

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: Bill Cookerly and Noreen Jordan
Randolph-Holbrook Joint Water
50 N. Franklin Street

Holbrook, MA 02343
617-470-1624 cookerlyb@gmail.com
781-767-1800 NJordan
NJordan@Holbrookmassachusetts.us

ANALYTICAL REPORT

RWA: FEE-RANDOLPHHOLBROOK-22-000004

Report Date: 6/9/2022

15.65

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

Regional Water Authority

90 Sargent Drive • New Haven, Connecticut 06511-5966
 203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Result Page:

Date Received: 04/21/2022 Customer ID: RAW WATER
 Sample ID: 300173555 PWS ID#:
 Collection Date: 04/20/2022 11:00 LOC ID#:

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.24	0.89	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFHxA	307-24-4	3.12	0.68	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFHpA	375-85-9	2.18	0.62	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFHxS	355-46-4	1.61	0.90	2	ng/L	1	J	EPA537	5/4/22 0340	CSS
PFOA	335-67-1	4.43	0.72	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFOS	1763-23-1	6.88	0.89	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFNA	375-95-1	0.82	0.63	2	ng/L	1	J	EPA537	5/4/22 0340	CSS
PFDA	335-76-2	ND	0.72	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFUnA	2058-94-8	ND	0.91	2	ng/L	1		EPA537	5/4/22 0340	CSS
NMeFOSAA	2355-31-9	ND	1.19	2	ng/L	1		EPA537	5/4/22 0340	CSS
NEtFOSAA	2991-50-6	ND	1.03	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFDaA	307-55-1	ND	0.83	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFTTrDA	72629-94-8	ND	0.90	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFTA	376-06-7	ND	0.97	2	ng/L	1		EPA537	5/4/22 0340	CSS
PFAS6 (MassDEP)		13.49	2.00	2	ng/L					
Surrogates			Results		Recovery Limits		Pass/Fail			
13C-PFHxA (SUR) % Recovery			104.78		70 - 130		Pass			
13C-PFDA (SUR) % Recovery			106.72		70 - 130		Pass			
d5-NEtFOSAA (SUR) % Recovery			89.16		70 - 130		Pass			

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300173555	PFAS_537	537_EXT-220427-1	250	04/27/2022

Regional Water Authority

90 Sargent Drive • New Haven, Connecticut 06511-5966
 203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Date Received: 04/21/2022
 Sample ID: 300173557
 Collection Date: 04/20/2022 11:00

Customer ID: FINISHED WATER
 PWS ID#: 4244001
 LOC ID#: 10296

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	2.35	0.93	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFHxA	307-24-4	3.52	0.71	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFHpA	375-85-9	2.28	0.65	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFHxS	355-46-4	2.42	0.95	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFOA	335-67-1	4.43	0.76	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFOS	1763-23-1	6.52	0.93	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFNA	375-95-1	0.94	0.66	2.1	ng/L	1.05	J	EPA537	5/2/22 2322	CSS
PFDA	335-76-2	ND	0.76	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFUnA	2058-94-8	ND	0.96	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
NMeFOSAA	2355-31-9	ND	1.25	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
NEtFOSAA	2991-50-6	ND	1.08	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFDoA	307-55-1	ND	0.87	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFTrDA	72629-94-8	ND	0.95	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFTA	376-06-7	ND	1.02	2.1	ng/L	1.05		EPA537	5/2/22 2322	CSS
PFAS6 (MassDEP)		15.65	2.10	2.1	ng/L					
	Surrogates									
			Results					Recovery Limits		Pass/Fail
	13C-PFHxA (SUR) % Recovery		116.05					70 - 130		Pass
	13C-PFDA (SUR) % Recovery		96.39					70 - 130		Pass
	d5-NEtFOSAA (SUR) % Recovery		85.57					70 - 130		Pass

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300173557	PFAS_537	537_EXT-220427-1	238	04/27/2022

SAMPLE SUMMARY

Sample ID	Text ID	Customer ID	Collection Date/Time	Receipt Date
300173555	NONE-300173555	RAW WATER	4/20/2022 11:00:00AM	4/21/22
300173556	NONE-300173556	FB - RAW WATER	4/20/2022 11:00:00AM	4/21/22
300173557	NONE-300173557	FINISHED WATER	4/20/2022 11:00:00AM	4/21/22
300173558	NONE-300173558	FB- FINISHED WATER	4/20/2022 11:00:00AM	4/21/22

Case Narrative**General Comments:**

See the Result Page section for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

The samples were received at the approximate temperature and in accordance with the chain of custody unless otherwise noted.

J = The reported result is below Minimum Reporting Level but greater than the Method Detection Limit. The reported result is an estimate.

E = Exceeds calibration range

ND = Non Detect

RL = Minimum Reporting Level

Massachusetts samples for required water quality sampling are included.

Samples and Field Blanks were received in bottles with preservatives that meet method requirements.
Preservative lot#: Trizma HCL: SLCD9714 & Trizma base: SLCD9794

"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 EPA 537 section 9.3.1.

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

Note: Sample# 300173557 (Finished Water) sample volume available for extraction produced a RL of 2.10, which is over the maximum acceptable limit of 2.05 for MassDEP PFAS analysis. The client was notified on 5/19/22.

Regional Water Authority

90 Sargent Drive • New Haven, Connecticut 06511-5966
 203-401-6743 or 877-894-5773 (Telephone) • Website: www.rwater.com

Date Received: 04/21/2022
 Sample ID: 300173558
 Collection Date: 04/20/2022 11:00

Customer ID: FB- FINISHED WATER
 PWS ID#:
 LOC ID#:

Analyte	CAS#	Results	MDL	RL	Units	Dilution	Qualifier	Method	Date Time/ Analyzed	Analyst
PFBS	375-73-5	ND	0.89	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFHxA	307-24-4	ND	0.68	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFHpA	375-85-9	ND	0.62	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFHxS	355-46-4	ND	0.90	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFOA	335-67-1	ND	0.72	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFOS	1763-23-1	ND	0.89	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFNA	375-95-1	ND	0.63	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFDA	335-76-2	ND	0.72	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFUnA	2058-94-8	ND	0.91	2	ng/L	1		EPA537	5/2/22 2334	CSS
NMeFOSAA	2355-31-9	ND	1.19	2	ng/L	1		EPA537	5/2/22 2334	CSS
NEtFOSAA	2991-50-6	ND	1.03	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFDoA	307-55-1	ND	0.83	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFTTrDA	72629-94-8	ND	0.90	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFTA	376-06-7	ND	0.97	2	ng/L	1		EPA537	5/2/22 2334	CSS
PFAS6 (MassDEP)		ND	2.00	2	ng/L					
	Surrogates		Results		Recovery Limits			Pass/Fail		
	13C-PFHxA (SUR) % Recovery		102.50		70 - 130			Pass		
	13C-PFDA (SUR) % Recovery		92.40		70 - 130			Pass		
	d5-NEtFOSAA (SUR) % Recovery		93.74		70 - 130			Pass		

Sample Extraction Data:

Lab Number (Field ID)	Prep Method	Batch	Final (mL)	Date
300173558	PFAS_537	537_EXT-220427-1	250	04/27/2022

South Central Connecticut Regional Water Authority PFAS QA/QC Summary

Extraction Batch QC for: EPA 537

MA Lab Cert.#: M-CT004

Extraction Batch Date: 4/27/2022

Sample ID for LFSM/LFSMD: 300173062

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	102.4	89.9	12.7	N.D.	[Y]	106.9
PFHxA	108.3	102.7	5.1	N.D.	[Y]	106.0
PFHpA	105.6	101.0	4.4	N.D.	[Y]	110.1
PFHxS	104.4	88.5	16.4	N.D.	[Y]	101.9
PFOA	106.1	96.2	9.7	N.D.	[Y]	106.1
PFOS	92.8	91.1	1.8	N.D.	[Y]	102.5
PFNA	107.8	102.8	4.7	N.D.	[Y]	113.8
PFDA	101.8	89.0	13.5	N.D.	[Y]	110.4
PFUnA	98.6	81.4	19.1	N.D.	[Y]	105.6
NMeFOSAA	90.8	75.4	18.6	N.D.	[Y]	92.7
NEtFOSAA	93.9	83.8	11.4	N.D.	[Y]	97.0
PFDaA	96.8	78.6	20.8	N.D.	[Y]	100.9
PFTrDA	91.9	82.9	10.4	N.D.	[Y]	101.0
PFTA	100.2	85.7	15.7	N.D.	[Y]	98.9

Surrogate %Recovery

¹³ C ₂ -PFHxA	¹³ C ₂ -PFDA	d ₅ -NEtFOSAA	
106.41	97.02	89.10	LFSM
106.37	98.24	97.92	LFSMD
128.86	120.67	109.29	LRB
104.87	102.53	95.76	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 another sample than submitted on this Chain of Custody.

LRB = Laboratory Reagent Blank

RPD = relative percent difference

FB = Field Blank

N.D. = 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 ppt, unless noted otherwise

LFSMD = Laboratory Fortified Sample Matrix Duplicate

Surrogate Acceptance Limit is 70 - 130% Recovery

South Central Connecticut Regional Water Authority	
Mass DEP Lab Cert. #:	M-CT004
Method:	EPA 537

Analyte (Acronym)
Perfluorobutane sulfonic acid (PFBS)
Perfluorohexanoic acid (PFHxA)
Perfluoroheptanoic acid (PFHpA)
Perfluorohexane sulfonic acid (PFHxS)
Perfluorooctanoic acid (PFOA)
Perfluorooctane sulfonic acid (PFOS)
Perfluorononanoic acid (PFNA)
Perfluorodecanoic acid (PFDA)
Perfluoroundecanoic acid (PFUnA)
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)
Perfluorododecanoic acid (PFDoA)
Perfluorotridecanoic acid (PFTrDA)
Perfluorotetradecanoic acid (PFTA)

ENVIRONMENTAL PARTNERS

— An Apex Company —

May 24, 2022

Noreen Jordan
Town of Holbrook
Department of Public Works
50 North Franklin Street
Holbrook, MA 02343

RE: Lake Holbrook Dam Replacement Bid & CPS
EP Project #: R225-2008.00
Invoice No.: 0000828

Dear Noreen:

In accordance with our Agreement for Engineering services in connection with the [Holbrook] - Lake Holbrook Dam Replacement Bid & CPS, please find enclosed our invoice for work completed in April 2022.

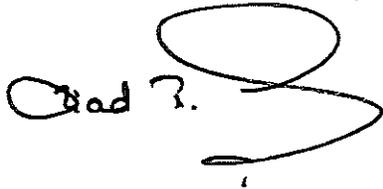
This invoice reflects work completed in April 2022 in connection with Task 2 (Construction administration), and Task 3 (Construction oversight). Through the end of April 2022, we have expended approximately 91% of the budget with the following tasks remaining:

- Closeout documents (DCR and Contractor)
- Record Drawings
- Submissions to DOT and DCR
- Dam inspection
- Emergency action plan for the dam as required by ODS

We appreciate the opportunity to be able to assist you with this project. Should you have any questions or require additional information, please do not hesitate to contact me. You can reach me via e-mail or telephone.

Very Truly Yours,

Environmental Partners Group, LLC

A handwritten signature in black ink, appearing to read "Ziad Kary", with a large, stylized flourish extending to the right.

Ziad Kary, P.E.
Project Manager
P: 617- 657-0283
E: zfk@envpartners.com

Encl. Invoice # 0000828

Invoice

Environmental Partners Group, LLC
P.O. Box 69142
Baltimore, MD 21264-9142
Tel: (617)-657-0200 Fax: (617)-657-0201

Town of Holbrook
Department of Public Works
50 North Franklin Street
Holbrook, MA 02343

May 05, 2022

Project No: R225-2008.00

Invoice No: 000000000828

Project R225-2008.00 Lake Holbrook Dam Replacement Bid & CPS

Professional Services from April 2, 2022 to April 29, 2022

Professional Services Fee

Billing Phase	Fee	Percent Complete	Earned	Previous Fee Billing	Current Fee Billing
Task 1 - Bidding Assistance	20,000.00	100.00	20,000.00	20,000.00	0.00
Task 2 - Construction Contract Administr	145,000.00	88.00	127,600.00	124,700.00	2,900.00
Task 3 - Resident Engineering	95,000.00	80.00	76,000.00	71,250.00	4,750.00
Task 4 - Pedestrian Walkway Permitting	60,000.00	100.00	60,000.00	60,000.00	0.00
Total Fee	320,000.00		283,600.00	275,950.00	7,650.00
	Total Fee				7,650.00
			Total this Invoice		\$7,650.00

	Current	Prior	Total
Billings to Date	7,650.00	275,950.00	283,600.00

It's been a pleasure working with you.

Sincerely,