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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:

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ANALYTICAL REPORT

Project: FEE-RANDOLPHHOLBROOK-22-000014

Report Date: 1/11/2023

*Finished
9.85*

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.

Gary M. Alexander, Team Lead
Technical Representative



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SAMPLE SUMMARY

Sample ID	Customer ID	Collection Date/Time	Receipt Date
300290881	RAW	12/27/2022 1200	12/28/22
300290882	FB - RAW	12/27/2022 1200	12/28/22
300290883	FINISHED	12/27/2022 1200	12/28/22
300290884	FB - FINISHED	12/27/2022 1200	12/28/22

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.

Method EPA537 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	1763-23-1	Perfluorooctanesulfonic acid (PFOS)
537	335-67-1	Perfluorooctanoic acid (PFOA)
537	355-46-4	Perfluorohexanesulfonic acid (PFHxS)
537	375-95-1	Perfluorononanoic acid (PFNA)
537	375-85-9	Perfluorohexanoic acid (PFHxA)
537	335-76-2	Perfluorodecanoic acid (PFDA)
537	375-73-5	Perfluorobutanesulfonic acid (PFBS)
537	307-55-1	Perfluorododecanoic acid (PFDoA)
537	307-24-4	Perfluorohexanoic acid (PFHxA)
537	376-06-7	Perfluorotetradecanoic acid (PFTA)
537	72629-94-8	Perfluorotridecanoic acid (PFTrDA)
537	2058-94-8	Perfluoroundecanoic acid (PFUnA)
537	2991-50-6	N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537	2355-31-9	N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)

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

Qualifier

SUR = Sample# 300290883 for EPA 537: Surrogate d5-NEtFOSAA recovery fails low; results suspect for analytes NMeFOSAA and NEtFOSAA.

Sample ID: 300290881

Customer ID: RAW

Collection Date: 12/27/2022 12:00

PWS ID# / LOC ID#:

Project: FEE-RANDOLPHHOLBROOK-22-000014

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.90	0.89	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFHxA	307-24-4	4.29	0.68	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFHpA	375-85-9	2.40	0.62	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFHxS	355-46-4	2.93	0.90	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFOA	335-67-1	5.60	0.72	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFOS	1763-23-1	8.69	0.89	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFNA	375-95-1	1.15	0.63	2.0	ng/L	1.0	J	EPA537	1/6/23 1452	CSS/GMA
PFDA	335-76-2	ND	0.72	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFUnA	2058-94-8	ND	0.91	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
NMeFOSAA	2355-31-9	ND	1.19	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
NEtFOSAA	2991-50-6	ND	1.03	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFDaA	307-55-1	ND	0.83	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFTDA	72629-94-8	ND	0.90	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFTA	376-06-7	ND	0.97	2.0	ng/L	1.0		EPA537	1/6/23 1452	CSS/GMA
PFAS6 (MassDEP)		19.62	2.00	2.00	ng/L	1.0				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		95.90		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		98.30		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
300290881	PFAS_537	537_EXT-230103-1	250	01/03/2023

Sample ID: 300290882

Customer ID: FB - RAW

Collection Date: 12/27/2022 12:00

PWS ID# / LOC ID#:

Project: FEE-RANDOLPHHOLBROOK-22-000014

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.87	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFHxA	307-24-4	ND	0.67	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFHpA	375-85-9	ND	0.61	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFHxS	355-46-4	ND	0.88	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFOA	335-67-1	ND	0.71	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFOS	1763-23-1	ND	0.87	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFNA	375-95-1	ND	0.62	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFDA	335-76-2	ND	0.71	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFUnA	2058-94-8	ND	0.89	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
NMeFOSAA	2355-31-9	ND	1.17	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
NEtFOSAA	2991-50-6	ND	1.01	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFDaA	307-55-1	ND	0.81	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFTTrDA	72629-94-8	ND	0.88	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFTA	376-06-7	ND	0.95	1.96	ng/L	0.98		EPA537	1/6/23 1506	CSS/GMA
PFAS6 (MassDEP)		ND	1.96	1.96	ng/L	0.98				
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			93.60		70 - 130		Pass			
13C-PFDA (SUR) % Recovery			87.50		70 - 130		Pass			
d5-NEtFOSAA (SUR) % Recovery			81.70		70 - 130		Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300290882	PFAS_537	537_EXT-230103-1	254	01/03/2023

Sample ID: 300290883

Customer ID: FINISHED

Collection Date: 12/27/2022 12:00

PWS ID# / LOC ID#: 4244001 / 10296

Project: FEE-RANDOLPHHOLBROOK-22-000014

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.01	0.90	2.02	ng/L	1.01	J	EPA537	1/6/23 1521	CSS/GMA
PFHxA	307-24-4	3.04	0.69	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFHpA	375-85-9	1.82	0.63	2.02	ng/L	1.01	J	EPA537	1/6/23 1521	CSS/GMA
PFHxS	355-46-4	1.90	0.91	2.02	ng/L	1.01	J	EPA537	1/6/23 1521	CSS/GMA
PFOA	335-67-1	4.21	0.73	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFOS	1763-23-1	5.64	0.90	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFNA	375-95-1	0.87	0.64	2.02	ng/L	1.01	J	EPA537	1/6/23 1521	CSS/GMA
PFDA	335-76-2	ND	0.73	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFUnA	2058-94-8	ND	0.92	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
NMeFOSAA	2355-31-9	ND	1.20	2.02	ng/L	1.01	SUR	EPA537	1/6/23 1521	CSS/GMA
NEtFOSAA	2991-50-6	ND	1.04	2.02	ng/L	1.01	SUR	EPA537	1/6/23 1521	CSS/GMA
PFDoA	307-55-1	ND	0.84	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFTTrDA	72629-94-8	ND	0.91	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFTA	376-06-7	ND	0.98	2.02	ng/L	1.01		EPA537	1/6/23 1521	CSS/GMA
PFAS6 (MassDEP)		9.85	2.02	2.02	ng/L	1.01				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		74.90		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		75.70		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		65.30		70 - 130		Fail				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300290883	PFAS_537	537_EXT-230103-1	248	01/03/2023

Sample ID: 300290884

Customer ID: FB - FINISHED

Collection Date: 12/27/2022 12:00

PWS ID# / LOC ID#:

Project: FEE-RANDOLPHHOLBROOK-22-000014

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.89	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFHxA	307-24-4	ND	0.68	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFHpA	375-85-9	ND	0.62	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFHxS	355-46-4	ND	0.90	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFOA	335-67-1	ND	0.72	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFOS	1763-23-1	ND	0.89	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFNA	375-95-1	ND	0.63	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFDA	335-76-2	ND	0.72	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFUnA	2058-94-8	ND	0.91	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
NMeFOSAA	2355-31-9	ND	1.19	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
NEtFOSAA	2991-50-6	ND	1.03	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFDoA	307-55-1	ND	0.83	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFTTrDA	72629-94-8	ND	0.90	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFTA	376-06-7	ND	0.97	2.0	ng/L	1.0		EPA537	1/6/23 1604	CSS/GMA
PFAS6 (MassDEP)		ND	2.00	2.00	ng/L	1.0				
Surrogates		Results		Recovery Limits		Pass/Fail				
13C-PFHxA (SUR) % Recovery		95.00		70 - 130		Pass				
13C-PFDA (SUR) % Recovery		90.60		70 - 130		Pass				
d5-NEtFOSAA (SUR) % Recovery		83.30		70 - 130		Pass				

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300290884	PFAS_537	537_EXT-230103-1	250	01/03/2023