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-25-000003

Report Date: 4/2/2025

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.

Richard Sibley
Laboratory Manager
Technical Representative

Regional Water Authority
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SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300669623	Raw	3/4/2025 1300	3/5/25
300669624	Field Blank - Raw	3/4/2025 1300	3/5/25
300669625	Finished	3/4/2025 1300	3/5/25
300669626	Field Blank - Finished	3/4/2025 1300	3/5/25

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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 (Acronymn)
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-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-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.

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

Regional Water Authority

90 Sargent Drive • New Haven, Connecticut 06511-5966

203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Sample ID: 300669623

Collection Date: 03/04/2025 13:00

Customer ID: Raw

PWS ID# / LOC ID#: Raw

Project: FEE-RANDOLPHHOLBROOK-25-000003

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	3.42	0.96	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFHxA	307-24-4	3.66	0.76	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFHpA	375-85-9	1.72	0.71	2.02	ng/L	1.01	J	EPA537.1	3/13/25 0250	CSS
PFHxS	355-46-4	3.57	0.84	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFOA	335-67-1	4.15	0.77	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFOS	1763-23-1	7.48	1.02	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFNA	375-95-1	0.84	0.73	2.02	ng/L	1.01	J	EPA537.1	3/13/25 0250	CSS
9Cl-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA537.1	3/13/25 0250	CSS
PFAS6 (MassDEP)		15.20	2.02	2.02	ng/L	1.01				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	97.64	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	84.54	70 - 130	Pass
13C-PFDA (SUR) % Recovery	87.22	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	84.12	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300669623	PFAS_537	537_EXT-250310-1	248	03/10/2025

Regional Water Authority

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203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Sample ID: 300669624

Collection Date: 03/04/2025 13:00

Customer ID: Field Blank - Raw

PWS ID# / LOC ID#: Field Blank

Project: FEE-RANDOLPHHOLBROOK-25-000003

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.94	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFHxA	307-24-4	ND	0.74	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
HFPO-DA	13252-13-6	ND	1.13	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFHpA	375-85-9	ND	0.69	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFHxS	355-46-4	ND	0.82	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
ADONA	919005-14-4	ND	0.62	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFOA	335-67-1	ND	0.75	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFOS	1763-23-1	ND	1.00	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFNA	375-95-1	ND	0.71	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
9Cl-PF3ONS	756426-58-1	ND	0.83	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFDA	335-76-2	ND	0.74	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFUnA	2058-94-8	ND	0.93	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.03	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
NMeFOSAA	2355-31-9	ND	1.14	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
NEtFOSAA	2991-50-6	ND	1.14	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFDoA	307-55-1	ND	0.89	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFTrDA	72629-94-8	ND	0.92	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFTA	376-06-7	ND	1.03	1.98	ng/L	0.99		EPA537.1	3/13/25 0303	CSS
PFAS6 (MassDEP)		ND	1.98	1.98	ng/L	0.99				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	92.14	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	83.12	70 - 130	Pass
13C-PFDA (SUR) % Recovery	92.61	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	88.82	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300669624	PFAS_537	537_EXT-250310-1	252	03/10/2025

Regional Water Authority

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203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Sample ID: 300669625

Collection Date: 03/04/2025 13:00

Customer ID: Finished

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-25-000003

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.55	0.95	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFHxA	307-24-4	4.02	0.75	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFHpA	375-85-9	1.74	0.70	2.0	ng/L	1.0	J	EPA537.1	3/13/25 0317	CSS
PFHxS	355-46-4	3.08	0.83	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFOA	335-67-1	4.54	0.76	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFOS	1763-23-1	8.39	1.01	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFNA	375-95-1	1.06	0.72	2.0	ng/L	1.0	J	EPA537.1	3/13/25 0317	CSS
9Cl-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	3/13/25 0317	CSS
PFAS6 (MassDEP)		16.01	2.0	2.0	ng/L	1.0				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	109.11	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	100.26	70 - 130	Pass
13C-PFDA (SUR) % Recovery	103.74	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	87.63	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300669625	PFAS_537	537_EXT-250310-1	250	03/10/2025

Regional Water Authority
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203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Sample ID: 300669626
Collection Date: 03/04/2025 13:00

Customer ID: Field Blank - Finished
PWS ID# / LOC ID#: Field Blank
Project: FEE-RANDOLPHHOLBROOK-25-000003

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	3/13/25 0330	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
9Cl-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	3/13/25 0330	CSS
PFAS6 (MassDEP)		ND	2.0	2.0	ng/L	1.0				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	95.11	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	87.27	70 - 130	Pass
13C-PFDA (SUR) % Recovery	101.37	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	99.81	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300669626	PFAS_537	537_EXT-250310-1	250	03/10/2025

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

Chain of Custody Form

Company Name	Company Address
RANDOLPH / HOLBROOK JOINT WATER	275 POND ST. RANDOLPH, MA 02368

Sampler	PO Number
PAUL HENNESSY	

RWA LIMS Number	Date Collected	Time Collected	Sample ID / Sample Location	Number of Bottles	PFAS 250mL Plastic w/Tris HydroChloride & Tris (Hydroxymethyl) Aminomethane (PFAS14)	PFAS Poured Field Blank 250mL Plastic w/Tris HydroChloride & Tris (Hydroxymethyl) Aminomethane	Field Blank #	Container & Preservative Meet Criteria (Circle): Yes / No
30066923	3/4/25	1PM	① RAW	5	4	1	30066924	NOT FOR COMPLIANCE
625	3/4/25	1PM	② FINISHED	5	4	1	626	MA DEP COMPLIANCE

Test Requested, Container, & Preservative

State Sample Collected:
CT__ NY ___ Other(specify)__

Evidence of Cooling (Circle): Y or N
Cooler Temp °C: 1.9

Relinquished By (Signature):	Relinquished by (Signature):
PAUL HENNESSY	FedEx
Date & Time: 3/4/25 1158PM	Date & Time:
Received By (Signature):	Received By (Signature):
Date & Time:	Date & Time: 3/5/25 1103

Comments:
Lot # SLCP2107
Lot # SLCQ2107
PFAS14

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: 3/10/2025 **Sample ID for LFSM/LFSMD:** 300668847

Analyte	LFSM %Recovery	LFSMD %Recovery	RPD of LFSM/LFSMD	LRB (MRL is 2)		LFB 10 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	97.0	109.4	11.2	ND	[Y]	86.2
PFHxA	106.6	107.4	0.7	ND	[Y]	108.7
HFPO-DA	114.3	123.4	7.6	ND	[Y]	101.4
PFHpA	91.8	97.6	5.8	ND	[Y]	100.8
PFHxS	91.7	103.7	11.5	ND	[Y]	96.5
ADONA	101.6	106.6	4.8	ND	[Y]	103.5
PFOA	97.6	99.4	1.7	ND	[Y]	97.2
PFOS	96.9	101.3	4.0	ND	[Y]	100.3
PFNA	93.3	103.3	10.0	ND	[Y]	100.2
9Cl-PF3ONS	98.7	102.5	3.8	ND	[Y]	102.4
PFDA	93.5	96.3	2.9	ND	[Y]	93.9
PFUnA	97.0	105.2	8.0	ND	[Y]	101.5
11Cl-PF3OUdS	87.2	102.5	16.1	ND	[Y]	102.0
NMeFOSAA	95.8	89.2	7.1	ND	[Y]	102.2
NEtFOSAA	91.2	103.8	12.9	ND	[Y]	86.7
PFDoA	87.0	101.8	15.6	ND	[Y]	101.0
PFTrDA	85.1	98.2	14.4	ND	[Y]	98.1
PFTA	91.3	103.1	12.1	ND	[Y]	94.2

Surrogate %Recovery

$^{13}C_2$-PFHxA	$^{13}C_3$-HFPO-DA	$^{13}C_2$-PFDA	$^{d}_5$-NEtFOSAA	
96.06	95.95	88.14	84.58	LFSM
114.22	101.72	114.43	97.75	LFSMD
108.02	99.81	109.73	100.45	LRB
91.30	82.29	95.62	89.27	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
LFB = Laboratory Fortified Blank
LFSM = Laboratory Fortified Sample Matrix
LFSMD = Laboratory Fortified Sample Matrix Duplicate
RPD = relative percent difference
MRL = Method Reporting Level
FB = Field Blank
ND = Non-Detect
Results are ng/L (ppt)
LFSM/LFSMD spike concentration is 20 ng/L, unless noted otherwise
Surrogate Acceptance Limit is 70 - 130% Recovery