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-25-000005

Report Date: 5/28/2025

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
300700589	Raw	5/14/2025 1200	5/15/25
300700590	Field Blank - Raw	5/14/2025 1200	5/15/25
300700591	Finished	5/14/2025 1200	5/15/25
300700592	Field Blank - Finished	5/14/2025 1200	5/15/25

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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

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Sample ID: 300700589

Collection Date: 05/14/2025 12:00

Customer ID: Raw

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-25-000005

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.04	0.97	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFHxA	307-24-4	3.16	0.77	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
HFPO-DA	13252-13-6	ND	1.16	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFHpA	375-85-9	1.92	0.71	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0054	CSS
PFHxS	355-46-4	1.99	0.85	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0054	CSS
ADONA	919005-14-4	ND	0.64	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFOA	335-67-1	3.95	0.78	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFOS	1763-23-1	6.35	1.03	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFNA	375-95-1	0.82	0.73	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0054	CSS
9Cl-PF3ONS	756426-58-1	ND	0.86	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFDA	335-76-2	ND	0.77	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFUnA	2058-94-8	ND	0.96	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.06	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
NMeFOSAA	2355-31-9	ND	1.17	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
NEtFOSAA	2991-50-6	ND	1.17	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFDoA	307-55-1	ND	0.92	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFTrDA	72629-94-8	ND	0.95	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFTA	376-06-7	ND	1.06	2.04	ng/L	1.02		EPA 537.1	5/21/25 0054	CSS
PFAS6 (MassDEP)		10.30	2.04	2.04	ng/L	1.02				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	90.30	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	86.60	70 - 130	Pass
13C-PFDA (SUR) % Recovery	90.70	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	79.60	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300700589	PFAS_537	537_EXT-250515-1	244	05/15/2025

Regional Water Authority

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

Sample ID: 300700590

Collection Date: 05/14/2025 12:00

Customer ID: Field Blank - Raw

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000005

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	5/21/25 0110	CSS
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
9Cl-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	5/21/25 0110	CSS
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	96.10	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	88.60	70 - 130	Pass
13C-PFDA (SUR) % Recovery	91.70	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	86.30	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300700590	PFAS_537	537_EXT-250515-1	248	05/15/2025

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Sample ID: 300700591

Collection Date: 05/14/2025 12:00

Customer ID: Finished

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-25-000005

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	1.95	0.97	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0125	CSS
PFHxA	307-24-4	3.21	0.77	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
HFPO-DA	13252-13-6	ND	1.16	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFHpA	375-85-9	1.80	0.71	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0125	CSS
PFHxS	355-46-4	2.28	0.85	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
ADONA	919005-14-4	ND	0.64	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFOA	335-67-1	4.36	0.78	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFOS	1763-23-1	6.72	1.03	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFNA	375-95-1	0.77	0.73	2.04	ng/L	1.02	J	EPA 537.1	5/21/25 0125	CSS
9Cl-PF3ONS	756426-58-1	ND	0.86	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFDA	335-76-2	ND	0.77	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFUnA	2058-94-8	ND	0.96	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.06	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
NMeFOSAA	2355-31-9	ND	1.17	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
NEtFOSAA	2991-50-6	ND	1.17	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFDoA	307-55-1	ND	0.92	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFTrDA	72629-94-8	ND	0.95	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFTA	376-06-7	ND	1.06	2.04	ng/L	1.02		EPA 537.1	5/21/25 0125	CSS
PFAS6 (MassDEP)		13.36	2.04	2.04	ng/L	1.02				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	90.60	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	89.10	70 - 130	Pass
13C-PFDA (SUR) % Recovery	89.30	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	79.90	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300700591	PFAS_537	537_EXT-250515-1	246	05/15/2025

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: 300700592

Collection Date: 05/14/2025 12:00

Customer ID: Field Blank - Finished

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000005

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	5/21/25 0141	CSS
PFHxA	307-24-4	ND	0.76	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFHpA	375-85-9	ND	0.71	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFHxS	355-46-4	ND	0.84	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFOA	335-67-1	ND	0.77	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFOS	1763-23-1	ND	1.02	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
9Cl-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
11Cl-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	5/21/25 0141	CSS
PFAS6 (MassDEP)		ND	2.02	2.02	ng/L	1.01				

Surrogates	Results	Recovery Limits	Pass/Fail
13C-PFHxA (SUR) % Recovery	108.40	70 - 130	Pass
13C3-HFPO-DA (SUR) % Recovery	94.40	70 - 130	Pass
13C-PFDA (SUR) % Recovery	106.50	70 - 130	Pass
d5-NEtFOSAA (SUR) % Recovery	104.10	70 - 130	Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300700592	PFAS_537	537_EXT-250515-1	248	05/15/2025

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

Chain of Custody Form

Company Name: RANDOLPH/HOLBROOK JOINT WATER

Company Address: 275 POND ST. RANDOLPH, MA 02368

Sampler: PAUL HENNESSY

PO Number:

State Sample Collected: CT___ NY___ Other(specify)___

Thermometer ID:

Evidence of Cooling (Circle): (Y) or N

Cooler Temp °C: 1.7

Container & Preservative Meet Criteria (Circle): Yes/No

RWA LIMS Number	Date Collected	Time Collected	Sample ID / Sample Location	Number of Bottles	Test Requested, Container, & Preservative: EPA 537.1 PFAS14 250mL Plastic w/Trizma & Trizma (Hydroxymethyl) Aminomethane	Test Requested, Container, & Preservative: EPA 537.1 - Poured Field Blank 250mL Plastic w/Trizma & Trizma (Hydroxymethyl) Aminomethane	RWA Field Blank #				Remarks
300700589	5/14/25	12PM	(1) RAW	5	4	1	300700590				NOT FOR COMPLIANCE
591	5/14/25	12PM	(2) FINISHED	5	4	1		592			MA DEP COMPLIANCE

Relinquished By (Signature): PAUL HENNESSY
Date & Time: 5/14/25, 1215PM

Relinquished by (Signature): FedEx
Date & Time:

Received By (Signature):
Date & Time:

Received By (Signature):
Date & Time: 5/15/25 1123

Comments:
Lot # SLCP9180
Lot # 361330
PFAS 14

Fee-Randolph/Holbrook-25-000005

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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: 5/15/2025 **Sample ID for LFSM/LFSMD:** 300699013

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	94.2	89.6	4.8	ND	[Y]	91.4
PFHxA	99.2	91.8	6.8	ND	[Y]	91.1
HFPO-DA	97.7	83.0	16.2	ND	[Y]	86.5
PFHpA	97.7	90.4	7.1	ND	[Y]	90.7
PFHxS	99.9	94.1	5.7	ND	[Y]	92.6
ADONA	97.4	92.3	5.4	ND	[Y]	91.3
PFOA	100.0	91.8	7.7	ND	[Y]	90.3
PFOS	98.7	89.9	8.5	ND	[Y]	89.3
PFNA	98.6	91.6	7.3	ND	[Y]	90.9
9Cl-PF3ONS	98.8	89.9	9.4	ND	[Y]	87.9
PFDA	97.3	88.5	9.4	ND	[Y]	89.7
PFUnA	95.5	88.4	7.8	ND	[Y]	86.6
11Cl-PF3OUdS	99.3	92.3	7.2	ND	[Y]	87.1
NMeFOSAA	100.1	92.0	8.4	ND	[Y]	86.1
NEtFOSAA	95.3	90.0	5.7	ND	[Y]	87.0
PFDoA	100.7	94.3	6.5	ND	[Y]	88.7
PFTrDA	97.2	92.5	5.0	ND	[Y]	87.3
PFTA	97.8	91.0	7.2	ND	[Y]	87.0

Surrogate %Recovery

$^{13}C_2$-PFHxA	$^{13}C_3$-HFPO-DA	$^{13}C_2$-PFDA	$^{d}_5$-NEtFOSAA	
100.60	95.20	99.50	97.00	LFSM
100.20	95.00	98.50	96.40	LFSMD
97.50	90.20	96.00	94.00	LRB
93.60	88.70	91.60	85.60	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