	95.3
PFUnA	91.2	105.1	14.2	ND	[Y]	98.6
11CI-PF3OUdS	90.3	99.2	9.4	ND	[Y]	88.2
NMeFOSAA	89.6	90.7	1.2	ND	[Y]	89.0
NEtFOSAA	76.3	100.4	27.3	ND	[Y]	91.0
PFDaA	87.4	101.7	15.1	ND	[Y]	88.4
PFTTrDA	84.9	101.8	18.1	ND	[Y]	88.7
PFTA	94.0	97.7	3.9	ND	[Y]	94.5

Surrogate %Recovery

¹³ C ₂ -PFHxA	¹³ C ₃ -HFPO-DA	¹³ C ₂ -PFDA	d ₅ -NEtFOSAA	
109.01	101.83	105.51	97.25	LFSM
121.54	111.96	116.48	109.05	LFSMD
103.10	98.76	97.70	103.34	LRB
98.60	94.26	98.82	93.38	LFB

Note: The Surrogate %Recovery for Samples and Poured Field Blanks is included on Final Reports.

All Batch QC passes method criteria unless noted in "Comments" section below

Comments: The matrix spike data is **NOT** from a sample in this upload batch.

LRB = Laboratory Reagent Blank

RPD = relative percent difference

FB = Field Blank

ND = Non-Detect

LFB = Laboratory Fortified Blank

MRL = Method Reporting Level

Results are ng/L (ppt)

LFSM = Laboratory Fortified Sample Matrix

LFSM/LFSMD spike concentration is 20 ng/L, unless noted otherwise

LFSMD = Laboratory Fortified Sample Matrix Duplicate

Surrogate Acceptance Limit is 70 - 130% Recovery