

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
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ANALYTICAL REPORT

Project: FEE-RANDOLPHHOLBROOK-25-000007

Report Date: 8/5/2025

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
300727405	RAW	7/10/2025 1430	7/11/25
300727406	FIELD BLANK - RAW	7/10/2025 1430	7/11/25
300727407	FINISHED	7/10/2025 1430	7/11/25
300727408	FIELD BLANK - FINISHED	7/10/2025 1430	7/11/25

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.

<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	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.

300727408 Field Blank, EPA 537.1: pH fails at a 5.0, outside of expected range 6.5 to 7.5. All surrogate recoveries fail low (< 70%). All analytes are <1/3 MRL and all IS recoveries pass.

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

Sample ID: 300727405

Customer ID: RAW

Collection Date: 07/10/2025 14:30

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-25-000007

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	1.68	0.97	2.04	ng/L	1.02	J	EPA 537.1	7/17/25 2119	DSA
PFHxA	307-24-4	3.91	0.77	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
HFPO-DA	13252-13-6	ND	1.16	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFHpA	375-85-9	1.74	0.71	2.04	ng/L	1.02	J	EPA 537.1	7/17/25 2119	DSA
PFHxS	355-46-4	2.27	0.85	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
ADONA	919005-14-4	ND	0.64	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFOA	335-67-1	5.26	0.78	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFOS	1763-23-1	8.83	1.03	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFNA	375-95-1	1.16	0.73	2.04	ng/L	1.02	J	EPA 537.1	7/17/25 2119	DSA
9CI-PF3ONS	756426-58-1	ND	0.86	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFDA	335-76-2	ND	0.77	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFUnA	2058-94-8	ND	0.96	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
11CI-PF3OUdS	763051-92-9	ND	1.06	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
NMeFOSAA	2355-31-9	ND	1.17	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
NEtFOSAA	2991-50-6	ND	1.17	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFDoA	307-55-1	ND	0.92	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFTTrDA	72629-94-8	ND	0.95	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFTA	376-06-7	ND	1.06	2.04	ng/L	1.02		EPA 537.1	7/17/25 2119	DSA
PFAS6 (MassDEP)		16.36	2.04	2.04	ng/L	1.02				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		88.80		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		110.90		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		99.50		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		81.80		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300727405	PFAS_537	537_EXT-250714-1	244	07/14/2025

90 Sargent Drive • New Haven, Connecticut 06511-5966
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Sample ID: 300727406

Customer ID: FIELD BLANK - RAW

Collection Date: 07/10/2025 14:30

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000007

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		EPA 537.1	7/17/25 2135	DSA
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2135	DSA
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			94.50		70 - 130		Pass			
13C3-HFPO-DA (SUR) % Recovery			115.10		70 - 130		Pass			
13C-PFDA (SUR) % Recovery			101.70		70 - 130		Pass			
d5-NEtFOSAA (SUR) % Recovery			92.60		70 - 130		Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300727406	PFAS_537	537_EXT-250714-1	248	07/14/2025

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Sample ID: 300727407

Customer ID: FINISHED

Collection Date: 07/10/2025 14:30

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-25-000007

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	EPA 537.1	7/17/25 2151	DSA
PFHxA	307-24-4	3.74	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFHpA	375-85-9	1.58	0.71	2.02	ng/L	1.01	J	EPA 537.1	7/17/25 2151	DSA
PFHxS	355-46-4	2.79	0.84	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFOA	335-67-1	5.55	0.77	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFOS	1763-23-1	9.22	1.02	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFNA	375-95-1	1.07	0.73	2.02	ng/L	1.01	J	EPA 537.1	7/17/25 2151	DSA
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2151	DSA
PFAS6 (MassDEP)		17.56	2.02	2.02	ng/L	1.01				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		88.60		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		110.60		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		100.20		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		85.90		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300727407	PFAS_537	537_EXT-250714-1	248	07/14/2025

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

Sample ID: 300727408

Customer ID: FIELD BLANK - FINISHED

Collection Date: 07/10/2025 14:30

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000007

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		EPA 537.1	7/17/25 2207	DSA
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	7/17/25 2207	DSA
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			13.20		70 - 130		Fail			
13C3-HFPO-DA (SUR) % Recovery			16.30		70 - 130		Fail			
13C-PFDA (SUR) % Recovery			60.20		70 - 130		Fail			
d5-NEtFOSAA (SUR) % Recovery			31.10		70 - 130		Fail			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300727408	PFAS_537	537_EXT-250714-1	248	07/14/2025

Chain of Custody Form

Company Name RANDOLPH/HOLBROOK JOINT WATER			Company Address 275 POND ST. RANDOLPH, MA 02043			Test Requested, Container, & Preservative			State Sample Collected: CT ☐ NY ☐ Other (specify) <u>MA</u>		
Sampler PAUL HENNESSY			PO Number			Number of Bottles			Thermometer ID:		
RWA LIMS Number			Date Collected			Time Collected			Evidence of Cooling (Circle): ☒ or ☐ N		
Sample ID / Sample Location			Time Collected			Sample ID / Sample Location			Cooler Temp °C: <u>10</u>		
300727405			7/10/25			230PM			EPA 537.1 - Poured Field Blank		
300727407			7/10/25			230PM			250mL Plastic w/Tris Hydrochloride & Tris (Hydroxymethyl) Aminomethane		
406			✓			✓			250mL Plastic w/Tris Hydrochloride & Tris (Hydroxymethyl) Aminomethane		
408			✓			✓			250mL Plastic w/Tris Hydrochloride & Tris (Hydroxymethyl) Aminomethane		
Remarks			Remarks			Remarks			Container & Preservative Meet Criteria (Circle): ☒ Yes ☐ No		
NOT FOR COMPLIANCE			NOT FOR COMPLIANCE			NOT FOR COMPLIANCE			MA DEP COMPLIANCE		
Comments:			Comments:			Comments:			Comments:		
Relinquished By (Signature):			Relinquished By (Signature):			Relinquished By (Signature):			Relinquished By (Signature):		
Date & Time: 7/10/25 245PM			Date & Time: 7/10/25 245PM			Date & Time: 7/10/25 245PM			Date & Time: 7/10/25 245PM		
Received By (Signature):			Received By (Signature):			Received By (Signature):			Received By (Signature):		
Date & Time: 7/11/25 1350			Date & Time: 7/11/25 1350			Date & Time: 7/11/25 1350			Date & Time: 7/11/25 1350		

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: 7/14/2025

Sample ID for LFSM/LFSMD: 300726741

Analyte	LFSM %Recovery	LFSMD %Recovery	RPD of LFSM/LFSMD	LRB (MRL is 2)		LFB 20 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	75.3	78.1	3.4	ND	[Y]	78.8
PFHxA	94.8	97.3	2.4	ND	[Y]	100.9
HFPO-DA	90.7	92.1	1.5	ND	[Y]	101.5
PFHpA	75.1	76.7	2.1	ND	[Y]	78.7
PFHxS	99.4	101.0	1.5	ND	[Y]	105.6
ADONA	98.8	99.5	0.8	ND	[Y]	100.7
PFOA	94.3	96.9	2.5	ND	[Y]	100.0
PFOS	96.1	98.5	2.3	ND	[Y]	101.0
PFNA	98.4	98.4	0.0	ND	[Y]	102.2
9CI-PF3ONS	97.2	98.7	1.5	ND	[Y]	102.6
PFDA	75.9	76.5	0.7	ND	[Y]	80.2
PFUnA	77.2	77.5	0.3	ND	[Y]	80.5
11CI-PF3OUdS	90.1	90.1	0.1	ND	[Y]	94.7
NMeFOSAA	94.7	100.4	5.9	ND	[Y]	105.0
NEtFOSAA	70.1	72.9	4.0	ND	[Y]	74.4
PFDaA	88.3	88.6	0.4	ND	[Y]	93.7
PFTTrDA	83.1	82.4	0.9	ND	[Y]	87.1
PFTA	89.5	90.2	0.7	ND	[Y]	95.8

Surrogate %Recovery

¹³ C ₂ -PFHxA	¹³ C ₃ -HFPO-DA	¹³ C ₂ -PFDA	d ₅ -NEtFOSAA	
79.40	92.70	92.30	81.80	LFSM
81.90	94.60	96.40	87.70	LFSMD
85.60	91.90	99.10	86.80	LRB
90.20	105.70	105.20	95.80	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.

Sample# 300727407 FB-Finished: All surrogate recoveries fail low. All analytes are <1/3 MRL and all IS recoveries pass. Sample bottle preservation pH check of 5.0 was below expected range of 6.5 to 7.5 units.

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