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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
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ANALYTICAL REPORT

Project: FEE-RANDOLPHHOLBROOK-25-000004

Report Date: 5/7/2025

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.

Richard Sibley
Laboratory Manager
Technical Representative

SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300684906	RAW	4/10/2025 1300	4/11/25
300684907	FIELD BLANK - RAW	4/10/2025 1300	4/11/25
300684908	FINISHED	4/10/2025 1300	4/11/25
300684909	FIELD BLANK - FINISHED	4/10/2025 1300	4/11/25

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	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-chloroeicosafuoro-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.

Sample ID: 300684906

Customer ID: RAW

Collection Date: 04/10/2025 13:00

PWS ID# / LOC ID#: RAW

Project: FEE-RANDOLPHHOLBROOK-25-000004

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.22	0.97	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFHxA	307-24-4	2.72	0.77	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
HFPO-DA	13252-13-6	ND	1.16	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFHpA	375-85-9	1.47	0.71	2.04	ng/L	1.02	J	EPA 537.1	4/22/25 1328	CSS
PFHxS	355-46-4	1.98	0.85	2.04	ng/L	1.02	J	EPA 537.1	4/22/25 1328	CSS
ADONA	919005-14-4	ND	0.64	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFOA	335-67-1	3.99	0.78	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFOS	1763-23-1	6.23	1.03	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFNA	375-95-1	ND	0.73	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
9CI-PF3ONS	756426-58-1	ND	0.86	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFDA	335-76-2	ND	0.77	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFUnA	2058-94-8	ND	0.96	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
11CI-PF3OUdS	763051-92-9	ND	1.06	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
NMeFOSAA	2355-31-9	ND	1.17	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
NEtFOSAA	2991-50-6	ND	1.17	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFDoA	307-55-1	ND	0.92	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFTTrDA	72629-94-8	ND	0.95	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFTA	376-06-7	ND	1.06	2.04	ng/L	1.02		EPA 537.1	4/22/25 1328	CSS
PFAS6 (MassDEP)		10.22	2.04	2.04	ng/L	1.02				
Surrogates					Results	Recovery Limits		Pass/Fail		
13C-PFHxA (SUR) % Recovery					91.10	70 - 130		Pass		
13C3-HFPO-DA (SUR) % Recovery					111.30	70 - 130		Pass		
13C-PFDA (SUR) % Recovery					92.90	70 - 130		Pass		
d5-NEtFOSAA (SUR) % Recovery					78.20	70 - 130		Pass		

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300684906	PFAS_537	537_EXT-250416-1	246	04/16/2025

Sample ID: 300684907

Customer ID: FIELD BLANK - RAW

Collection Date: 04/10/2025 13:00

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000004

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		EPA 537.1	4/22/25 1343	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA 537.1	4/22/25 1343	CSS
PFAS6 (MassDEP)		ND	2.0	2.0	ng/L	1.0				
	Surrogates				Results			Recovery Limits		Pass/Fail
	13C-PFHxA (SUR) % Recovery				94.70			70 - 130		Pass
	13C3-HFPO-DA (SUR) % Recovery				110.80			70 - 130		Pass
	13C-PFDA (SUR) % Recovery				93.30			70 - 130		Pass
	d5-NEtFOSAA (SUR) % Recovery				90.50			70 - 130		Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300684907	PFAS_537	537_EXT-250416-1	250	04/16/2025

Regional Water Authority

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Sample ID: 300684908

Customer ID: FINISHED

Collection Date: 04/10/2025 13:00

PWS ID# / LOC ID#: 4244001/10296

Project: FEE-RANDOLPHHOLBROOK-25-000004

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.24	0.96	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFHxA	307-24-4	2.84	0.76	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
HFPO-DA	13252-13-6	ND	1.15	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFHpA	375-85-9	1.74	0.71	2.02	ng/L	1.01	J	EPA 537.1	4/22/25 1359	CSS
PFHxS	355-46-4	2.32	0.84	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
ADONA	919005-14-4	ND	0.64	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFOA	335-67-1	3.98	0.77	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFOS	1763-23-1	5.75	1.02	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFNA	375-95-1	ND	0.73	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
9CI-PF3ONS	756426-58-1	ND	0.85	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFDA	335-76-2	ND	0.76	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFUnA	2058-94-8	ND	0.95	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
11CI-PF3OUdS	763051-92-9	ND	1.05	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
NMeFOSAA	2355-31-9	ND	1.16	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
NEtFOSAA	2991-50-6	ND	1.16	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFDoA	307-55-1	ND	0.91	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFTTrDA	72629-94-8	ND	0.94	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFTA	376-06-7	ND	1.05	2.02	ng/L	1.01		EPA 537.1	4/22/25 1359	CSS
PFAS6 (MassDEP)		12.05	2.02	2.02	ng/L	1.01				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		84.90		70 - 130		Pass				
13C3-HFPO-DA (SUR) % Recovery		101.90		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		86.00		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		81.40		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300684908	PFAS_537	537_EXT-250416-1	248	04/16/2025

Sample ID: 300684909

Customer ID: FIELD BLANK - FINISHED

Collection Date: 04/10/2025 13:00

PWS ID# / LOC ID#: FIELD BLANK

Project: FEE-RANDOLPHHOLBROOK-25-000004

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		EPA 537.1	4/22/25 1415	CSS
PFHxA	307-24-4	ND	0.75	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
HFPO-DA	13252-13-6	ND	1.14	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFHpA	375-85-9	ND	0.70	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFHxS	355-46-4	ND	0.83	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
ADONA	919005-14-4	ND	0.63	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFOA	335-67-1	ND	0.76	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFOS	1763-23-1	ND	1.01	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFNA	375-95-1	ND	0.72	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
9CI-PF3ONS	756426-58-1	ND	0.84	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFDA	335-76-2	ND	0.75	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFUnA	2058-94-8	ND	0.94	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
11CI-PF3OUdS	763051-92-9	ND	1.04	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
NMeFOSAA	2355-31-9	ND	1.15	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
NEtFOSAA	2991-50-6	ND	1.15	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFDoA	307-55-1	ND	0.90	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFTTrDA	72629-94-8	ND	0.93	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFTA	376-06-7	ND	1.04	2.0	ng/L	1.0		EPA 537.1	4/22/25 1415	CSS
PFAS6 (MassDEP)		ND	2.0	2.0	ng/L	1.0				
Surrogates			Results		Recovery Limits			Pass/Fail		
13C-PFHxA (SUR) % Recovery			100.80		70 - 130			Pass		
13C3-HFPO-DA (SUR) % Recovery			115.70		70 - 130			Pass		
13C-PFDA (SUR) % Recovery			99.40		70 - 130			Pass		
d5-NEtFOSAA (SUR) % Recovery			93.30		70 - 130			Pass		

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300684909	PFAS_537	537_EXT-250416-1	250	04/16/2025

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: 4/16/2025

Sample ID for LFSM/LFSMD: 300685072

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	95.4	86.6	9.3	ND	[Y]	96.6
PFHxA	95.8	89.3	6.8	ND	[Y]	94.7
HFPO-DA	107.9	103.7	4.0	ND	[Y]	105.0
PFHpA	93.7	85.3	9.3	ND	[Y]	94.4
PFHxS	95.7	86.2	10.3	ND	[Y]	96.5
ADONA	97.4	88.7	9.4	ND	[Y]	93.8
PFOA	95.3	87.4	8.4	ND	[Y]	93.6
PFOS	94.0	88.7	5.7	ND	[Y]	94.0
PFNA	95.3	88.0	8.0	ND	[Y]	93.5
9Cl-PF3ONS	96.0	85.5	11.5	ND	[Y]	93.0
PFDA	93.7	86.6	7.8	ND	[Y]	91.3
PFUnA	92.5	85.9	7.4	ND	[Y]	89.1
11Cl-PF3OUdS	94.9	83.9	12.3	ND	[Y]	87.2
NMeFOSAA	90.7	84.1	7.6	ND	[Y]	87.7
NEtFOSAA	92.0	87.5	5.0	ND	[Y]	85.3
PFDoA	98.9	92.4	6.8	ND	[Y]	90.5
PFTrDA	96.9	91.0	6.3	ND	[Y]	89.7
PFTA	97.6	93.4	4.5	ND	[Y]	91.2

Surrogate %Recovery

¹³ C ₂ -PFHxA	¹³ C ₃ -HFPO-DA	¹³ C ₂ -PFDA	^d ₅ -NEtFOSAA	
90.70	99.30	90.90	89.10	LFSM
97.90	117.30	97.90	95.20	LFSMD
89.20	100.30	89.00	86.40	LRB
96.00	105.60	94.20	88.00	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