



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-24-000001

Report Date: 1/18/2024

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



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SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300468397	RAW	1/4/2024 1300	1/5/24
300468398	FB - RAW	1/4/2024 1300	1/5/24
300468399	FINISHED	1/4/2024 1300	1/5/24
300468400	FB - FINISHED	1/4/2024 1300	1/5/24

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	Perfluorohexadecanoic 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 (PFTTrDA)
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.

Sample ID: 300468397

Customer ID: RAW

Collection Date: 01/04/2024 13:00

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-24-000001

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.44	0.95	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFHxA	307-24-4	3.36	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFHpA	375-85-9	2.02	0.70	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFHxS	355-46-4	2.15	0.83	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFOA	335-67-1	5.09	0.76	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFOS	1763-23-1	8.62	1.01	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFNA	375-95-1	1.04	0.72	2.0	ng/L	1.0	J	EPA537.1	1/9/24 2201	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFDaA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2201	CSS
PFAS6 (MassDEP)		17.88	2.00	2.0	ng/L	1.0				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		90.20		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		85.20		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		93.30		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		81.00		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300468397	PFAS_537	537_EXT-240108-1	250	01/08/2024

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Sample ID: 300468398

Customer ID: FB - RAW

Collection Date: 01/04/2024 13:00

PWS ID# / LOC ID#: FB - RAW

Project: FEE-RANDOLPHHOLBROOK-24-000001

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	1/9/24 2216	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2216	CSS
PFAS6 (MassDEP)		ND	2.00	2.0	ng/L	1.0				
Surrogates			Results		Recovery Limits			Pass/Fail		
13C-PFHxA (SUR) % Recovery			96.30		70 - 130			Pass		
13C3-HFPO-DA (SUR) % Recovery			94.20		70 - 130			Pass		
13C-PFDA (SUR) % Recovery			91.70		70 - 130			Pass		
d5-NEtFOSAA (SUR) % Recovery			86.20		70 - 130			Pass		

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300468398	PFAS_537	537_EXT-240108-1	250	01/08/2024

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Sample ID: 300468399

Customer ID: FINISHED

Collection Date: 01/04/2024 13:00

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-24-000001

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.75	0.95	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFHxA	307-24-4	3.70	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFHpA	375-85-9	2.04	0.70	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFHxS	355-46-4	2.22	0.83	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFOA	335-67-1	5.11	0.76	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFOS	1763-23-1	8.66	1.01	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFNA	375-95-1	0.95	0.72	2.0	ng/L	1.0	J	EPA537.1	1/9/24 2230	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2230	CSS
PFAS6 (MassDEP)		18.03	2.00	2.0	ng/L	1.0				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		95.20		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		90.70		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		95.90		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		79.00		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300468399	PFAS_537	537_EXT-240108-1	250	01/08/2024

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Sample ID: 300468400

Customer ID: FB - FINISHED

Collection Date: 01/04/2024 13:00

PWS ID# / LOC ID#: FB - FINISHED

Project: FEE-RANDOLPHHOLBROOK-24-000001

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	1/9/24 2314	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFDaA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA537.1	1/9/24 2314	CSS
PFAS6 (MassDEP)		ND	2.00	2.0	ng/L	1.0				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		92.10		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		86.50		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		91.40		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		83.00		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300468400	PFAS_537	537_EXT-240108-1	250	01/08/2024



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 POND ST. RANDOLPH, MA 02368	PO Number	Number of Bottles	PFA5 + 400 (Hydroxymethyl) Aminom - Plastic w/Tris HydroChl Poured Field Blank (Hydroxymethyl) Aminom - Plastic w/Tris HydroChl (Hydroxymethyl) Aminom
Sampler PAUL-HENNESSY	Evidence of Cooling (Circle): ☒ or N Cooler Temp °C: 1.0 Container & Preservative Meet Criteria (Circle): Yes/ No LOT # SLCN1650 LOT # SLCN1665			

[illegible]

Relinquished By (Signature): <i>Paul Hennessey</i>	Relinquished by (Signature): <i>Fed X</i>	Comments: <i>PFA's X 8/8</i>
Date & Time: <i>1/4/24 115 PM</i>	Date & Time:	
Received By (Signature): <i>[Signature]</i>	Received By (Signature):	
Date & Time: <i>1/5/24 1121</i>	Date & Time:	

Fee-2an Dai Faltobrook -24-000001

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: 1/8/2024

Sample ID for LFSM/LFSMD: 300468399

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	93.3	90.8	2.3	ND	[Y]	95.7
PFHxA	92.9	85.4	7.0	ND	[Y]	88.0
HFPO-DA	84.6	98.3	14.9	ND	[Y]	87.0
PFHpA	93.2	87.2	5.9	ND	[Y]	88.0
PFHxS	100.8	95.7	4.6	ND	[Y]	92.9
ADONA	90.0	85.4	5.2	ND	[Y]	85.0
PFOA	98.9	91.7	5.9	ND	[Y]	90.5
PFOS	86.8	85.3	1.1	ND	[Y]	90.7
PFNA	99.2	91.7	7.5	ND	[Y]	91.9
9CI-PF3ONS	92.5	86.9	6.3	ND	[Y]	86.3
PFDA	101.1	91.9	9.4	ND	[Y]	88.0
PFUnA	91.2	86.9	4.8	ND	[Y]	82.6
11CI-PF3OUdS	89.4	78.6	12.8	ND	[Y]	87.8
NMeFOSAA	89.1	78.8	12.2	ND	[Y]	82.8
NEtFOSAA	80.8	82.2	1.7	ND	[Y]	81.9
PFDaA	88.2	80.7	8.9	ND	[Y]	83.0
PFTTrDA	87.9	80.5	8.9	ND	[Y]	81.1
PFTA	90.1	82.5	8.8	ND	[Y]	83.5

Surrogate %Recovery

¹³ C ₂ -PFHxA	¹³ C ₃ -HFPO-DA	¹³ C ₂ -PFDA	^d ₅ -NEtFOSAA	
94.40	93.00	96.20	84.70	LFSM
91.20	88.20	92.00	77.90	LFSMD
96.90	92.60	92.10	86.00	LRB
90.00	85.70	87.80	84.90	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* 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