con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 26, 2024

Francesca King
NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012

Project Location: Brookhaven, NY
Client Job Number:
Project Number: June PFAS
Laboratory Work Order Number: 24H2333

Enclosed are results of analyses for samples as received by the laboratory on August 15, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Raymond J. McCarthy
Project Manager

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012
ATTN: Francesca King

REPORT DATE: 8/26/2024

PURCHASE ORDER NUMBER: June PFAS

PROJECT NUMBER: June PFAS

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24H2333

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Brookhaven, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FB-TOB-08142024	24H2333-01	Field Blank		Draft Method 1633	
080-VP3-08142024	24H2333-02	Ground Water		Draft Method 1633	
DUP-TOB-08142024	24H2333-03	Ground Water		Draft Method 1633	
060-VP3-08142024	24H2333-04	Ground Water		Draft Method 1633	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Draft Method 1633

Qualifications:

D-03

Sample diluted pre-extraction due to elevated TSS pre-analysis result.

Analyte & Samples(s) Qualified:

24H2333-03[DUP-TOB-08142024]

D-04

Sample extracted at a dilution due to insufficient volume provided.

Analyte & Samples(s) Qualified:

24H2333-01[FB-TOB-08142024]

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

D7-NMeFOSE
S109396-CCB2

D9-NEtFOSE
S109396-CCB2

N-ethylperfluorooctanesulfonamidoethanol (NEtFO
S109396-CCB2

N-methylperfluorooctanesulfonamidoethanol(NMeF
S109396-CCB2

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FT
B383470-MSD1

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA
B383470-MSD1

N-EtFOSAA (NEtFOSAA)
B383470-MSD1

N-methylperfluorooctanesulfonamidoethanol(NMeF
B383470-MSD1

Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)
B383470-MSD1

Perfluoro-3-methoxypropanoic acid (PFMPA)
B383470-MSD1

Perfluoro-4-methoxybutanoic acid (PFMBA)
B383470-MSD1

Perfluorobutanesulfonic acid (PFBS)
24H2333-02[080-VP3-08142024], B383470-MSD1

Perfluorobutanoic acid (PFBA)
24H2333-02[080-VP3-08142024], B383470-MSD1

Perfluorododecanoic acid (PFDoA)
B383470-MSD1

Perfluorooctanesulfonamide (PFOSA)
B383470-MSD1

Perfluorooctanesulfonic acid (PFOS)
B383470-MSD1

Perfluoropentanoic acid (PFPeA)
24H2333-02[080-VP3-08142024], B383470-MSD1

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

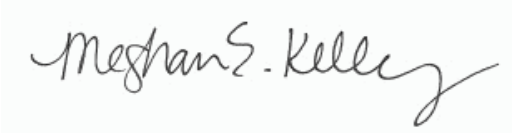
V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
S109396-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: FB-TOB-08142024 | Sampled: 8/14/2024 10:15

Sample ID: 24H2333-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.2	2.3	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoropentanoic acid (PFPeA)	ND	2.1	0.45	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorohexanoic acid (PFHxA)	ND	1.1	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoroheptanoic acid (PFHpA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorooctanoic acid (PFOA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorononanoic acid (PFNA)	ND	1.1	0.20	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorodecanoic acid (PFDA)	ND	1.1	0.22	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.1	0.22	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.1	0.21	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.1	0.31	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.1	0.27	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	1.1	0.22	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.1	0.27	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	1.1	0.30	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.1	0.35	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	1.1	0.41	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.1	0.27	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.1	0.30	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.1	0.31	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.2	0.79	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.2	3.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.2	1.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.1	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.1	0.35	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.1	0.36	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.1	0.38	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.1	0.42	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	11	2.9	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	11	2.8	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.2	1.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.2	0.87	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.2	1.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.2	1.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	11	2.3	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	53	12	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	53	10	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1	0.37	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.1	0.59	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: FB-TOB-08142024 | Sampled: 8/14/2024 10:15

Sample ID: 24H2333-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.1	0.57	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1	0.58	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:25	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	78.5	10-130		8/23/24 10:25
13C5-PFPeA	74.6	35-150		8/23/24 10:25
13C5-PFHxA	76.8	55-150		8/23/24 10:25
13C4-PFHpA	74.5	55-150		8/23/24 10:25
13C8-PFOA	76.6	60-140		8/23/24 10:25
13C9-PFNA	74.7	55-140		8/23/24 10:25
13C6-PFDA	74.3	50-140		8/23/24 10:25
13C7-PFUnA	75.6	30-140		8/23/24 10:25
13C2-PFDoA	72.1	10-150		8/23/24 10:25
13C2-PFTeDA	59.1	10-130		8/23/24 10:25
13C3-PFBS	78.8	55-150		8/23/24 10:25
13C3-PFHxS	76.5	55-150		8/23/24 10:25
13C8-PFOS	70.3	45-140		8/23/24 10:25
13C2-4:2FTS	70.8	60-200		8/23/24 10:25
13C2-6:2FTS	106	60-200		8/23/24 10:25
13C2-8:2FTS	83.8	50-200		8/23/24 10:25
13C8-PFOSA	60.4	30-130		8/23/24 10:25
D3-NMeFOSA	52.7	15-130		8/23/24 10:25
D5-NEtFOSA	52.1	10-130		8/23/24 10:25
D3-NMeFOSAA	62.8	45-200		8/23/24 10:25
D5-NEtFOSAA	62.3	10-200		8/23/24 10:25
D7-NMeFOSE	54.3	10-150		8/23/24 10:25
D9-NEtFOSE	51.4	10-150		8/23/24 10:25
13C3-HFPO-DA	82.3	25-160		8/23/24 10:25

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY
Sample Description:
Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: FB-TOB-08142024
Sampled: 8/14/2024 10:15

Sample ID: 24H2333-01

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	8/16/24	8/16/24 11:57	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 080-VP3-08142024 | Sampled: 8/14/2024 12:30

Sample ID: 24H2333-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	2.4	3.9	2.1	ng/L	1	R-06, J	Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoropentanoic acid (PFPeA)	2.9	1.9	0.41	ng/L	1	R-06	Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorohexanoic acid (PFHxA)	2.1	0.96	0.23	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoroheptanoic acid (PFHpA)	1.3	0.96	0.26	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorooctanoic acid (PFOA)	2.8	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorononanoic acid (PFNA)	ND	0.96	0.18	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorodecanoic acid (PFDA)	ND	0.96	0.20	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.20	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.19	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.29	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorobutanesulfonic acid (PFBS)	1.8	0.96	0.20	ng/L	1	R-06	Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.64	0.96	0.27	ng/L	1	J	Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.32	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.96	0.37	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.24	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.72	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	2.9	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.22	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.32	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.33	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.35	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.39	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.79	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.93	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	1.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	2.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	11	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	9.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.34	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.54	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 080-VP3-08142024 | Sampled: 8/14/2024 12:30

Sample ID: 24H2333-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:41	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	80.9	10-130		8/23/24 10:41
13C5-PFPeA	78.5	35-150		8/23/24 10:41
13C5-PFHxA	79.8	55-150		8/23/24 10:41
13C4-PFHpA	78.3	55-150		8/23/24 10:41
13C8-PFOA	78.9	60-140		8/23/24 10:41
13C9-PFNA	78.4	55-140		8/23/24 10:41
13C6-PFDA	76.3	50-140		8/23/24 10:41
13C7-PFUnA	76.1	30-140		8/23/24 10:41
13C2-PFDoA	68.7	10-150		8/23/24 10:41
13C2-PFTeDA	63.2	10-130		8/23/24 10:41
13C3-PFBS	82.7	55-150		8/23/24 10:41
13C3-PFHxS	75.6	55-150		8/23/24 10:41
13C8-PFOS	77.8	45-140		8/23/24 10:41
13C2-4:2FTS	74.2	60-200		8/23/24 10:41
13C2-6:2FTS	70.5	60-200		8/23/24 10:41
13C2-8:2FTS	64.9	50-200		8/23/24 10:41
13C8-PFOSA	68.1	30-130		8/23/24 10:41
D3-NMeFOSA	58.8	15-130		8/23/24 10:41
D5-NEtFOSA	61.6	10-130		8/23/24 10:41
D3-NMeFOSAA	74.5	45-200		8/23/24 10:41
D5-NEtFOSAA	70.6	10-200		8/23/24 10:41
D7-NMeFOSE	58.8	10-150		8/23/24 10:41
D9-NEtFOSE	57.2	10-150		8/23/24 10:41
13C3-HFPO-DA	83.6	25-160		8/23/24 10:41

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY
Sample Description:
Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 080-VP3-08142024
Sampled: 8/14/2024 12:30

Sample ID: 24H2333-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	72	10	10	mg/L	1		Draft Method 1633	8/19/24	8/19/24 12:41	LL

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: DUP-TOB-08142024 | Sampled: 8/14/2024 00:00

Sample ID: 24H2333-03

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	12	20	11	ng/L	1	J	Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoropentanoic acid (PFPeA)	39	9.8	2.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorohexanoic acid (PFHxA)	21	4.9	1.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoroheptanoic acid (PFHpA)	9.4	4.9	1.3	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorooctanoic acid (PFOA)	3.4	4.9	1.3	ng/L	1	J	Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorononanoic acid (PFNA)	ND	4.9	0.92	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorodecanoic acid (PFDA)	ND	4.9	1.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoroundecanoic acid (PFUnA)	ND	4.9	0.99	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorododecanoic acid (PFDoA)	ND	4.9	0.98	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	4.9	1.4	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	4.9	1.3	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorobutanesulfonic acid (PFBS)	3.2	4.9	1.0	ng/L	1	J	Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	4.9	1.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.7	4.9	1.4	ng/L	1	J	Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	4.9	1.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	4.9	1.9	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorononanesulfonic acid (PFNS)	ND	4.9	1.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	4.9	1.4	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	4.9	1.4	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	15	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.5	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	4.9	1.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	4.9	1.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	4.9	1.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-MeFOSAA (NMeFOSAA)	ND	4.9	1.7	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-EtFOSAA (NEtFOSAA)	ND	4.9	2.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	49	13	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	49	13	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	4.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
9Cl-PF3ONS (F53B Minor)	ND	20	4.7	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
11Cl-PF3OUdS (F53B Major)	ND	20	5.2	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	49	11	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	240	55	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	240	46	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	9.8	1.7	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	9.8	2.7	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: DUP-TOB-08142024 | Sampled: 8/14/2024 00:00

Sample ID: 24H2333-03

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	9.8	2.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	9.8	2.7	ng/L	1		Draft Method 1633	8/22/24	8/23/24 10:57	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	81.2	10-130		8/23/24 10:57
13C5-PFPeA	79.6	35-150		8/23/24 10:57
13C5-PFHxA	79.9	55-150		8/23/24 10:57
13C4-PFHpA	77.6	55-150		8/23/24 10:57
13C8-PFOA	77.8	60-140		8/23/24 10:57
13C9-PFNA	75.0	55-140		8/23/24 10:57
13C6-PFDA	78.4	50-140		8/23/24 10:57
13C7-PFUnA	75.2	30-140		8/23/24 10:57
13C2-PFDoA	69.0	10-150		8/23/24 10:57
13C2-PFTeDA	64.4	10-130		8/23/24 10:57
13C3-PFBS	82.8	55-150		8/23/24 10:57
13C3-PFHxS	79.9	55-150		8/23/24 10:57
13C8-PFOS	74.4	45-140		8/23/24 10:57
13C2-4:2FTS	71.4	60-200		8/23/24 10:57
13C2-6:2FTS	69.6	60-200		8/23/24 10:57
13C2-8:2FTS	69.5	50-200		8/23/24 10:57
13C8-PFOSA	62.8	30-130		8/23/24 10:57
D3-NMeFOSA	47.0	15-130		8/23/24 10:57
D5-NEtFOSA	48.3	10-130		8/23/24 10:57
D3-NMeFOSAA	72.7	45-200		8/23/24 10:57
D5-NEtFOSAA	70.2	10-200		8/23/24 10:57
D7-NMeFOSE	54.8	10-150		8/23/24 10:57
D9-NEtFOSE	51.6	10-150		8/23/24 10:57
13C3-HFPO-DA	87.0	25-160		8/23/24 10:57

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: DUP-TOB-08142024 | Sampled: 8/14/2024 00:00

Sample ID: 24H2333-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	110	10	10	mg/L	1		Draft Method 1633	8/19/24	8/19/24 12:41	LL

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 060-VP3-08142024 | Sampled: 8/14/2024 13:20

Sample ID: 24H2333-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	9.6	3.8	2.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoropentanoic acid (PFPeA)	41	1.9	0.41	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorohexanoic acid (PFHxA)	22	0.96	0.23	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoroheptanoic acid (PFHpA)	10	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorooctanoic acid (PFOA)	2.8	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorononanoic acid (PFNA)	ND	0.96	0.18	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorodecanoic acid (PFDA)	ND	0.96	0.20	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.19	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.19	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorobutanesulfonic acid (PFBS)	3.1	0.96	0.20	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	0.24	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.1	0.96	0.27	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.32	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.96	0.37	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.24	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.71	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	2.9	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.22	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.31	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.32	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.34	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.38	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.6	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.99	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.79	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.92	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	1.0	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	2.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	11	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	9.1	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.33	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY | Sample Description: | Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 060-VP3-08142024 | Sampled: 8/14/2024 13:20

Sample ID: 24H2333-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	8/22/24	8/23/24 11:12	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	79.9	10-130		8/23/24 11:12
13C5-PFPeA	78.4	35-150		8/23/24 11:12
13C5-PFHxA	78.6	55-150		8/23/24 11:12
13C4-PFHpA	78.4	55-150		8/23/24 11:12
13C8-PFOA	76.8	60-140		8/23/24 11:12
13C9-PFNA	75.5	55-140		8/23/24 11:12
13C6-PFDA	77.2	50-140		8/23/24 11:12
13C7-PFUnA	73.5	30-140		8/23/24 11:12
13C2-PFDoA	68.3	10-150		8/23/24 11:12
13C2-PFTeDA	66.4	10-130		8/23/24 11:12
13C3-PFBS	83.3	55-150		8/23/24 11:12
13C3-PFHxS	77.3	55-150		8/23/24 11:12
13C8-PFOS	76.4	45-140		8/23/24 11:12
13C2-4:2FTS	77.7	60-200		8/23/24 11:12
13C2-6:2FTS	74.3	60-200		8/23/24 11:12
13C2-8:2FTS	65.9	50-200		8/23/24 11:12
13C8-PFOSA	67.5	30-130		8/23/24 11:12
D3-NMeFOSA	53.6	15-130		8/23/24 11:12
D5-NEtFOSA	56.7	10-130		8/23/24 11:12
D3-NMeFOSAA	72.7	45-200		8/23/24 11:12
D5-NEtFOSAA	72.1	10-200		8/23/24 11:12
D7-NMeFOSE	57.5	10-150		8/23/24 11:12
D9-NEtFOSE	55.6	10-150		8/23/24 11:12
13C3-HFPO-DA	87.3	25-160		8/23/24 11:12

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Brookhaven, NY
Sample Description:
Work Order: 24H2333

Date Received: 8/15/2024

Field Sample #: 060-VP3-08142024
Sampled: 8/14/2024 13:20

Sample ID: 24H2333-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	54	10	10	mg/L	1		Draft Method 1633	8/19/24	8/19/24 12:41	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24H2333-01 [FB-TOB-08142024]	B383200	50.0	08/16/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24H2333-02 [080-VP3-08142024]	B383286	50.0	08/19/24
24H2333-03 [DUP-TOB-08142024]	B383286	50.0	08/19/24
24H2333-04 [060-VP3-08142024]	B383286	50.0	08/19/24

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 8/16/2024 per NO PREP in Batch B383200**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24H2333-01 [FB-TOB-08142024]	B383470	472	5.00	08/22/24
24H2333-02 [080-VP3-08142024]	B383470	518	5.00	08/22/24
24H2333-03 [DUP-TOB-08142024]	B383470	102	5.00	08/22/24
24H2333-04 [060-VP3-08142024]	B383470	523	5.00	08/22/24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
Blank (B383470-BLK1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Perfluorobutanoic acid (PFBA)	ND	4.0	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	4.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	4.0	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*91.9*		ng/L	99.4		92.4	10-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
Blank (B383470-BLK1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Surrogate: 13C5-PFPeA	*46.8*		ng/L	49.7		94.2	35-150			
Surrogate: 13C5-PFHxA	*23.1*		ng/L	24.8		93.0	55-150			
Surrogate: 13C4-PFHpA	*22.6*		ng/L	24.8		90.8	55-150			
Surrogate: 13C8-PFOA	*22.6*		ng/L	24.8		90.9	60-140			
Surrogate: 13C9-PFNA	*11.6*		ng/L	12.4		93.5	55-140			
Surrogate: 13C6-PFDA	*11.0*		ng/L	12.4		88.9	50-140			
Surrogate: 13C7-PFUnA	*11.6*		ng/L	12.4		93.3	30-140			
Surrogate: 13C2-PFDoA	*10.7*		ng/L	12.4		85.8	10-150			
Surrogate: 13C2-PFTeDA	*11.2*		ng/L	12.4		89.8	10-130			
Surrogate: 13C3-PFBS	*24.7*		ng/L	24.8		99.6	55-150			
Surrogate: 13C3-PFHxS	*22.4*		ng/L	24.8		90.0	55-150			
Surrogate: 13C8-PFOS	*22.0*		ng/L	24.8		88.4	45-140			
Surrogate: 13C2-4:2FTS	*48.5*		ng/L	49.7		97.6	60-200			
Surrogate: 13C2-6:2FTS	*42.9*		ng/L	49.7		86.4	60-200			
Surrogate: 13C2-8:2FTS	*40.6*		ng/L	49.7		81.7	50-200			
Surrogate: 13C8-PFOSA	*20.0*		ng/L	24.8		80.5	30-130			
Surrogate: D3-NMeFOSA	*16.7*		ng/L	24.8		67.3	15-130			
Surrogate: D5-NEtFOSA	*15.8*		ng/L	24.8		63.4	10-130			
Surrogate: D3-NMeFOSAA	*45.7*		ng/L	49.7		92.0	45-200			
Surrogate: D5-NEtFOSAA	*44.7*		ng/L	49.7		90.0	10-200			
Surrogate: D7-NMeFOSE	*257*		ng/L	248		103	10-150			
Surrogate: D9-NEtFOSE	*268*		ng/L	248		108	10-150			
Surrogate: 13C3-HFPO-DA	*99.8*		ng/L	99.4		100	25-160			
LCS (B383470-BS1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Perfluorobutanoic acid (PFBA)	93.3	3.9	ng/L	94.2		99.1	58-148			
Perfluoropentanoic acid (PFPeA)	47.3	2.0	ng/L	47.1		101	54-152			
Perfluorohexanoic acid (PFHxA)	23.6	0.98	ng/L	23.5		100	55-152			
Perfluoroheptanoic acid (PFHpA)	22.8	0.98	ng/L	23.5		96.8	54-154			
Perfluorooctanoic acid (PFOA)	24.0	0.98	ng/L	23.5		102	52-161			
Perfluorononanoic acid (PFNA)	23.5	0.98	ng/L	23.5		99.7	59-149			
Perfluorodecanoic acid (PFDA)	23.8	0.98	ng/L	23.5		101	52-147			
Perfluoroundecanoic acid (PFUnA)	22.8	0.98	ng/L	23.5		96.7	48-159			
Perfluorododecanoic acid (PFDoA)	23.7	0.98	ng/L	23.5		101	64-142			
Perfluorotridecanoic acid (PFTrDA)	24.1	0.98	ng/L	23.5		102	49-148			
Perfluorotetradecanoic acid (PFTeDA)	23.7	0.98	ng/L	23.5		101	47-161			
Perfluorobutanesulfonic acid (PFBS)	20.5	0.98	ng/L	20.9		98.3	62-144			
Perfluoropentanesulfonic acid (PFPeS)	22.1	0.98	ng/L	22.1		100	59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.2	0.98	ng/L	21.5		93.8	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	21.8	0.98	ng/L	22.4		97.3	55-152			
Perfluorooctanesulfonic acid (PFOS)	21.0	0.98	ng/L	21.8		96.0	58-149			
Perfluorononanesulfonic acid (PFNS)	22.7	0.98	ng/L	22.7		100	52-148			
Perfluorodecanesulfonic acid (PFDS)	22.5	0.98	ng/L	22.7		98.9	51-147			
Perfluorododecanesulfonic acid (PFDoS)	22.9	0.98	ng/L	22.8		100	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	84.4	3.9	ng/L	88.3		95.7	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	93.7	3.9	ng/L	89.5		105	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	91.2	3.9	ng/L	90.6		101	63-152			
Perfluorooctanesulfonamide (PFOSA)	22.5	0.98	ng/L	23.5		95.4	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	23.0	0.98	ng/L	23.5		97.6	63-145			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
LCS (B383470-BS1)				Prepared: 08/22/24 Analyzed: 08/23/24						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	22.9	0.98	ng/L	23.5		97.2	65-139			
N-MeFOSAA (NMeFOSAA)	22.3	0.98	ng/L	23.5		94.8	58-144			
N-EtFOSAA (NEtFOSAA)	22.7	0.98	ng/L	23.5		96.6	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	239	9.8	ng/L	235		101	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	233	9.8	ng/L	235		99.2	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	91.5	3.9	ng/L	94.2		97.1	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	77.9	3.9	ng/L	88.9		87.6	68-146			
9Cl-PF3ONS (F53B Minor)	79.2	3.9	ng/L	88.3		89.7	56-156			
11Cl-PF3OUdS (F53B Major)	81.5	3.9	ng/L	88.9		91.7	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	202	9.8	ng/L	235		85.6	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1040	49	ng/L	1180		88.0	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1000	49	ng/L	1180		85.1	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	51.9	2.0	ng/L	41.9		124	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	51.0	2.0	ng/L	47.1		108	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	55.4	2.0	ng/L	47.1		118	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	63.9	2.0	ng/L	47.1		136	48-161			
Surrogate: 13C4-PFBA	*82.9*		ng/L	98.1		84.5	10-130			
Surrogate: 13C5-PFPeA	*42.0*		ng/L	49.0		85.7	35-150			
Surrogate: 13C5-PFHxA	*20.4*		ng/L	24.5		83.3	55-150			
Surrogate: 13C4-PFHpA	*20.2*		ng/L	24.5		82.6	55-150			
Surrogate: 13C8-PFOA	*20.3*		ng/L	24.5		83.0	60-140			
Surrogate: 13C9-PFNA	*10.1*		ng/L	12.3		82.2	55-140			
Surrogate: 13C6-PFDA	*9.81*		ng/L	12.3		80.0	50-140			
Surrogate: 13C7-PFUnA	*10.1*		ng/L	12.3		82.1	30-140			
Surrogate: 13C2-PFDoA	*9.45*		ng/L	12.3		77.1	10-150			
Surrogate: 13C2-PFTeDA	*9.79*		ng/L	12.3		79.8	10-130			
Surrogate: 13C3-PFBS	*21.1*		ng/L	24.5		85.9	55-150			
Surrogate: 13C3-PFHxS	*20.3*		ng/L	24.5		82.6	55-150			
Surrogate: 13C8-PFOS	*19.9*		ng/L	24.5		81.1	45-140			
Surrogate: 13C2-4:2FTS	*40.1*		ng/L	49.0		81.8	60-200			
Surrogate: 13C2-6:2FTS	*41.2*		ng/L	49.0		84.0	60-200			
Surrogate: 13C2-8:2FTS	*40.4*		ng/L	49.0		82.4	50-200			
Surrogate: 13C8-PFOSA	*17.4*		ng/L	24.5		70.8	30-130			
Surrogate: D3-NMeFOSA	*13.4*		ng/L	24.5		54.5	15-130			
Surrogate: D5-NEtFOSA	*13.7*		ng/L	24.5		55.8	10-130			
Surrogate: D3-NMeFOSAA	*39.7*		ng/L	49.0		80.9	45-200			
Surrogate: D5-NEtFOSAA	*39.3*		ng/L	49.0		80.1	10-200			
Surrogate: D7-NMeFOSE	*169*		ng/L	245		68.9	10-150			
Surrogate: D9-NEtFOSE	*176*		ng/L	245		71.6	10-150			
Surrogate: 13C3-HFPO-DA	*95.3*		ng/L	98.1		97.2	25-160			
MRL Check (B383470-MRL1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Perfluorobutanoic acid (PFBA)	8.36	3.9	ng/L	7.82		107	44-157			
Perfluoropentanoic acid (PFPeA)	4.00	2.0	ng/L	3.91		102	57-148			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
MRL Check (B383470-MRL1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Perfluorohexanoic acid (PFHxA)	2.00	0.98	ng/L	1.96		102	62-149			
Perfluoroheptanoic acid (PFHpA)	1.97	0.98	ng/L	1.96		101	56-150			
Perfluorooctanoic acid (PFOA)	2.12	0.98	ng/L	1.96		108	57-161			
Perfluorononanoic acid (PFNA)	2.00	0.98	ng/L	1.96		102	53-157			
Perfluorodecanoic acid (PFDA)	1.93	0.98	ng/L	1.96		98.4	43-158			
Perfluoroundecanoic acid (PFUnA)	1.90	0.98	ng/L	1.96		97.1	50-155			
Perfluorododecanoic acid (PFDoA)	2.11	0.98	ng/L	1.96		108	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.99	0.98	ng/L	1.96		102	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.99	0.98	ng/L	1.96		102	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.77	0.98	ng/L	1.74		102	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.05	0.98	ng/L	1.84		112	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.78	0.98	ng/L	1.79		99.5	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.94	0.98	ng/L	1.86		104	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.07	0.98	ng/L	1.81		114	43-162			
Perfluorononanesulfonic acid (PFNS)	2.00	0.98	ng/L	1.88		106	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.00	0.98	ng/L	1.89		106	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.98	0.98	ng/L	1.90		104	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.05	3.9	ng/L	7.33		96.1	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.87	3.9	ng/L	7.43		106	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	6.96	3.9	ng/L	7.53		92.4	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.91	0.98	ng/L	1.96		97.4	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.00	0.98	ng/L	1.96		102	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.91	0.98	ng/L	1.96		97.4	49-156			
N-MeFOSAA (NMeFOSAA)	2.02	0.98	ng/L	1.96		104	32-160			
N-EtFOSAA (NEtFOSAA)	2.04	0.98	ng/L	1.96		104	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	20.3	9.8	ng/L	19.6		104	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	19.7	9.8	ng/L	19.6		101	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.75	3.9	ng/L	7.82		99.1	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.63	3.9	ng/L	7.38		89.8	61-148			
9Cl-PF3ONS (F53B Minor)	6.77	3.9	ng/L	7.33		92.3	44-167			
11Cl-PF3OUdS (F53B Major)	6.59	3.9	ng/L	7.38		89.2	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.7	9.8	ng/L	19.6		90.4	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	87.4	49	ng/L	97.8		89.4	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	85.8	49	ng/L	97.8		87.7	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.93	2.0	ng/L	3.48		113	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.32	2.0	ng/L	3.91		110	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.37	2.0	ng/L	3.91		112	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.46	2.0	ng/L	3.91		140	47-160			
Surrogate: 13C4-PFBA	*81.8*		ng/L	97.8		83.6	10-130			
Surrogate: 13C5-PFPeA	*41.4*		ng/L	48.9		84.7	35-150			
Surrogate: 13C5-PFHxA	*20.7*		ng/L	24.4		84.7	55-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
MRL Check (B383470-MRL1)				Prepared: 08/22/24 Analyzed: 08/23/24						
Surrogate: 13C4-PFHpA	*20.7*		ng/L	24.4		84.8	55-150			
Surrogate: 13C8-PFOA	*19.1*		ng/L	24.4		78.0	60-140			
Surrogate: 13C9-PFNA	*9.95*		ng/L	12.2		81.4	55-140			
Surrogate: 13C6-PFDA	*9.77*		ng/L	12.2		79.9	50-140			
Surrogate: 13C7-PFUnA	*9.64*		ng/L	12.2		78.8	30-140			
Surrogate: 13C2-PFDoA	*9.50*		ng/L	12.2		77.7	10-150			
Surrogate: 13C2-PFTeDA	*9.71*		ng/L	12.2		79.5	10-130			
Surrogate: 13C3-PFBS	*21.6*		ng/L	24.4		88.4	55-150			
Surrogate: 13C3-PFHxS	*20.2*		ng/L	24.4		82.4	55-150			
Surrogate: 13C8-PFOS	*19.2*		ng/L	24.4		78.4	45-140			
Surrogate: 13C2-4:2FTS	*38.4*		ng/L	48.9		78.5	60-200			
Surrogate: 13C2-6:2FTS	*37.7*		ng/L	48.9		77.1	60-200			
Surrogate: 13C2-8:2FTS	*36.1*		ng/L	48.9		73.9	50-200			
Surrogate: 13C8-PFOSA	*17.2*		ng/L	24.4		70.5	30-130			
Surrogate: D3-NMeFOSA	*15.6*		ng/L	24.4		64.0	15-130			
Surrogate: D5-NEtFOSA	*15.8*		ng/L	24.4		64.8	10-130			
Surrogate: D3-NMeFOSAA	*39.7*		ng/L	48.9		81.1	45-200			
Surrogate: D5-NEtFOSAA	*40.6*		ng/L	48.9		83.1	10-200			
Surrogate: D7-NMeFOSE	*187*		ng/L	244		76.7	10-150			
Surrogate: D9-NEtFOSE	*203*		ng/L	244		82.9	10-150			
Surrogate: 13C3-HFPO-DA	*94.1*		ng/L	97.8		96.2	25-160			
Matrix Spike (B383470-MS1)		**Source: 24H2333-02**		Prepared: 08/22/24 Analyzed: 08/23/24						
Perfluorobutanoic acid (PFBA)	100	4.1	ng/L	97.6	2.41	100	58-148			
Perfluoropentanoic acid (PFPeA)	52.5	2.0	ng/L	48.8	2.89	102	54-152			
Perfluorohexanoic acid (PFHxA)	27.4	1.0	ng/L	24.4	2.08	104	55-152			
Perfluoroheptanoic acid (PFHpA)	25.6	1.0	ng/L	24.4	1.33	99.5	54-154			
Perfluorooctanoic acid (PFOA)	26.6	1.0	ng/L	24.4	2.80	97.7	52-161			
Perfluorononanoic acid (PFNA)	25.3	1.0	ng/L	24.4	ND	104	59-149			
Perfluorodecanoic acid (PFDA)	24.4	1.0	ng/L	24.4	ND	99.9	52-147			
Perfluoroundecanoic acid (PFUnA)	24.4	1.0	ng/L	24.4	ND	100	48-159			
Perfluorododecanoic acid (PFDoA)	24.3	1.0	ng/L	24.4	ND	99.8	64-142			
Perfluorotridecanoic acid (PFTrDA)	24.6	1.0	ng/L	24.4	ND	101	49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.9	1.0	ng/L	24.4	ND	102	47-161			
Perfluorobutanesulfonic acid (PFBS)	23.0	1.0	ng/L	21.6	1.78	98.1	62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.7	1.0	ng/L	22.9	ND	103	59-151			
Perfluorohexanesulfonic acid (PFHxS)	22.0	1.0	ng/L	22.3	0.641	95.7	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	24.1	1.0	ng/L	23.2	ND	104	55-152			
Perfluorooctanesulfonic acid (PFOS)	22.9	1.0	ng/L	22.6	ND	101	58-149			
Perfluorononanesulfonic acid (PFNS)	24.0	1.0	ng/L	23.5	ND	102	52-148			
Perfluorodecanesulfonic acid (PFDS)	23.8	1.0	ng/L	23.5	ND	101	51-147			
Perfluorododecanesulfonic acid (PFDoS)	25.5	1.0	ng/L	23.7	ND	108	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	94.2	4.1	ng/L	91.5	ND	103	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	93.7	4.1	ng/L	92.7	ND	101	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	96.5	4.1	ng/L	93.9	ND	103	63-152			
Perfluorooctanesulfonamide (PFOSA)	24.1	1.0	ng/L	24.4	ND	98.7	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	25.0	1.0	ng/L	24.4	ND	102	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	24.7	1.0	ng/L	24.4	ND	101	65-139			
N-MeFOSAA (NMeFOSAA)	23.2	1.0	ng/L	24.4	ND	95.2	58-144			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B383470 - Draft Method 1633											
Matrix Spike (B383470-MS1)	**Source: 24H2333-02**			Prepared: 08/22/24 Analyzed: 08/23/24							
N-EtFOSAA (NEtFOSAA)	25.0	1.0	ng/L	24.4	ND	102	59-146				
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	250	10	ng/L	244	ND	103	71-136				
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	252	10	ng/L	244	ND	103	69-137				
Hexafluoropropylene oxide dimer acid (HFPO-DA)	102	4.1	ng/L	97.6	ND	104	63-144				
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	89.4	4.1	ng/L	92.1	ND	97.0	68-146				
9Cl-PF3ONS (F53B Minor)	92.7	4.1	ng/L	91.5	ND	101	56-156				
11Cl-PF3OUdS (F53B Major)	93.3	4.1	ng/L	92.1	ND	101	46-156				
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	210	10	ng/L	244	ND	86.2	62-129				
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1080	51	ng/L	1220	ND	88.5	63-134				
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1060	51	ng/L	1220	ND	86.9	50-138				
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	54.6	2.0	ng/L	43.4	ND	126	56-151				
Perfluoro-3-methoxypropanoic acid (PFMPA)	52.6	2.0	ng/L	48.8	ND	108	51-145				
Perfluoro-4-methoxybutanoic acid (PFMBA)	56.2	2.0	ng/L	48.8	ND	115	55-148				
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	65.3	2.0	ng/L	48.8	ND	134	48-161				
Surrogate: 13C4-PFBA	*81.6*		ng/L	102		80.3	10-130				
Surrogate: 13C5-PFPeA	*40.7*		ng/L	50.8		80.2	35-150				
Surrogate: 13C5-PFHxA	*19.5*		ng/L	25.4		76.6	55-150				
Surrogate: 13C4-PFHpA	*20.1*		ng/L	25.4		79.2	55-150				
Surrogate: 13C8-PFOA	*20.1*		ng/L	25.4		79.2	60-140				
Surrogate: 13C9-PFNA	*9.81*		ng/L	12.7		77.2	55-140				
Surrogate: 13C6-PFDA	*9.53*		ng/L	12.7		75.0	50-140				
Surrogate: 13C7-PFUnA	*9.58*		ng/L	12.7		75.4	30-140				
Surrogate: 13C2-PFDoA	*9.14*		ng/L	12.7		72.0	10-150				
Surrogate: 13C2-PFTeDA	*9.00*		ng/L	12.7		70.8	10-130				
Surrogate: 13C3-PFBS	*21.2*		ng/L	25.4		83.5	55-150				
Surrogate: 13C3-PFHxS	*19.8*		ng/L	25.4		77.9	55-150				
Surrogate: 13C8-PFOS	*18.9*		ng/L	25.4		74.5	45-140				
Surrogate: 13C2-4:2FTS	*40.6*		ng/L	50.8		79.9	60-200				
Surrogate: 13C2-6:2FTS	*43.1*		ng/L	50.8		84.8	60-200				
Surrogate: 13C2-8:2FTS	*38.5*		ng/L	50.8		75.7	50-200				
Surrogate: 13C8-PFOSA	*16.9*		ng/L	25.4		66.7	30-130				
Surrogate: D3-NMeFOSA	*15.5*		ng/L	25.4		61.0	15-130				
Surrogate: D5-NEtFOSA	*15.8*		ng/L	25.4		62.1	10-130				
Surrogate: D3-NMeFOSAA	*38.1*		ng/L	50.8		75.0	45-200				
Surrogate: D5-NEtFOSAA	*37.4*		ng/L	50.8		73.7	10-200				
Surrogate: D7-NMeFOSE	*157*		ng/L	254		61.9	10-150				
Surrogate: D9-NEtFOSE	*161*		ng/L	254		63.3	10-150				
Surrogate: 13C3-HFPO-DA	*86.1*		ng/L	102		84.7	25-160				
Matrix Spike Dup (B383470-MSD1)	**Source: 24H2333-02**			Prepared: 08/22/24 Analyzed: 08/23/24							
Perfluorobutanoic acid (PFBA)	127	5.2	ng/L	124	ND	102	58-148	**23.6**	*	20	R-06
Perfluoropentanoic acid (PFPeA)	66.4	2.6	ng/L	62.1	2.89	102	54-152	**23.2**	*	20	R-06
Perfluorohexanoic acid (PFHxA)	33.5	1.3	ng/L	31.1	2.08	101	55-152	20.0		25	
Perfluoroheptanoic acid (PFHpA)	32.3	1.3	ng/L	31.1	1.33	99.7	54-154	23.1		25	
Perfluorooctanoic acid (PFOA)	33.1	1.3	ng/L	31.1	2.80	97.7	52-161	21.8		25	

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B383470 - Draft Method 1633											
Matrix Spike Dup (B383470-MSD1)	**Source: 24H2333-02**			Prepared: 08/22/24 Analyzed: 08/23/24							
Perfluorononanoic acid (PFNA)	31.5	1.3	ng/L	31.1	ND	101	59-149	21.8		25	
Perfluorodecanoic acid (PFDA)	29.7	1.3	ng/L	31.1	ND	95.5	52-147	19.7		25	
Perfluoroundecanoic acid (PFUnA)	30.2	1.3	ng/L	31.1	ND	97.4	48-159	21.3		30	
Perfluorododecanoic acid (PFDoA)	32.0	1.3	ng/L	31.1	ND	103	64-142	**27.1**	*	25	R-06
Perfluorotridecanoic acid (PFTrDA)	31.4	1.3	ng/L	31.1	ND	101	49-148	24.1		25	
Perfluorotetradecanoic acid (PFTeDA)	31.5	1.3	ng/L	31.1	ND	102	47-161	23.5		25	
Perfluorobutanesulfonic acid (PFBS)	29.6	1.3	ng/L	27.6	1.78	101	62-144	**24.9**	*	20	R-06
Perfluoropentanesulfonic acid (PFPeS)	29.2	1.3	ng/L	29.2	ND	100	59-151	21.0		25	
Perfluorohexanesulfonic acid (PFHxS)	27.0	1.3	ng/L	28.4	0.641	92.6	57-146	20.2		25	
Perfluoroheptanesulfonic acid (PFHpS)	29.5	1.3	ng/L	29.6	ND	99.7	55-152	20.1		25	
Perfluorooctanesulfonic acid (PFOS)	30.2	1.3	ng/L	28.8	ND	105	58-149	**27.6**	*	20	R-06
Perfluorononanesulfonic acid (PFNS)	29.9	1.3	ng/L	29.9	ND	99.9	52-148	21.8		25	
Perfluorodecanesulfonic acid (PFDS)	30.0	1.3	ng/L	30.0	ND	100	51-147	23.1		25	
Perfluorododecanesulfonic acid (PFDoS)	30.3	1.3	ng/L	30.1	ND	101	36-145	17.4		30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	118	5.2	ng/L	116	ND	101	67-146	22.2		25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	119	5.2	ng/L	118	ND	100	61-151	23.4		30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	125	5.2	ng/L	120	ND	104	63-152	25.4		30	
Perfluorooctanesulfonamide (PFOSA)	30.9	1.3	ng/L	31.1	ND	99.5	61-148	**24.9**	*	20	R-06
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	30.9	1.3	ng/L	31.1	ND	99.6	63-145	21.3		25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	30.6	1.3	ng/L	31.1	ND	98.5	65-139	21.3		25	
N-MeFOSAA (NMeFOSAA)	29.3	1.3	ng/L	31.1	ND	94.4	58-144	23.2		25	
N-EtFOSAA (NEtFOSAA)	32.7	1.3	ng/L	31.1	ND	105	59-146	**26.7**	*	25	R-06
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	322	13	ng/L	311	ND	104	71-136	**24.9**	*	20	R-06
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	322	13	ng/L	311	ND	104	69-137	24.4		25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	123	5.2	ng/L	124	ND	99.1	63-144	19.0		25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	104	5.2	ng/L	117	ND	88.6	68-146	15.0		20	
9Cl-PF3ONS (F53B Minor)	107	5.2	ng/L	116	ND	92.1	56-156	14.6		30	
11Cl-PF3OUdS (F53B Major)	104	5.2	ng/L	117	ND	88.6	46-156	10.7		35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	263	13	ng/L	311	ND	84.6	62-129	**22.1**	*	20	R-06
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1350	65	ng/L	1550	ND	87.0	63-134	**22.3**	*	20	R-06
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1350	65	ng/L	1550	ND	86.7	50-138	23.8		25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	69.9	2.6	ng/L	55.3	ND	126	56-151	**24.5**	*	20	R-06
Perfluoro-3-methoxypropanoic acid (PFMPA)	68.8	2.6	ng/L	62.1	ND	111	51-145	**26.8**	*	25	R-06
Perfluoro-4-methoxybutanoic acid (PFMBA)	74.8	2.6	ng/L	62.1	ND	120	55-148	**28.5**	*	20	R-06
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	79.5	2.6	ng/L	62.1	ND	128	48-161	19.7		35	
Surrogate: 13C4-PFBA	*99.9*		ng/L	129		77.2	10-130				
Surrogate: 13C5-PFPeA	*50.3*		ng/L	64.7		77.7	35-150				
Surrogate: 13C5-PFHxA	*24.6*		ng/L	32.3		76.1	55-150				
Surrogate: 13C4-PFHpA	*24.3*		ng/L	32.3		75.0	55-150				
Surrogate: 13C8-PFOA	*25.0*		ng/L	32.3		77.2	60-140				
Surrogate: 13C9-PFNA	*12.2*		ng/L	16.2		75.7	55-140				

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383470 - Draft Method 1633										
Matrix Spike Dup (B383470-MSD1)	**Source: 24H2333-02**			Prepared: 08/22/24 Analyzed: 08/23/24						
Surrogate: 13C6-PFDA	*12.4*		ng/L	16.2		77.0	50-140			
Surrogate: 13C7-PFUnA	*12.1*		ng/L	16.2		74.7	30-140			
Surrogate: 13C2-PFDoA	*11.2*		ng/L	16.2		69.0	10-150			
Surrogate: 13C2-PFTeDA	*11.7*		ng/L	16.2		72.2	10-130			
Surrogate: 13C3-PFBS	*26.1*		ng/L	32.3		80.7	55-150			
Surrogate: 13C3-PFHxS	*25.1*		ng/L	32.3		77.6	55-150			
Surrogate: 13C8-PFOS	*23.8*		ng/L	32.3		73.6	45-140			
Surrogate: 13C2-4:2FTS	*49.9*		ng/L	64.7		77.1	60-200			
Surrogate: 13C2-6:2FTS	*50.2*		ng/L	64.7		77.5	60-200			
Surrogate: 13C2-8:2FTS	*47.3*		ng/L	64.7		73.1	50-200			
Surrogate: 13C8-PFOSA	*20.3*		ng/L	32.3		62.7	30-130			
Surrogate: D3-NMeFOSA	*16.0*		ng/L	32.3		49.4	15-130			
Surrogate: D5-NEtFOSA	*17.1*		ng/L	32.3		52.9	10-130			
Surrogate: D3-NMeFOSAA	*47.4*		ng/L	64.7		73.3	45-200			
Surrogate: D5-NEtFOSAA	*44.9*		ng/L	64.7		69.4	10-200			
Surrogate: D7-NMeFOSE	*182*		ng/L	323		56.1	10-150			
Surrogate: D9-NEtFOSE	*183*		ng/L	323		56.6	10-150			
Surrogate: 13C3-HFPO-DA	*112*		ng/L	129		86.5	25-160			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B383286 - Draft Method 1633										
Blank (B383286-BLK1)				Prepared & Analyzed: 08/19/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B383286-BS1)				Prepared & Analyzed: 08/19/24						
Total Suspended Solids	176	5.0	mg/L	200		88.0	51.5-130			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
D-03	Sample diluted pre-extraction due to elevated TSS pre-analysis result.
D-04	Sample extracted at a dilution due to insufficient volume provided.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV,CT
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV,CT
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV,CT
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV,CT
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV,CT
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV,CT
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV,CT
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV,CT
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV,CT
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV,CT
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV,CT
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV,CT
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV,CT
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV,CT
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV,CT
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV,CT
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV,CT
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV,CT
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV,CT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV,CT
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV,CT
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV,CT
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV,CT
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV,CT
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV,CT
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV,CT
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV,CT
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV,CT
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV,CT
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV,CT
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV,CT

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2025
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2025
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2025

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

24H0333

https://www.pacelabs.com/

RM

Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

19

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	NYSDEC
Address:	50 Circle Road, Stony Brook NY 11790
Phone:	631-444-0379
Project Name:	Brookhaven Landfill PFAS Plume Invesitgation
Project Location:	Horseblock Road, Brookhaven
Project Number:	June PFAS
Project Manager:	Chris Oommen/Francesca King
Pace Analytical Quote Name/Number:	Kyle Stuckey
Invoice Recipient:	NYSDEC
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date: 30-Day

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: francesca.king@dec.ny.gov
Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	TCLP Fluid pH	RCRA 8 - Metals TCLP, Including Mercury	Total Metals	Chlorides and Sulfate	1633 PFAS	# of Containers	[2] Preservation Code	[3] Container Code
1	FB-TOB-08142024	8-14-24/1035	→ same		✓	O	L					X			
2	080-VP3-08142024	8-14-24/1230	→ same		✓	GW	U					X			
2	080-VP3-08142024MS	8-14-24/1230	→ same		✓	GW	U					X			
2	080-VP3-08142024MSD	8-14-24/1230	→ same		✓	GW	U					X			
3	DUP-TOB-08142024	8-14-24			✓	GW	U					X			
4	060-VP3-08142024	8-14-24/1320	→ same		✓	GW	U					X			

ANALYSIS REQUESTED

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)		Date/Time: 8/14/24 16:14
Received by: (signature)		Date/Time: 8/14/24 16:15
Relinquished by: (signature)	PACE	Date/Time: 8.14.24 21:30
Received by: (signature)	PACE	Date/Time: 8.14.24 18:25
Relinquished by: (signature)	Anthony Green	Date/Time: 2217 AUG 16 2024
Received by: (signature)	Anthony Green	Date/Time:

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☑ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Pace 8/16/24 0145

PACE 8/15/24 06:00

PACE 8/15/24 08:30

MM 36 8/15/24 830

Table of Contents

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist

Effective Date: 06/11/2024

Log In Back-Sheet

Client NY Division of Environmental Remediation

Project Brookhaven Landfill (Jwk PFAS)

MCP/RCP Required no

Deliverable Package Requirement none

Location Brookhaven, NY

PWSID# (When Applicable) n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/15/24 0630

Back-Sheet By / Date / Time MCM 8/16/24 0808

Temperature Method Gun # 4

WV samples: Yes (see note*) / No (follow normal procedure)

Temp < 6° C Actual Temperature 3.6

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☐

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

**Note: West Virginia requires all samples to have their temperature taken. Note any outliers.*

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																				
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	1 Liter	Ambers																				
HCL																						
Sulfuric																						
Sulfuric	250mL																					
Phosphoric																						
HCl																						
Unpreserved	100mL																					
Unpreserved	1 Liter	Plastics																				
Sulfuric																						
Unpreserved	500mL		2	6	2	2																
Sulfuric																						
Unpreserved	250mL																					
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved		VOA Vials																				
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact		Other / Fill in																				
125 plastic			1	3	1	1																

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 9, 2024

Francesca King
NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012

Project Location: NY
Client Job Number:
Project Number: June PFAS
Laboratory Work Order Number: 24H3363

Enclosed are results of analyses for samples as received by the laboratory on August 22, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Raymond J. McCarthy
Project Manager

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012
ATTN: Francesca King

REPORT DATE: 9/9/2024

PURCHASE ORDER NUMBER: June PFAS

PROJECT NUMBER: June PFAS

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24H3363

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Field Blank	24H3363-01	Field Blank		Draft Method 1633	
080-VPS-TOB-082024	24H3363-02	Ground Water		Draft Method 1633	
060-VPS-TOB-082024	24H3363-03	Ground Water		Draft Method 1633	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Draft Method 1633

Qualifications:

D-03

Sample diluted pre-extraction due to elevated TSS pre-analysis result.

Analyte & Samples(s) Qualified:

24H3363-02[080-VPS-TOB-082024]

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Total Suspended Solids
24H3363-02[080-VPS-TOB-082024], 24H3363-03[060-VPS-TOB-082024]

PF-23

Qualifier ion ratio <50% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
24H3363-03[060-VPS-TOB-082024]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: Field Blank | Sampled: 8/20/2024 08:55

Sample ID: 24H3363-01

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.8	2.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.41	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.95	0.23	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorooctanoic acid (PFOA)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorononanoic acid (PFNA)	ND	0.95	0.18	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorodecanoic acid (PFDA)	ND	0.95	0.20	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.95	0.19	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.95	0.19	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.95	0.28	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.95	0.20	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.95	0.31	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.95	0.36	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.95	0.27	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.95	0.27	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.71	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	2.9	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.95	0.22	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.95	0.31	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.95	0.32	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.95	0.34	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.95	0.38	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.5	2.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.5	2.5	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.98	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.78	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.91	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.5	2.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	11	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	9.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.33	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: Field Blank | Sampled: 8/20/2024 08:55

Sample ID: 24H3363-01

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.51	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.52	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:09	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	73.5	10-130		9/6/24 18:09
13C5-PFPeA	75.1	35-150		9/6/24 18:09
13C5-PFHxA	70.1	55-150		9/6/24 18:09
13C4-PFHpA	67.8	55-150		9/6/24 18:09
13C8-PFOA	68.5	60-140		9/6/24 18:09
13C9-PFNA	74.6	55-140		9/6/24 18:09
13C6-PFDA	71.7	50-140		9/6/24 18:09
13C7-PFUnA	61.6	30-140		9/6/24 18:09
13C2-PFDoA	74.8	10-150		9/6/24 18:09
13C2-PFTeDA	72.7	10-130		9/6/24 18:09
13C3-PFBS	69.9	55-150		9/6/24 18:09
13C3-PFHxS	70.5	55-150		9/6/24 18:09
13C8-PFOS	71.7	45-140		9/6/24 18:09
13C2-4:2FTS	67.7	60-200		9/6/24 18:09
13C2-6:2FTS	86.2	60-200		9/6/24 18:09
13C2-8:2FTS	124	50-200		9/6/24 18:09
13C8-PFOSA	67.1	30-130		9/6/24 18:09
D3-NMeFOSA	58.0	15-130		9/6/24 18:09
D5-NEtFOSA	54.2	10-130		9/6/24 18:09
D3-NMeFOSAA	63.6	45-200		9/6/24 18:09
D5-NEtFOSAA	49.1	10-200		9/6/24 18:09
D7-NMeFOSE	73.4	10-150		9/6/24 18:09
D9-NEtFOSE	63.5	10-150		9/6/24 18:09
13C3-HFPO-DA	71.7	25-160		9/6/24 18:09

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: Field Blank | Sampled: 8/20/2024 08:55

Sample ID: 24H3363-01

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	8/26/24	8/26/24 6:10	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 080-VPS-TOB-082024 | Sampled: 8/20/2024 10:30

Sample ID: 24H3363-02

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	20	11	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoropentanoic acid (PFPeA)	7.1	9.8	2.1	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorohexanoic acid (PFHxA)	4.3	4.9	1.2	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoroheptanoic acid (PFHpA)	1.9	4.9	1.3	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorooctanoic acid (PFOA)	4.0	4.9	1.3	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorononanoic acid (PFNA)	ND	4.9	0.92	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorodecanoic acid (PFDA)	ND	4.9	1.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoroundecanoic acid (PFUnA)	ND	4.9	0.99	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorododecanoic acid (PFDoA)	ND	4.9	0.98	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	4.9	1.4	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	4.9	1.3	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorobutanesulfonic acid (PFBS)	2.3	4.9	1.0	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	4.9	1.2	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorohexanesulfonic acid (PFHxS)	2.6	4.9	1.4	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	4.9	1.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	4.9	1.9	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorononanesulfonic acid (PFNS)	ND	4.9	1.2	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	4.9	1.4	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	4.9	1.4	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	15	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.4	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	4.9	1.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	4.9	1.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	4.9	1.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-MeFOSAA (NMeFOSAA)	ND	4.9	1.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-EtFOSAA (NEtFOSAA)	ND	4.9	2.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	49	13	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	49	13	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	4.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
9Cl-PF3ONS (F53B Minor)	ND	20	4.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
11Cl-PF3OUdS (F53B Major)	ND	20	5.2	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	49	11	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	240	55	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	240	46	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	9.8	1.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	9.8	2.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 080-VPS-TOB-082024 | Sampled: 8/20/2024 10:30

Sample ID: 24H3363-02

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	9.8	2.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	9.8	2.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:24	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	71.8	10-130		9/6/24 18:24
13C5-PFPeA	73.7	35-150		9/6/24 18:24
13C5-PFHxA	69.3	55-150		9/6/24 18:24
13C4-PFHpA	66.6	55-150		9/6/24 18:24
13C8-PFOA	70.7	60-140		9/6/24 18:24
13C9-PFNA	66.2	55-140		9/6/24 18:24
13C6-PFDA	68.8	50-140		9/6/24 18:24
13C7-PFUnA	73.0	30-140		9/6/24 18:24
13C2-PFDoA	70.6	10-150		9/6/24 18:24
13C2-PFTeDA	70.5	10-130		9/6/24 18:24
13C3-PFBS	72.0	55-150		9/6/24 18:24
13C3-PFHxS	70.4	55-150		9/6/24 18:24
13C8-PFOS	69.0	45-140		9/6/24 18:24
13C2-4:2FTS	68.1	60-200		9/6/24 18:24
13C2-6:2FTS	83.4	60-200		9/6/24 18:24
13C2-8:2FTS	92.0	50-200		9/6/24 18:24
13C8-PFOSA	57.0	30-130		9/6/24 18:24
D3-NMeFOSA	43.6	15-130		9/6/24 18:24
D5-NEtFOSA	42.7	10-130		9/6/24 18:24
D3-NMeFOSAA	69.2	45-200		9/6/24 18:24
D5-NEtFOSAA	75.0	10-200		9/6/24 18:24
D7-NMeFOSE	54.5	10-150		9/6/24 18:24
D9-NEtFOSE	52.8	10-150		9/6/24 18:24
13C3-HFPO-DA	68.3	25-160		9/6/24 18:24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 080-VPS-TOB-082024 | Sampled: 8/20/2024 10:30

Sample ID: 24H3363-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	240	10	10	mg/L	1	H-01	Draft Method 1633	8/27/24	8/27/24 13:35	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 060-VPS-TOB-082024 | Sampled: 8/20/2024 12:00

Sample ID: 24H3363-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	15	3.9	2.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoropentanoic acid (PFPeA)	25	1.9	0.42	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorohexanoic acid (PFHxA)	19	0.97	0.23	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoroheptanoic acid (PFHpA)	6.6	0.97	0.26	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorooctanoic acid (PFOA)	13	0.97	0.26	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorononanoic acid (PFNA)	0.77	0.97	0.18	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorodecanoic acid (PFDA)	ND	0.97	0.20	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.97	0.20	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.97	0.20	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	0.29	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorobutanesulfonic acid (PFBS)	4.0	0.97	0.21	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoropentanesulfonic acid (PFPeS)	0.92	0.97	0.25	ng/L	1	J	Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.9	0.97	0.27	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.97	0.32	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorooctanesulfonic acid (PFOS)	1.3	0.97	0.37	ng/L	1	PF-23	Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.97	0.25	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	0.28	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	0.28	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.73	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	3.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	0.23	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.97	0.32	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	0.33	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.97	0.35	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.97	0.39	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	2.7	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	2.6	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.80	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.94	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	2.1	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	11	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	9.3	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.34	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.54	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 060-VPS-TOB-082024 | Sampled: 8/20/2024 12:00

Sample ID: 24H3363-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.53	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.54	ng/L	1		Draft Method 1633	9/6/24	9/6/24 18:40	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	72.8	10-130		9/6/24 18:40
13C5-PFPeA	74.9	35-150		9/6/24 18:40
13C5-PFHxA	71.5	55-150		9/6/24 18:40
13C4-PFHpA	70.2	55-150		9/6/24 18:40
13C8-PFOA	72.6	60-140		9/6/24 18:40
13C9-PFNA	68.8	55-140		9/6/24 18:40
13C6-PFDA	69.4	50-140		9/6/24 18:40
13C7-PFUnA	68.6	30-140		9/6/24 18:40
13C2-PFDoA	64.7	10-150		9/6/24 18:40
13C2-PFTeDA	68.4	10-130		9/6/24 18:40
13C3-PFBS	70.3	55-150		9/6/24 18:40
13C3-PFHxS	67.7	55-150		9/6/24 18:40
13C8-PFOS	67.5	45-140		9/6/24 18:40
13C2-4:2FTS	80.1	60-200		9/6/24 18:40
13C2-6:2FTS	82.5	60-200		9/6/24 18:40
13C2-8:2FTS	82.0	50-200		9/6/24 18:40
13C8-PFOSA	53.6	30-130		9/6/24 18:40
D3-NMeFOSA	43.9	15-130		9/6/24 18:40
D5-NEtFOSA	45.8	10-130		9/6/24 18:40
D3-NMeFOSAA	61.8	45-200		9/6/24 18:40
D5-NEtFOSAA	64.3	10-200		9/6/24 18:40
D7-NMeFOSE	54.0	10-150		9/6/24 18:40
D9-NEtFOSE	52.7	10-150		9/6/24 18:40
13C3-HFPO-DA	70.7	25-160		9/6/24 18:40

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: NY | Sample Description: | Work Order: 24H3363

Date Received: 8/22/2024

Field Sample #: 060-VPS-TOB-082024 | Sampled: 8/20/2024 12:00

Sample ID: 24H3363-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	60	10	10	mg/L	1	H-01	Draft Method 1633	8/27/24	8/27/24 13:09	LL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24H3363-01 [Field Blank]	B384019	50.0	08/26/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24H3363-02 [080-VPS-TOB-082024]	B384173	50.0	08/27/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24H3363-03 [060-VPS-TOB-082024]	B384177	50.0	08/27/24

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 8/26/2024 per NO PREP in Batch B384019**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24H3363-01 [Field Blank]	B384981	528	5.00	09/06/24
24H3363-02 [080-VPS-TOB-082024]	B384981	103	5.00	09/06/24
24H3363-03 [060-VPS-TOB-082024]	B384981	513	5.00	09/06/24

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
Blank (B384981-BLK1)				Prepared & Analyzed: 09/06/24						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*76.1*		ng/L	98.5		77.2	10-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
Blank (B384981-BLK1)				Prepared & Analyzed: 09/06/24						
Surrogate: 13C5-PFPeA	*38.8*		ng/L	49.3		78.7	35-150			
Surrogate: 13C5-PFHxA	*18.6*		ng/L	24.6		75.4	55-150			
Surrogate: 13C4-PFHpA	*17.9*		ng/L	24.6		72.9	55-150			
Surrogate: 13C8-PFOA	*19.9*		ng/L	24.6		80.7	60-140			
Surrogate: 13C9-PFNA	*9.48*		ng/L	12.3		76.9	55-140			
Surrogate: 13C6-PFDA	*9.59*		ng/L	12.3		77.9	50-140			
Surrogate: 13C7-PFUnA	*9.45*		ng/L	12.3		76.8	30-140			
Surrogate: 13C2-PFDoA	*9.38*		ng/L	12.3		76.2	10-150			
Surrogate: 13C2-PFTeDA	*9.01*		ng/L	12.3		73.1	10-130			
Surrogate: 13C3-PFBS	*18.4*		ng/L	24.6		74.9	55-150			
Surrogate: 13C3-PFHxS	*18.2*		ng/L	24.6		73.7	55-150			
Surrogate: 13C8-PFOS	*18.4*		ng/L	24.6		74.7	45-140			
Surrogate: 13C2-4:2FTS	*31.9*		ng/L	49.3		64.8	60-200			
Surrogate: 13C2-6:2FTS	*38.5*		ng/L	49.3		78.1	60-200			
Surrogate: 13C2-8:2FTS	*41.8*		ng/L	49.3		84.9	50-200			
Surrogate: 13C8-PFOSA	*15.0*		ng/L	24.6		61.0	30-130			
Surrogate: D3-NMeFOSA	*11.3*		ng/L	24.6		45.9	15-130			
Surrogate: D5-NEtFOSA	*11.8*		ng/L	24.6		47.7	10-130			
Surrogate: D3-NMeFOSAA	*36.4*		ng/L	49.3		73.9	45-200			
Surrogate: D5-NEtFOSAA	*36.8*		ng/L	49.3		74.6	10-200			
Surrogate: D7-NMeFOSE	*143*		ng/L	246		58.1	10-150			
Surrogate: D9-NEtFOSE	*139*		ng/L	246		56.6	10-150			
Surrogate: 13C3-HFPO-DA	*75.1*		ng/L	98.5		76.2	25-160			
LCS (B384981-BS1)				Prepared & Analyzed: 09/06/24						
Perfluorobutanoic acid (PFBA)	104	3.9	ng/L	94.2		110	58-148			
Perfluoropentanoic acid (PFPeA)	53.8	2.0	ng/L	47.1		114	54-152			
Perfluorohexanoic acid (PFHxA)	26.2	0.98	ng/L	23.5		111	55-152			
Perfluoroheptanoic acid (PFHpA)	24.3	0.98	ng/L	23.5		103	54-154			
Perfluorooctanoic acid (PFOA)	25.6	0.98	ng/L	23.5		109	52-161			
Perfluorononanoic acid (PFNA)	25.8	0.98	ng/L	23.5		110	59-149			
Perfluorodecanoic acid (PFDA)	24.8	0.98	ng/L	23.5		105	52-147			
Perfluoroundecanoic acid (PFUnA)	26.6	0.98	ng/L	23.5		113	48-159			
Perfluorododecanoic acid (PFDoA)	26.2	0.98	ng/L	23.5		111	64-142			
Perfluorotridecanoic acid (PFTrDA)	25.7	0.98	ng/L	23.5		109	49-148			
Perfluorotetradecanoic acid (PFTeDA)	26.0	0.98	ng/L	23.5		110	47-161			
Perfluorobutanesulfonic acid (PFBS)	21.8	0.98	ng/L	20.9		104	62-144			
Perfluoropentanesulfonic acid (PFPeS)	24.6	0.98	ng/L	22.1		111	59-151			
Perfluorohexanesulfonic acid (PFHxS)	21.6	0.98	ng/L	21.5		100	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	25.7	0.98	ng/L	22.4		115	55-152			
Perfluorooctanesulfonic acid (PFOS)	23.3	0.98	ng/L	21.8		107	58-149			
Perfluorononanesulfonic acid (PFNS)	23.8	0.98	ng/L	22.7		105	52-148			
Perfluorodecanesulfonic acid (PFDS)	23.1	0.98	ng/L	22.7		102	51-147			
Perfluorododecanesulfonic acid (PFDoS)	24.1	0.98	ng/L	22.8		106	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	103	3.9	ng/L	88.3		116	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	109	3.9	ng/L	89.5		122	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	101	3.9	ng/L	90.7		111	63-152			
Perfluorooctanesulfonamide (PFOSA)	25.2	0.98	ng/L	23.5		107	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	25.4	0.98	ng/L	23.5		108	63-145			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
LCS (B384981-BS1)				Prepared & Analyzed: 09/06/24						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	26.0	0.98	ng/L	23.5		111	65-139			
N-MeFOSAA (NMeFOSAA)	28.2	0.98	ng/L	23.5		120	58-144			
N-EtFOSAA (NEtFOSAA)	25.1	0.98	ng/L	23.5		107	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	258	9.8	ng/L	235		110	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	258	9.8	ng/L	235		109	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	105	3.9	ng/L	94.2		111	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	98.5	3.9	ng/L	88.9		111	68-146			
9Cl-PF3ONS (F53B Minor)	99.0	3.9	ng/L	88.3		112	56-156			
11Cl-PF3OUdS (F53B Major)	93.9	3.9	ng/L	88.9		106	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	255	9.8	ng/L	235		108	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1340	49	ng/L	1180		114	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1240	49	ng/L	1180		105	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	57.8	2.0	ng/L	41.9		138	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	56.4	2.0	ng/L	47.1		120	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	59.4	2.0	ng/L	47.1		126	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.9	2.0	ng/L	47.1		129	48-161			
Surrogate: 13C4-PFBA	*73.9*		ng/L	98.1		75.3	10-130			
Surrogate: 13C5-PFPeA	*37.1*		ng/L	49.1		75.7	35-150			
Surrogate: 13C5-PFHxA	*17.7*		ng/L	24.5		72.3	55-150			
Surrogate: 13C4-PFHpA	*17.2*		ng/L	24.5		70.1	55-150			
Surrogate: 13C8-PFOA	*19.5*		ng/L	24.5		79.6	60-140			
Surrogate: 13C9-PFNA	*9.22*		ng/L	12.3		75.1	55-140			
Surrogate: 13C6-PFDA	*9.32*		ng/L	12.3		76.0	50-140			
Surrogate: 13C7-PFUnA	*8.86*		ng/L	12.3		72.2	30-140			
Surrogate: 13C2-PFDoA	*8.90*		ng/L	12.3		72.6	10-150			
Surrogate: 13C2-PFTeDA	*8.72*		ng/L	12.3		71.1	10-130			
Surrogate: 13C3-PFBS	*18.2*		ng/L	24.5		74.0	55-150			
Surrogate: 13C3-PFHxS	*17.6*		ng/L	24.5		71.8	55-150			
Surrogate: 13C8-PFOS	*17.7*		ng/L	24.5		72.2	45-140			
Surrogate: 13C2-4:2FTS	*34.1*		ng/L	49.1		69.5	60-200			
Surrogate: 13C2-6:2FTS	*37.5*		ng/L	49.1		76.4	60-200			
Surrogate: 13C2-8:2FTS	*39.5*		ng/L	49.1		80.4	50-200			
Surrogate: 13C8-PFOSA	*14.5*		ng/L	24.5		59.1	30-130			
Surrogate: D3-NMeFOSA	*10.8*		ng/L	24.5		43.9	15-130			
Surrogate: D5-NEtFOSA	*11.1*		ng/L	24.5		45.4	10-130			
Surrogate: D3-NMeFOSAA	*33.8*		ng/L	49.1		68.8	45-200			
Surrogate: D5-NEtFOSAA	*34.0*		ng/L	49.1		69.3	10-200			
Surrogate: D7-NMeFOSE	*141*		ng/L	245		57.5	10-150			
Surrogate: D9-NEtFOSE	*138*		ng/L	245		56.4	10-150			
Surrogate: 13C3-HFPO-DA	*73.9*		ng/L	98.1		75.3	25-160			
MRL Check (B384981-MRL1)				Prepared & Analyzed: 09/06/24						
Perfluorobutanoic acid (PFBA)	8.53	3.9	ng/L	7.79		109	44-157			
Perfluoropentanoic acid (PFPeA)	4.24	1.9	ng/L	3.90		109	57-148			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
MRL Check (B384981-MRL1)				Prepared & Analyzed: 09/06/24						
Perfluorohexanoic acid (PFHxA)	2.00	0.97	ng/L	1.95		103	62-149			
Perfluoroheptanoic acid (PFHpA)	1.95	0.97	ng/L	1.95		100	56-150			
Perfluorooctanoic acid (PFOA)	2.14	0.97	ng/L	1.95		110	57-161			
Perfluorononanoic acid (PFNA)	2.01	0.97	ng/L	1.95		103	53-157			
Perfluorodecanoic acid (PFDA)	1.91	0.97	ng/L	1.95		98.1	43-158			
Perfluoroundecanoic acid (PFUnA)	1.93	0.97	ng/L	1.95		99.3	50-155			
Perfluorododecanoic acid (PFDoA)	2.10	0.97	ng/L	1.95		108	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.03	0.97	ng/L	1.95		104	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.04	0.97	ng/L	1.95		105	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.75	0.97	ng/L	1.73		101	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.95	0.97	ng/L	1.83		106	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.97	0.97	ng/L	1.78		111	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.02	0.97	ng/L	1.86		109	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.05	0.97	ng/L	1.81		113	43-162			
Perfluorononanesulfonic acid (PFNS)	1.98	0.97	ng/L	1.87		106	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.89	0.97	ng/L	1.88		101	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.94	0.97	ng/L	1.89		103	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.15	3.9	ng/L	7.30		112	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.77	3.9	ng/L	7.40		118	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	8.39	3.9	ng/L	7.50		112	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.00	0.97	ng/L	1.95		103	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.22	0.97	ng/L	1.95		114	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.16	0.97	ng/L	1.95		111	49-156			
N-MeFOSAA (NMeFOSAA)	2.34	0.97	ng/L	1.95		120	32-160			
N-EtFOSAA (NEtFOSAA)	1.96	0.97	ng/L	1.95		100	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	19.8	9.7	ng/L	19.5		102	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	19.9	9.7	ng/L	19.5		102	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.18	3.9	ng/L	7.79		105	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.20	3.9	ng/L	7.35		97.9	61-148			
9Cl-PF3ONS (F53B Minor)	7.14	3.9	ng/L	7.30		97.8	44-167			
11Cl-PF3OUdS (F53B Major)	6.56	3.9	ng/L	7.35		89.2	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.1	9.7	ng/L	19.5		87.9	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	85.8	49	ng/L	97.4		88.1	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	81.8	49	ng/L	97.4		84.0	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.77	1.9	ng/L	3.47		109	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.87	1.9	ng/L	3.90		99.5	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.94	1.9	ng/L	3.90		101	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.21	1.9	ng/L	3.90		108	47-160			
Surrogate: 13C4-PFBA	*76.9*		ng/L	97.4		78.9	10-130			
Surrogate: 13C5-PFPeA	*39.1*		ng/L	48.7		80.4	35-150			
Surrogate: 13C5-PFHxA	*19.1*		ng/L	24.3		78.5	55-150			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
MRL Check (B384981-MRL1)				Prepared & Analyzed: 09/06/24						
Surrogate: 13C4-PFHpA	*18.0*		ng/L	24.3		74.1	55-150			
Surrogate: 13C8-PFOA	*19.5*		ng/L	24.3		79.9	60-140			
Surrogate: 13C9-PFNA	*9.40*		ng/L	12.2		77.2	55-140			
Surrogate: 13C6-PFDA	*9.32*		ng/L	12.2		76.6	50-140			
Surrogate: 13C7-PFUnA	*9.37*		ng/L	12.2		77.0	30-140			
Surrogate: 13C2-PFDoA	*9.00*		ng/L	12.2		73.9	10-150			
Surrogate: 13C2-PFTeDA	*8.87*		ng/L	12.2		72.9	10-130			
Surrogate: 13C3-PFBS	*20.1*		ng/L	24.3		82.6	55-150			
Surrogate: 13C3-PFHxS	*19.4*		ng/L	24.3		79.7	55-150			
Surrogate: 13C8-PFOS	*17.7*		ng/L	24.3		72.8	45-140			
Surrogate: 13C2-4:2FTS	*35.7*		ng/L	48.7		73.3	60-200			
Surrogate: 13C2-6:2FTS	*43.7*		ng/L	48.7		89.7	60-200			
Surrogate: 13C2-8:2FTS	*48.7*		ng/L	48.7		100	50-200			
Surrogate: 13C8-PFOSA	*15.2*		ng/L	24.3		62.6	30-130			
Surrogate: D3-NMeFOSA	*11.9*		ng/L	24.3		49.0	15-130			
Surrogate: D5-NEtFOSA	*12.3*		ng/L	24.3		50.3	10-130			
Surrogate: D3-NMeFOSAA	*36.7*		ng/L	48.7		75.4	45-200			
Surrogate: D5-NEtFOSAA	*37.1*		ng/L	48.7		76.2	10-200			
Surrogate: D7-NMeFOSE	*144*		ng/L	243		59.3	10-150			
Surrogate: D9-NEtFOSE	*143*		ng/L	243		58.6	10-150			
Surrogate: 13C3-HFPO-DA	*73.7*		ng/L	97.4		75.7	25-160			
Matrix Spike (B384981-MS1)		**Source: 24H3363-02**		Prepared & Analyzed: 09/06/24						
Perfluorobutanoic acid (PFBA)	504	19	ng/L	464	ND	109	58-148			
Perfluoropentanoic acid (PFPeA)	261	9.7	ng/L	232	7.08	109	54-152			
Perfluorohexanoic acid (PFHxA)	128	4.8	ng/L	116	4.34	106	55-152			
Perfluoroheptanoic acid (PFHpA)	122	4.8	ng/L	116	1.94	104	54-154			
Perfluorooctanoic acid (PFOA)	127	4.8	ng/L	116	4.04	106	52-161			
Perfluorononanoic acid (PFNA)	124	4.8	ng/L	116	ND	107	59-149			
Perfluorodecanoic acid (PFDA)	123	4.8	ng/L	116	ND	106	52-147			
Perfluoroundecanoic acid (PFUnA)	122	4.8	ng/L	116	ND	105	48-159			
Perfluorododecanoic acid (PFDoA)	120	4.8	ng/L	116	ND	103	64-142			
Perfluorotridecanoic acid (PFTrDA)	128	4.8	ng/L	116	ND	111	49-148			
Perfluorotetradecanoic acid (PFTeDA)	126	4.8	ng/L	116	ND	108	47-161			
Perfluorobutanesulfonic acid (PFBS)	108	4.8	ng/L	103	2.27	103	62-144			
Perfluoropentanesulfonic acid (PFPeS)	118	4.8	ng/L	109	ND	108	59-151			
Perfluorohexanesulfonic acid (PFHxS)	107	4.8	ng/L	106	2.55	98.0	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	122	4.8	ng/L	111	ND	110	55-152			
Perfluorooctanesulfonic acid (PFOS)	111	4.8	ng/L	108	ND	103	58-149			
Perfluorononanesulfonic acid (PFNS)	114	4.8	ng/L	112	ND	102	52-148			
Perfluorodecanesulfonic acid (PFDS)	110	4.8	ng/L	112	ND	98.6	51-147			
Perfluorododecanesulfonic acid (PFDoS)	112	4.8	ng/L	113	ND	99.2	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	496	19	ng/L	435	ND	114	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	514	19	ng/L	441	ND	116	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	496	19	ng/L	447	ND	111	63-152			
Perfluorooctanesulfonamide (PFOSA)	119	4.8	ng/L	116	ND	102	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	122	4.8	ng/L	116	ND	105	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	121	4.8	ng/L	116	ND	104	65-139			
N-MeFOSAA (NMeFOSAA)	121	4.8	ng/L	116	ND	105	58-144			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
Matrix Spike (B384981-MS1)		**Source: 24H3363-02**		Prepared & Analyzed: 09/06/24						
N-EtFOSAA (NEtFOSAA)	119	4.8	ng/L	116	ND	103	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1230	48	ng/L	1160	ND	106	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1210	48	ng/L	1160	ND	104	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	528	19	ng/L	464	ND	114	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	507	19	ng/L	438	ND	116	68-146			
9Cl-PF3ONS (F53B Minor)	512	19	ng/L	435	ND	118	56-156			
11Cl-PF3OUdS (F53B Major)	480	19	ng/L	438	ND	109	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1220	48	ng/L	1160	ND	105	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	6330	240	ng/L	5800	ND	109	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	5930	240	ng/L	5800	ND	102	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	273	9.7	ng/L	207	ND	132	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	264	9.7	ng/L	232	ND	113	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	281	9.7	ng/L	232	ND	121	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	274	9.7	ng/L	232	ND	118	48-161			
Surrogate: 13C4-PFBA	*372*		ng/L	484		76.9	10-130			
Surrogate: 13C5-PFPeA	*194*		ng/L	242		80.4	35-150			
Surrogate: 13C5-PFHxA	*94.0*		ng/L	121		77.8	55-150			
Surrogate: 13C4-PFHpA	*88.6*		ng/L	121		73.3	55-150			
Surrogate: 13C8-PFOA	*93.6*		ng/L	121		77.4	60-140			
Surrogate: 13C9-PFNA	*44.5*		ng/L	60.5		73.6	55-140			
Surrogate: 13C6-PFDA	*45.7*		ng/L	60.5		75.6	50-140			
Surrogate: 13C7-PFUnA	*45.9*		ng/L	60.5		76.0	30-140			
Surrogate: 13C2-PFDoA	*43.4*		ng/L	60.5		71.8	10-150			
Surrogate: 13C2-PFTeDA	*44.1*		ng/L	60.5		72.9	10-130			
Surrogate: 13C3-PFBS	*93.5*		ng/L	121		77.3	55-150			
Surrogate: 13C3-PFHxS	*91.2*		ng/L	121		75.4	55-150			
Surrogate: 13C8-PFOS	*91.9*		ng/L	121		76.0	45-140			
Surrogate: 13C2-4:2FTS	*182*		ng/L	242		75.4	60-200			
Surrogate: 13C2-6:2FTS	*204*		ng/L	242		84.2	60-200			
Surrogate: 13C2-8:2FTS	*234*		ng/L	242		96.8	50-200			
Surrogate: 13C8-PFOSA	*75.1*		ng/L	121		62.1	30-130			
Surrogate: D3-NMeFOSA	*58.7*		ng/L	121		48.6	15-130			
Surrogate: D5-NEtFOSA	*59.4*		ng/L	121		49.1	10-130			
Surrogate: D3-NMeFOSAA	*181*		ng/L	242		74.9	45-200			
Surrogate: D5-NEtFOSAA	*174*		ng/L	242		72.1	10-200			
Surrogate: D7-NMeFOSE	*704*		ng/L	1210		58.2	10-150			
Surrogate: D9-NEtFOSE	*690*		ng/L	1210		57.1	10-150			
Surrogate: 13C3-HFPO-DA	*364*		ng/L	484		75.2	25-160			
Matrix Spike Dup (B384981-MSD1)		**Source: 24H3363-02**		Prepared & Analyzed: 09/06/24						
Perfluorobutanoic acid (PFBA)	500	19	ng/L	462	ND	108	58-148	0.775	20	
Perfluoropentanoic acid (PFPeA)	262	9.6	ng/L	231	7.08	110	54-152	0.438	20	
Perfluorohexanoic acid (PFHxA)	129	4.8	ng/L	116	4.34	108	55-152	1.26	25	
Perfluoroheptanoic acid (PFHpA)	118	4.8	ng/L	116	1.94	100	54-154	3.92	25	
Perfluorooctanoic acid (PFOA)	127	4.8	ng/L	116	4.04	106	52-161	0.0591	25	

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
Matrix Spike Dup (B384981-MSD1)	**Source: 24H3363-02**			Prepared & Analyzed: 09/06/24						
Perfluorononanoic acid (PFNA)	133	4.8	ng/L	116	ND	115	59-149	7.29	25	
Perfluorodecanoic acid (PFDA)	126	4.8	ng/L	116	ND	109	52-147	1.99	25	
Perfluoroundecanoic acid (PFUnA)	119	4.8	ng/L	116	ND	103	48-159	2.02	30	
Perfluorododecanoic acid (PFDoA)	123	4.8	ng/L	116	ND	107	64-142	2.66	25	
Perfluorotridecanoic acid (PFTrDA)	125	4.8	ng/L	116	ND	108	49-148	2.89	25	
Perfluorotetradecanoic acid (PFTeDA)	124	4.8	ng/L	116	ND	107	47-161	1.61	25	
Perfluorobutanesulfonic acid (PFBS)	104	4.8	ng/L	103	2.27	99.2	62-144	4.10	20	
Perfluoropentanesulfonic acid (PFPeS)	113	4.8	ng/L	109	ND	104	59-151	3.81	25	
Perfluorohexanesulfonic acid (PFHxS)	103	4.8	ng/L	106	2.55	95.0	57-146	3.44	25	
Perfluoroheptanesulfonic acid (PFHpS)	118	4.8	ng/L	110	ND	107	55-152	2.84	25	
Perfluorooctanesulfonic acid (PFOS)	116	4.8	ng/L	107	ND	108	58-149	4.28	20	
Perfluorononanesulfonic acid (PFNS)	118	4.8	ng/L	111	ND	106	52-148	3.43	25	
Perfluorodecanesulfonic acid (PFDS)	114	4.8	ng/L	112	ND	102	51-147	2.99	25	
Perfluorododecanesulfonic acid (PFDoS)	112	4.8	ng/L	112	ND	99.8	36-145	0.138	30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	487	19	ng/L	434	ND	112	67-146	1.73	25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	498	19	ng/L	439	ND	113	61-151	2.98	30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	488	19	ng/L	445	ND	110	63-152	1.55	30	
Perfluorooctanesulfonamide (PFOSA)	118	4.8	ng/L	116	ND	102	61-148	0.623	20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	126	4.8	ng/L	116	ND	109	63-145	2.99	25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	124	4.8	ng/L	116	ND	108	65-139	2.97	25	
N-MeFOSAA (NMeFOSAA)	123	4.8	ng/L	116	ND	107	58-144	1.69	25	
N-EtFOSAA (NEtFOSAA)	117	4.8	ng/L	116	ND	101	59-146	1.51	25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	1240	48	ng/L	1160	ND	107	71-136	0.331	20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	1200	48	ng/L	1160	ND	104	69-137	0.413	25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	493	19	ng/L	462	ND	107	63-144	6.85	25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	476	19	ng/L	436	ND	109	68-146	6.26	20	
9Cl-PF3ONS (F53B Minor)	488	19	ng/L	434	ND	113	56-156	4.74	30	
11Cl-PF3OUdS (F53B Major)	455	19	ng/L	436	ND	104	46-156	5.22	35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1220	48	ng/L	1160	ND	105	62-129	0.396	20	
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	6320	240	ng/L	5780	ND	109	63-134	0.128	20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	6100	240	ng/L	5780	ND	106	50-138	2.83	25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	270	9.6	ng/L	206	ND	131	56-151	1.02	20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	258	9.6	ng/L	231	ND	112	51-145	2.08	25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	278	9.6	ng/L	231	ND	120	55-148	1.35	20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	271	9.6	ng/L	231	ND	117	48-161	1.19	35	
Surrogate: 13C4-PFBA	*374*		ng/L	482		77.6	10-130			
Surrogate: 13C5-PFPeA	*195*		ng/L	241		80.8	35-150			
Surrogate: 13C5-PFHxA	*92.8*		ng/L	120		77.1	55-150			
Surrogate: 13C4-PFHpA	*91.4*		ng/L	120		75.9	55-150			
Surrogate: 13C8-PFOA	*90.9*		ng/L	120		75.5	60-140			
Surrogate: 13C9-PFNA	*42.7*		ng/L	60.2		70.9	55-140			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384981 - Draft Method 1633										
Matrix Spike Dup (B384981-MSD1)		**Source: 24H3363-02**		Prepared & Analyzed: 09/06/24						
Surrogate: 13C6-PFDA	*43.6*		ng/L	60.2		72.4	50-140			
Surrogate: 13C7-PFUnA	*47.0*		ng/L	60.2		78.1	30-140			
Surrogate: 13C2-PFDoA	*44.0*		ng/L	60.2		73.1	10-150			
Surrogate: 13C2-PFTeDA	*43.9*		ng/L	60.2		72.9	10-130			
Surrogate: 13C3-PFBS	*92.7*		ng/L	120		76.9	55-150			
Surrogate: 13C3-PFHxS	*89.6*		ng/L	120		74.4	55-150			
Surrogate: 13C8-PFOS	*90.0*		ng/L	120		74.8	45-140			
Surrogate: 13C2-4:2FTS	*181*		ng/L	241		75.0	60-200			
Surrogate: 13C2-6:2FTS	*220*		ng/L	241		91.4	60-200			
Surrogate: 13C2-8:2FTS	*237*		ng/L	241		98.4	50-200			
Surrogate: 13C8-PFOSA	*76.6*		ng/L	120		63.6	30-130			
Surrogate: D3-NMeFOSA	*61.9*		ng/L	120		51.4	15-130			
Surrogate: D5-NEtFOSA	*64.4*		ng/L	120		53.5	10-130			
Surrogate: D3-NMeFOSAA	*182*		ng/L	241		75.7	45-200			
Surrogate: D5-NEtFOSAA	*184*		ng/L	241		76.5	10-200			
Surrogate: D7-NMeFOSE	*701*		ng/L	1200		58.2	10-150			
Surrogate: D9-NEtFOSE	*696*		ng/L	1200		57.8	10-150			
Surrogate: 13C3-HFPO-DA	*376*		ng/L	482		78.0	25-160			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384173 - Draft Method 1633										
Blank (B384173-BLK1)				Prepared & Analyzed: 08/27/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B384173-BS1)				Prepared & Analyzed: 08/27/24						
Total Suspended Solids	180	5.0	mg/L	200		90.0	51.5-130			
Batch B384177 - Draft Method 1633										
Blank (B384177-BLK1)				Prepared & Analyzed: 08/27/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B384177-BS1)				Prepared & Analyzed: 08/27/24						
Total Suspended Solids	201	5.0	mg/L	200		100	51.5-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
D-03	Sample diluted pre-extraction due to elevated TSS pre-analysis result.
H-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
PF-23	Qualifier ion ratio <50% of associated calibration. Detection is suspect.

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV,CT
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV,CT
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV,CT
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV,CT
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV,CT
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV,CT
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV,CT
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV,CT
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV,CT
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV,CT
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV,CT
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV,CT
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV,CT
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV,CT
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV,CT
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV,CT
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV,CT
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV,CT
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV,CT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV,CT
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV,CT
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV,CT
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV,CT
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV,CT
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV,CT
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV,CT
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV,CT
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV,CT
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV,CT
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV,CT
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV,CT

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2025
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2025
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2025

24H3363 RM

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	NYSDEC
Address:	50 Circle Road, Stony Brook NY 11790
Phone:	631-444-0379
Project Name:	Brookhaven Landfill PFAS Plume Invesitgation
Project Location:	Horseblock Road, Brookhaven
Project Number:	June PFAS
Project Manager:	Chris Oommen/Francesca King
Pace Analytical Quote Name/Number:	Kyle Stuckey
Invoice Recipient:	NYSDEC
Sampled By:	

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date: 30-Day

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: francesca.king@dec.ny.gov
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	TCLP Fluid pH	RCRA 8 - Metals TCLP, Including Mercury	Total Metals	Chlorides and Sulfate	1633 PFAS
1	Field Blank	08-20-24/0855	same		✓	O	L					X
2	OBD-VPS-IDB-08202024	08-20-24/1030	same		✓	GW	U					X
3	OBD-VPS-IDB-08202024	08-20-24/1200	same		✓	GW	U					X

# of Containers 9
[2] Preservation Code N/A
[3] Container Code 9

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

	Date/Time:
Relinquished by: (signature)	8/21/24 8:34
Received by: (signature)	8/21/24 8:35
Relinquished by: (signature)	8/21/24
Received by: (signature)	8/21 1453
Relinquished by: (signature)	8/21/24 2110
Received by: (signature)	8/22/24 0573

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☑ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

PACE 8/22/24 06:00

PACE 8/22/24 0816

8/22/24 8/16

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log In Back-Sheet

Client NY Dept of Env. Remediation (DEC)

Project Brookhaven Landfill PFAS

MCP/RCP Required no

Deliverable Package Requirement NY Cat B

Location NY

PWSID# (When Applicable) na

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time ER 8/22/24 0816

Back-Sheet By / Date / Time Mam 8/23/24 1352

Temperature Method Gun # 6

WV samples: Yes (see note*) / No (follow normal procedure)

Temp < 6° C Actual Temperature 3.0

Rush Samples: Yes / No Notify No

Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☐

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☐ ☐

Additional Container Notes

**Note: West Virginia requires all samples to have their temperature taken. Note any outliers.*

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist

Effective Date: 06/11/2024

Container	Size	Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Soils Jars	(Circle Amb/Clear)	16oz Amb/Clear																				
Soils Jars	(Circle Amb/Clear)	8oz Amb/Clear																				
Soils Jars	(Circle Amb/Clear)	4oz Amb/Clear																				
Soils Jars	(Circle Amb/Clear)	2oz Amb/Clear																				
Amber's	1 Liter	Unpreserved																				
Amber's	1 Liter	HCL																				
Amber's	1 Liter	Sulfuric																				
Amber's	250mL	Sulfuric																				
Amber's	250mL	Phosphoric																				
Amber's	250mL	HCl																				
Amber's	100mL	Unpreserved																				
Plastics	1 Liter	Unpreserved																				
Plastics	1 Liter	Sulfuric																				
Plastics	500mL	Unpreserved	2	←	←																	
Plastics	500mL	Sulfuric																				
Plastics	250mL	Unpreserved																				
Plastics	250mL	Trizma																				
Plastics	250mL	Sulfuric																				
Plastics	250mL	Nitric																				
Plastics	250mL	NaOH																				
Plastics	250mL	Ammonium Acetate																				
Plastics	250mL	NaOH/Zinc																				
VOA Vials		Unpreserved																				
VOA Vials		HCl																				
VOA Vials		MeOH																				
VOA Vials		D.I. Water																				
VOA Vials		BiSulfate																				
Other / Fill in		Col/Bact																				
Other / Fill in																						
Other / Fill in		125ml plastic unp.		1	←																	
Other / Fill in																						
Other / Fill in																						
Other / Fill in																						

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 27, 2024

Francesca King
NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012

Project Location: Horseblock Road, Brookhaven, NY
Client Job Number:
Project Number: June PFAS
Laboratory Work Order Number: 24I2005

Enclosed are results of analyses for samples as received by the laboratory on September 13, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Raymond J. McCarthy
Project Manager

Table of Contents

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012
ATTN: Francesca King

REPORT DATE: 9/27/2024

PURCHASE ORDER NUMBER: June PFAS

PROJECT NUMBER: June PFAS

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24I2005

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Horseblock Road, Brookhaven, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FB-TOB-09102024	24I2005-01	Field Blank		Draft Method 1633	
130-VP8-09102024	24I2005-02	Ground Water		Draft Method 1633	
FB-TOB-09112024	24I2005-03	Field Blank		Draft Method 1633	
110-VP8-09112024	24I2005-04	Ground Water		Draft Method 1633	
090-VP8-09112024	24I2005-05	Ground Water		Draft Method 1633	
070-VP8-09112024	24I2005-06	Ground Water		Draft Method 1633	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Draft Method 1633

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix.

Analyte & Samples(s) Qualified:

24I2005-04[110-VP8-09112024]

D-03

Sample diluted pre-extraction due to elevated TSS pre-analysis result.

Analyte & Samples(s) Qualified:

24I2005-05[090-VP8-09112024], 24I2005-06[070-VP8-09112024]

D-04

Sample extracted at a dilution due to insufficient volume provided.

Analyte & Samples(s) Qualified:

24I2005-01[FB-TOB-09102024]

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Total Suspended Solids
24I2005-02[130-VP8-09102024]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09102024 Sampled: 9/10/2024 07:45

Sample ID: 24I2005-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.2	2.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoropentanoic acid (PFPeA)	ND	2.1	0.45	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorohexanoic acid (PFHxA)	ND	1.1	0.25	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoroheptanoic acid (PFHpA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorooctanoic acid (PFOA)	ND	1.1	0.28	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorononanoic acid (PFNA)	ND	1.1	0.20	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorodecanoic acid (PFDA)	ND	1.1	0.22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoroundecanoic acid (PFUnA)	ND	1.1	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorododecanoic acid (PFDoA)	ND	1.1	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorotridecanoic acid (PFTrDA)	ND	1.1	0.31	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	1.1	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorobutanesulfonic acid (PFBS)	ND	1.1	0.22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	1.1	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	1.1	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.1	0.35	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorooctanesulfonic acid (PFOS)	ND	1.1	0.40	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorononanesulfonic acid (PFNS)	ND	1.1	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorodecanesulfonic acid (PFDS)	ND	1.1	0.30	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	1.1	0.30	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.2	0.79	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.2	3.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.2	1.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluorooctanesulfonamide (PFOSA)	ND	1.1	0.24	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.1	0.35	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.1	0.36	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-MeFOSAA (NMeFOSAA)	ND	1.1	0.38	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-EtFOSAA (NEtFOSAA)	ND	1.1	0.42	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	11	2.9	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	11	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.2	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.2	0.87	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
9Cl-PF3ONS (F53B Minor)	ND	4.2	1.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
11Cl-PF3OUdS (F53B Major)	ND	4.2	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	11	2.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	53	12	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	53	10	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1	0.37	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.1	0.59	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09102024 Sampled: 9/10/2024 07:45

Sample ID: 24I2005-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.1	0.57	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1	0.58	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:00	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	78.2	10-130		9/26/24 15:00
13C5-PFPeA	82.4	35-150		9/26/24 15:00
13C5-PFHxA	75.4	55-150		9/26/24 15:00
13C4-PFHpA	69.8	55-150		9/26/24 15:00
13C8-PFOA	78.3	60-140		9/26/24 15:00
13C9-PFNA	73.1	55-140		9/26/24 15:00
13C6-PFDA	72.8	50-140		9/26/24 15:00
13C7-PFUnA	77.5	30-140		9/26/24 15:00
13C2-PFDoA	70.3	10-150		9/26/24 15:00
13C2-PFTeDA	64.1	10-130		9/26/24 15:00
13C3-PFBS	79.1	55-150		9/26/24 15:00
13C3-PFHxS	77.5	55-150		9/26/24 15:00
13C8-PFOS	73.4	45-140		9/26/24 15:00
13C2-4:2FTS	68.2	60-200		9/26/24 15:00
13C2-6:2FTS	71.6	60-200		9/26/24 15:00
13C2-8:2FTS	67.2	50-200		9/26/24 15:00
13C8-PFOSA	64.9	30-130		9/26/24 15:00
D3-NMeFOSA	57.3	15-130		9/26/24 15:00
D5-NEtFOSA	56.5	10-130		9/26/24 15:00
D3-NMeFOSAA	71.1	45-200		9/26/24 15:00
D5-NEtFOSAA	86.4	10-200		9/26/24 15:00
D7-NMeFOSE	63.2	10-150		9/26/24 15:00
D9-NEtFOSE	63.6	10-150		9/26/24 15:00
13C3-HFPO-DA	62.6	25-160		9/26/24 15:00

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09102024 Sampled: 9/10/2024 07:45

Sample ID: 24I2005-01

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 5:28	LL

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 130-VP8-09102024 Sampled: 9/10/2024 08:35

Sample ID: 24I2005-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	11	4.1	2.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoropentanoic acid (PFPeA)	17	2.0	0.44	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorohexanoic acid (PFHxA)	18	1.0	0.25	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoroheptanoic acid (PFHpA)	26	1.0	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorooctanoic acid (PFOA)	33	1.0	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorononanoic acid (PFNA)	2.3	1.0	0.19	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorodecanoic acid (PFDA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.20	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorobutanesulfonic acid (PFBS)	2.8	1.0	0.22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoropentanesulfonic acid (PFPeS)	1.1	1.0	0.26	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorohexanesulfonic acid (PFHxS)	5.4	1.0	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorooctanesulfonic acid (PFOS)	4.9	1.0	0.39	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.1	0.76	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.1	3.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.33	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.37	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.41	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	0.84	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
9Cl-PF3ONS (F53B Minor)	ND	4.1	0.98	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	2.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	51	12	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	51	9.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.36	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.57	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 130-VP8-09102024 Sampled: 9/10/2024 08:35

Sample ID: 24I2005-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.55	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.56	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:16	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	79.6	10-130		9/26/24 15:16
13C5-PFPeA	85.0	35-150		9/26/24 15:16
13C5-PFHxA	76.4	55-150		9/26/24 15:16
13C4-PFHpA	71.5	55-150		9/26/24 15:16
13C8-PFOA	80.3	60-140		9/26/24 15:16
13C9-PFNA	76.2	55-140		9/26/24 15:16
13C6-PFDA	73.1	50-140		9/26/24 15:16
13C7-PFUnA	76.5	30-140		9/26/24 15:16
13C2-PFDoA	79.0	10-150		9/26/24 15:16
13C2-PFTeDA	64.5	10-130		9/26/24 15:16
13C3-PFBS	77.3	55-150		9/26/24 15:16
13C3-PFHxS	77.5	55-150		9/26/24 15:16
13C8-PFOS	74.5	45-140		9/26/24 15:16
13C2-4:2FTS	101	60-200		9/26/24 15:16
13C2-6:2FTS	81.6	60-200		9/26/24 15:16
13C2-8:2FTS	70.9	50-200		9/26/24 15:16
13C8-PFOSA	65.6	30-130		9/26/24 15:16
D3-NMeFOSA	57.3	15-130		9/26/24 15:16
D5-NEtFOSA	53.6	10-130		9/26/24 15:16
D3-NMeFOSAA	73.4	45-200		9/26/24 15:16
D5-NEtFOSAA	85.4	10-200		9/26/24 15:16
D7-NMeFOSE	61.1	10-150		9/26/24 15:16
D9-NEtFOSE	61.0	10-150		9/26/24 15:16
13C3-HFPO-DA	67.5	25-160		9/26/24 15:16

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 130-VP8-09102024 Sampled: 9/10/2024 08:35

Sample ID: 24I2005-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	12	10	10	mg/L	1	H-01	Draft Method 1633	9/17/24	9/17/24 13:30	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09112024 Sampled: 9/11/2024 10:00

Sample ID: 24I2005-03

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.0	2.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.43	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorohexanoic acid (PFHxA)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoroheptanoic acid (PFHpA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorooctanoic acid (PFOA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorodecanoic acid (PFDA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.20	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.20	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorobutanesulfonic acid (PFBS)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	1.0	0.28	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.33	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorooctanesulfonic acid (PFOS)	ND	1.0	0.39	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.25	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.75	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	3.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.23	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.33	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.36	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.40	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.83	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.97	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
11Cl-PF3OUdS (F53B Major)	ND	4.0	1.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	2.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	9.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.35	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.56	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09112024 Sampled: 9/11/2024 10:00

Sample ID: 24I2005-03

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.54	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.56	ng/L	1		Draft Method 1633	9/24/24	9/26/24 15:32	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	76.1	10-130		9/26/24 15:32
13C5-PFPeA	81.9	35-150		9/26/24 15:32
13C5-PFHxA	71.2	55-150		9/26/24 15:32
13C4-PFHpA	68.9	55-150		9/26/24 15:32
13C8-PFOA	76.0	60-140		9/26/24 15:32
13C9-PFNA	69.4	55-140		9/26/24 15:32
13C6-PFDA	69.3	50-140		9/26/24 15:32
13C7-PFUnA	74.6	30-140		9/26/24 15:32
13C2-PFDoA	65.4	10-150		9/26/24 15:32
13C2-PFTeDA	59.8	10-130		9/26/24 15:32
13C3-PFBS	76.1	55-150		9/26/24 15:32
13C3-PFHxS	74.0	55-150		9/26/24 15:32
13C8-PFOS	70.7	45-140		9/26/24 15:32
13C2-4:2FTS	66.6	60-200		9/26/24 15:32
13C2-6:2FTS	71.5	60-200		9/26/24 15:32
13C2-8:2FTS	66.3	50-200		9/26/24 15:32
13C8-PFOSA	58.6	30-130		9/26/24 15:32
D3-NMeFOSA	51.1	15-130		9/26/24 15:32
D5-NEtFOSA	52.5	10-130		9/26/24 15:32
D3-NMeFOSAA	68.6	45-200		9/26/24 15:32
D5-NEtFOSAA	85.8	10-200		9/26/24 15:32
D7-NMeFOSE	57.3	10-150		9/26/24 15:32
D9-NEtFOSE	56.5	10-150		9/26/24 15:32
13C3-HFPO-DA	62.3	25-160		9/26/24 15:32

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: FB-TOB-09112024 Sampled: 9/11/2024 10:00

Sample ID: 24I2005-03

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 5:28	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 110-VP8-09112024 Sampled: 9/11/2024 10:25

Sample ID: 24I2005-04

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	59	80	44	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoropentanoic acid (PFPeA)	160	40	8.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorohexanoic acid (PFHxA)	160	20	4.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoroheptanoic acid (PFHpA)	190	20	5.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorooctanoic acid (PFOA)	330	20	5.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorononanoic acid (PFNA)	28	20	3.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorodecanoic acid (PFDA)	ND	20	4.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoroundecanoic acid (PFUnA)	ND	20	4.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorododecanoic acid (PFDoA)	ND	20	4.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorotridecanoic acid (PFTrDA)	ND	20	5.9	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	20	5.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorobutanesulfonic acid (PFBS)	7.0	20	4.2	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	20	5.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorohexanesulfonic acid (PFHxS)	20	20	5.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	20	6.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorooctanesulfonic acid (PFOS)	30	20	7.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorononanesulfonic acid (PFNS)	ND	20	5.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorodecanesulfonic acid (PFDS)	ND	20	5.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	20	5.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	80	15	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	80	61	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	80	22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluorooctanesulfonamide (PFOSA)	ND	20	4.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	20	6.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	20	6.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-MeFOSAA (NMeFOSAA)	ND	20	7.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-EtFOSAA (NEtFOSAA)	ND	20	8.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	200	55	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	200	53	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	80	21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	80	16	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
9Cl-PF3ONS (F53B Minor)	ND	80	19	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
11Cl-PF3OUdS (F53B Major)	ND	80	21	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	200	44	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	1000	230	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	1000	190	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	40	7.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	40	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 110-VP8-09112024 Sampled: 9/11/2024 10:25

Sample ID: 24I2005-04

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	40	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	40	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:19	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	76.8	10-130		9/26/24 16:19
13C5-PFPeA	81.2	35-150		9/26/24 16:19
13C5-PFHxA	73.8	55-150		9/26/24 16:19
13C4-PFHpA	68.1	55-150		9/26/24 16:19
13C8-PFOA	80.9	60-140		9/26/24 16:19
13C9-PFNA	72.8	55-140		9/26/24 16:19
13C6-PFDA	72.4	50-140		9/26/24 16:19
13C7-PFUnA	74.7	30-140		9/26/24 16:19
13C2-PFDoA	68.9	10-150		9/26/24 16:19
13C2-PFTeDA	63.6	10-130		9/26/24 16:19
13C3-PFBS	73.0	55-150		9/26/24 16:19
13C3-PFHxS	72.2	55-150		9/26/24 16:19
13C8-PFOS	74.6	45-140		9/26/24 16:19
13C2-4:2FTS	67.1	60-200		9/26/24 16:19
13C2-6:2FTS	64.2	60-200		9/26/24 16:19
13C2-8:2FTS	65.5	50-200		9/26/24 16:19
13C8-PFOSA	62.5	30-130		9/26/24 16:19
D3-NMeFOSA	50.2	15-130		9/26/24 16:19
D5-NEtFOSA	52.1	10-130		9/26/24 16:19
D3-NMeFOSAA	73.9	45-200		9/26/24 16:19
D5-NEtFOSAA	86.9	10-200		9/26/24 16:19
D7-NMeFOSE	60.7	10-150		9/26/24 16:19
D9-NEtFOSE	60.3	10-150		9/26/24 16:19
13C3-HFPO-DA	62.4	25-160		9/26/24 16:19

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 110-VP8-09112024 Sampled: 9/11/2024 10:25

Sample ID: 24I2005-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	1900	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 13:43	LL

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 090-VP8-09112024 Sampled: 9/11/2024 12:10

Sample ID: 24I2005-05

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	40	22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoropentanoic acid (PFPeA)	ND	20	4.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorohexanoic acid (PFHxA)	4.1	10	2.4	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoroheptanoic acid (PFHpA)	5.8	10	2.7	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorooctanoic acid (PFOA)	10	10	2.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorononanoic acid (PFNA)	2.1	10	1.9	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorodecanoic acid (PFDA)	ND	10	2.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoroundecanoic acid (PFUnA)	ND	10	2.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorododecanoic acid (PFDoA)	ND	10	2.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorotridecanoic acid (PFTrDA)	ND	10	3.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	10	2.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorobutanesulfonic acid (PFBS)	ND	10	2.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	10	2.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	10	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	10	3.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorooctanesulfonic acid (PFOS)	ND	10	3.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorononanesulfonic acid (PFNS)	ND	10	2.5	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorodecanesulfonic acid (PFDS)	ND	10	2.9	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	10	2.9	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	40	7.5	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	40	30	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	40	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluorooctanesulfonamide (PFOSA)	ND	10	2.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	10	3.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	10	3.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-MeFOSAA (NMeFOSAA)	ND	10	3.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-EtFOSAA (NEtFOSAA)	ND	10	4.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	100	27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	100	27	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	40	10	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	40	8.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
9Cl-PF3ONS (F53B Minor)	ND	40	9.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
11Cl-PF3OUdS (F53B Major)	ND	40	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	100	22	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	500	110	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	500	95	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	20	3.5	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	20	5.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 090-VP8-09112024 Sampled: 9/11/2024 12:10

Sample ID: 24I2005-05

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	20	5.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	20	5.5	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:34	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	77.8	10-130		9/26/24 16:34
13C5-PFPeA	85.5	35-150		9/26/24 16:34
13C5-PFHxA	76.2	55-150		9/26/24 16:34
13C4-PFHpA	69.5	55-150		9/26/24 16:34
13C8-PFOA	81.6	60-140		9/26/24 16:34
13C9-PFNA	72.7	55-140		9/26/24 16:34
13C6-PFDA	78.0	50-140		9/26/24 16:34
13C7-PFUnA	76.9	30-140		9/26/24 16:34
13C2-PFDoA	74.3	10-150		9/26/24 16:34
13C2-PFTeDA	66.5	10-130		9/26/24 16:34
13C3-PFBS	74.7	55-150		9/26/24 16:34
13C3-PFHxS	75.3	55-150		9/26/24 16:34
13C8-PFOS	76.1	45-140		9/26/24 16:34
13C2-4:2FTS	65.0	60-200		9/26/24 16:34
13C2-6:2FTS	68.5	60-200		9/26/24 16:34
13C2-8:2FTS	62.7	50-200		9/26/24 16:34
13C8-PFOSA	63.4	30-130		9/26/24 16:34
D3-NMeFOSA	57.4	15-130		9/26/24 16:34
D5-NEtFOSA	57.9	10-130		9/26/24 16:34
D3-NMeFOSAA	72.3	45-200		9/26/24 16:34
D5-NEtFOSAA	83.8	10-200		9/26/24 16:34
D7-NMeFOSE	62.3	10-150		9/26/24 16:34
D9-NEtFOSE	64.2	10-150		9/26/24 16:34
13C3-HFPO-DA	68.8	25-160		9/26/24 16:34

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 090-VP8-09112024 Sampled: 9/11/2024 12:10

Sample ID: 24I2005-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	990	10	10	mg/L	1		Draft Method 1633	9/18/24	9/18/24 11:54	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 070-VP8-09112024 Sampled: 9/11/2024 12:50

Sample ID: 24I2005-06

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	12	20	11	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoropentanoic acid (PFPeA)	20	10	2.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorohexanoic acid (PFHxA)	21	5.0	1.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoroheptanoic acid (PFHpA)	23	5.0	1.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorooctanoic acid (PFOA)	29	5.0	1.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorononanoic acid (PFNA)	2.9	5.0	0.94	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorodecanoic acid (PFDA)	ND	5.0	1.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoroundecanoic acid (PFUnA)	ND	5.0	1.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorododecanoic acid (PFDoA)	ND	5.0	1.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorotridecanoic acid (PFTrDA)	ND	5.0	1.5	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorobutanesulfonic acid (PFBS)	3.7	5.0	1.1	ng/L	1	J	Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorohexanesulfonic acid (PFHxS)	5.2	5.0	1.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	5.0	1.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorooctanesulfonic acid (PFOS)	12	5.0	1.9	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorononanesulfonic acid (PFNS)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorodecanesulfonic acid (PFDS)	ND	5.0	1.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	5.0	1.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	15	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluorooctanesulfonamide (PFOSA)	ND	5.0	1.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	5.0	1.6	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	5.0	1.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-MeFOSAA (NMeFOSAA)	ND	5.0	1.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-EtFOSAA (NEtFOSAA)	ND	5.0	2.0	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	50	14	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	50	13	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.2	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	4.1	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
9Cl-PF3ONS (F53B Minor)	ND	20	4.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
11Cl-PF3OUdS (F53B Major)	ND	20	5.4	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	50	11	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	250	56	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	250	47	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	10	1.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	10	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 070-VP8-09112024 Sampled: 9/11/2024 12:50

Sample ID: 24I2005-06

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	10	2.7	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	10	2.8	ng/L	1		Draft Method 1633	9/24/24	9/26/24 16:50	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	76.0	10-130		9/26/24 16:50
13C5-PFPeA	80.6	35-150		9/26/24 16:50
13C5-PFHxA	73.5	55-150		9/26/24 16:50
13C4-PFHpA	66.4	55-150		9/26/24 16:50
13C8-PFOA	78.1	60-140		9/26/24 16:50
13C9-PFNA	71.2	55-140		9/26/24 16:50
13C6-PFDA	73.0	50-140		9/26/24 16:50
13C7-PFUnA	77.0	30-140		9/26/24 16:50
13C2-PFDoA	70.5	10-150		9/26/24 16:50
13C2-PFTeDA	65.1	10-130		9/26/24 16:50
13C3-PFBS	75.2	55-150		9/26/24 16:50
13C3-PFHxS	75.0	55-150		9/26/24 16:50
13C8-PFOS	69.0	45-140		9/26/24 16:50
13C2-4:2FTS	68.4	60-200		9/26/24 16:50
13C2-6:2FTS	67.5	60-200		9/26/24 16:50
13C2-8:2FTS	65.8	50-200		9/26/24 16:50
13C8-PFOSA	59.7	30-130		9/26/24 16:50
D3-NMeFOSA	51.6	15-130		9/26/24 16:50
D5-NEtFOSA	51.1	10-130		9/26/24 16:50
D3-NMeFOSAA	68.6	45-200		9/26/24 16:50
D5-NEtFOSAA	75.4	10-200		9/26/24 16:50
D7-NMeFOSE	56.7	10-150		9/26/24 16:50
D9-NEtFOSE	58.1	10-150		9/26/24 16:50
13C3-HFPO-DA	67.6	25-160		9/26/24 16:50

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I2005

Date Received: 9/13/2024

Field Sample #: 070-VP8-09112024 Sampled: 9/11/2024 12:50

Sample ID: 24I2005-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	380	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 13:43	LL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I2005-02 [130-VP8-09102024]	B386255	50.0	09/17/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I2005-04 [110-VP8-09112024]	B386256	50.0	09/17/24
24I2005-06 [070-VP8-09112024]	B386256	50.0	09/17/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I2005-01 [FB-TOB-09102024]	B386257	50.0	09/17/24
24I2005-03 [FB-TOB-09112024]	B386257	50.0	09/17/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I2005-05 [090-VP8-09112024]	B386341	50.0	09/18/24

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 9/17/2024 per NO PREP in Batch B386257**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24I2005-01 [FB-TOB-09102024]	B386824	475	5.00	09/24/24
24I2005-02 [130-VP8-09102024]	B386824	490	5.00	09/24/24
24I2005-03 [FB-TOB-09112024]	B386824	496	5.00	09/24/24
24I2005-04 [110-VP8-09112024]	B386824	25.0	5.00	09/24/24
24I2005-05 [090-VP8-09112024]	B386824	50.0	5.00	09/24/24
24I2005-06 [070-VP8-09112024]	B386824	100	5.00	09/24/24

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386824 - Draft Method 1633										
Blank (B386824-BLK1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*85.1*		ng/L	98.20		86.6	10-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386824 - Draft Method 1633										
Blank (B386824-BLK1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Surrogate: 13C5-PFPeA	*37.3*		ng/L	49.10		76.1	35-150			
Surrogate: 13C5-PFHxA	*20.8*		ng/L	24.55		84.9	55-150			
Surrogate: 13C4-PFHpA	*19.0*		ng/L	24.55		77.6	55-150			
Surrogate: 13C8-PFOA	*20.3*		ng/L	24.55		82.8	60-140			
Surrogate: 13C9-PFNA	*10.3*		ng/L	12.27		83.7	55-140			
Surrogate: 13C6-PFDA	*9.42*		ng/L	12.27		76.8	50-140			
Surrogate: 13C7-PFUnA	*9.33*		ng/L	12.27		76.0	30-140			
Surrogate: 13C2-PFDoA	*8.85*		ng/L	12.27		72.1	10-150			
Surrogate: 13C2-PFTeDA	*8.16*		ng/L	12.27		66.5	10-130			
Surrogate: 13C3-PFBS	*20.9*		ng/L	24.55		85.0	55-150			
Surrogate: 13C3-PFHxS	*20.4*		ng/L	24.55		83.2	55-150			
Surrogate: 13C8-PFOS	*20.1*		ng/L	24.55		82.0	45-140			
Surrogate: 13C2-4:2FTS	*36.5*		ng/L	49.10		74.4	60-200			
Surrogate: 13C2-6:2FTS	*37.7*		ng/L	49.10		76.8	60-200			
Surrogate: 13C2-8:2FTS	*35.1*		ng/L	49.10		71.5	50-200			
Surrogate: 13C8-PFOSA	*16.9*		ng/L	24.55		68.8	30-130			
Surrogate: D3-NMeFOSA	*14.9*		ng/L	24.55		60.7	15-130			
Surrogate: D5-NEtFOSA	*15.0*		ng/L	24.55		60.9	10-130			
Surrogate: D3-NMeFOSAA	*39.2*		ng/L	49.10		79.8	45-200			
Surrogate: D5-NEtFOSAA	*46.7*		ng/L	49.10		95.2	10-200			
Surrogate: D7-NMeFOSE	*166*		ng/L	245.5		67.6	10-150			
Surrogate: D9-NEtFOSE	*164*		ng/L	245.5		66.9	10-150			
Surrogate: 13C3-HFPO-DA	*77.3*		ng/L	98.20		78.7	25-160			
LCS (B386824-BS1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Perfluorobutanoic acid (PFBA)	109	3.9	ng/L	94.74		115	58-148			
Perfluoropentanoic acid (PFPeA)	56.8	2.0	ng/L	47.37		120	54-152			
Perfluorohexanoic acid (PFHxA)	27.9	0.99	ng/L	23.68		118	55-152			
Perfluoroheptanoic acid (PFHpA)	26.9	0.99	ng/L	23.68		113	54-154			
Perfluorooctanoic acid (PFOA)	26.8	0.99	ng/L	23.68		113	52-161			
Perfluorononanoic acid (PFNA)	28.0	0.99	ng/L	23.68		118	59-149			
Perfluorodecanoic acid (PFDA)	27.9	0.99	ng/L	23.68		118	52-147			
Perfluoroundecanoic acid (PFUnA)	28.5	0.99	ng/L	23.68		120	48-159			
Perfluorododecanoic acid (PFDoA)	27.8	0.99	ng/L	23.68		117	64-142			
Perfluorotridecanoic acid (PFTrDA)	28.9	0.99	ng/L	23.68		122	49-148			
Perfluorotetradecanoic acid (PFTeDA)	28.3	0.99	ng/L	23.68		119	47-161			
Perfluorobutanesulfonic acid (PFBS)	22.9	0.99	ng/L	21.02		109	62-144			
Perfluoropentanesulfonic acid (PFPeS)	27.1	0.99	ng/L	22.26		122	59-151			
Perfluorohexanesulfonic acid (PFHxS)	22.6	0.99	ng/L	21.67		104	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	26.4	0.99	ng/L	22.56		117	55-152			
Perfluorooctanesulfonic acid (PFOS)	24.4	0.99	ng/L	21.97		111	58-149			
Perfluorononanesulfonic acid (PFNS)	24.5	0.99	ng/L	22.80		108	52-148			
Perfluorodecanesulfonic acid (PFDS)	24.0	0.99	ng/L	22.86		105	51-147			
Perfluorododecanesulfonic acid (PFDoS)	22.8	0.99	ng/L	22.97		99.1	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	110	3.9	ng/L	88.82		124	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	115	3.9	ng/L	90.00		128	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	115	3.9	ng/L	91.18		126	63-152			
Perfluorooctanesulfonamide (PFOSA)	26.6	0.99	ng/L	23.68		112	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	29.1	0.99	ng/L	23.68		123	63-145			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386824 - Draft Method 1633										
LCS (B386824-BS1)				Prepared: 09/24/24 Analyzed: 09/26/24						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	30.0	0.99	ng/L	23.68		127	65-139			
N-MeFOSAA (NMeFOSAA)	32.2	0.99	ng/L	23.68		136	58-144			
N-EtFOSAA (NEtFOSAA)	23.2	0.99	ng/L	23.68		98.2	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	276	9.9	ng/L	236.8		117	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	269	9.9	ng/L	236.8		113	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	108	3.9	ng/L	94.74		114	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	109	3.9	ng/L	89.41		122	68-146			
9Cl-PF3ONS (F53B Minor)	105	3.9	ng/L	88.82		119	56-156			
11Cl-PF3OUdS (F53B Major)	95.7	3.9	ng/L	89.41		107	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	187	9.9	ng/L	236.8		79.1	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1090	49	ng/L	1184		92.0	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	963	49	ng/L	1184		81.3	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	49.2	2.0	ng/L	42.16		117	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	44.1	2.0	ng/L	47.37		93.0	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.0	2.0	ng/L	47.37		103	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	41.1	2.0	ng/L	47.37		86.9	48-161			
Surrogate: 13C4-PFBA	*82.2*		ng/L	98.68		83.3	10-130			
Surrogate: 13C5-PFPeA	*44.2*		ng/L	49.34		89.6	35-150			
Surrogate: 13C5-PFHxA	*19.8*		ng/L	24.67		80.1	55-150			
Surrogate: 13C4-PFHpA	*17.9*		ng/L	24.67		72.4	55-150			
Surrogate: 13C8-PFOA	*21.2*		ng/L	24.67		85.8	60-140			
Surrogate: 13C9-PFNA	*9.69*		ng/L	12.34		78.6	55-140			
Surrogate: 13C6-PFDA	*9.84*		ng/L	12.34		79.7	50-140			
Surrogate: 13C7-PFUnA	*9.80*		ng/L	12.34		79.4	30-140			
Surrogate: 13C2-PFDoA	*8.97*		ng/L	12.34		72.7	10-150			
Surrogate: 13C2-PFTeDA	*8.41*		ng/L	12.34		68.2	10-130			
Surrogate: 13C3-PFBS	*20.3*		ng/L	24.67		82.4	55-150			
Surrogate: 13C3-PFHxS	*19.2*		ng/L	24.67		78.0	55-150			
Surrogate: 13C8-PFOS	*19.5*		ng/L	24.67		78.9	45-140			
Surrogate: 13C2-4:2FTS	*38.7*		ng/L	49.34		78.5	60-200			
Surrogate: 13C2-6:2FTS	*35.3*		ng/L	49.34		71.6	60-200			
Surrogate: 13C2-8:2FTS	*36.0*		ng/L	49.34		72.9	50-200			
Surrogate: 13C8-PFOSA	*16.3*		ng/L	24.67		66.3	30-130			
Surrogate: D3-NMeFOSA	*14.7*		ng/L	24.67		59.6	15-130			
Surrogate: D5-NEtFOSA	*14.5*		ng/L	24.67		58.8	10-130			
Surrogate: D3-NMeFOSAA	*35.4*		ng/L	49.34		71.8	45-200			
Surrogate: D5-NEtFOSAA	*42.7*		ng/L	49.34		86.6	10-200			
Surrogate: D7-NMeFOSE	*155*		ng/L	246.7		62.6	10-150			
Surrogate: D9-NEtFOSE	*154*		ng/L	246.7		62.3	10-150			
Surrogate: 13C3-HFPO-DA	*71.4*		ng/L	98.68		72.4	25-160			
MRL Check (B386824-MRL1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Perfluorobutanoic acid (PFBA)	8.46	4.0	ng/L	7.945		106	44-157			
Perfluoropentanoic acid (PFPeA)	4.29	2.0	ng/L	3.973		108	57-148			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386824 - Draft Method 1633										
MRL Check (B386824-MRL1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Perfluorohexanoic acid (PFHxA)	2.21	0.99	ng/L	1.986		111	62-149			
Perfluoroheptanoic acid (PFHpA)	2.00	0.99	ng/L	1.986		101	56-150			
Perfluorooctanoic acid (PFOA)	1.91	0.99	ng/L	1.986		96.1	57-161			
Perfluorononanoic acid (PFNA)	2.33	0.99	ng/L	1.986		117	53-157			
Perfluorodecanoic acid (PFDA)	2.11	0.99	ng/L	1.986		106	43-158			
Perfluoroundecanoic acid (PFUnA)	2.22	0.99	ng/L	1.986		112	50-155			
Perfluorododecanoic acid (PFDoA)	2.16	0.99	ng/L	1.986		109	60-141			
Perfluorotridecanoic acid (PFTrDA)	2.16	0.99	ng/L	1.986		109	52-140			
Perfluorotetradecanoic acid (PFTeDA)	2.14	0.99	ng/L	1.986		108	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.73	0.99	ng/L	1.763		98.3	63-145			
Perfluoropentanesulfonic acid (PFPeS)	2.07	0.99	ng/L	1.867		111	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.99	0.99	ng/L	1.817		110	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	2.04	0.99	ng/L	1.892		108	51-150			
Perfluorooctanesulfonic acid (PFOS)	2.15	0.99	ng/L	1.842		117	43-162			
Perfluorononanesulfonic acid (PFNS)	2.05	0.99	ng/L	1.912		107	46-151			
Perfluorodecanesulfonic acid (PFDS)	2.07	0.99	ng/L	1.917		108	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.74	0.99	ng/L	1.927		90.3	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.46	4.0	ng/L	7.448		114	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.52	4.0	ng/L	7.548		113	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	9.57	4.0	ng/L	7.647		125	46-165			
Perfluorooctanesulfonamide (PFOSA)	2.12	0.99	ng/L	1.986		107	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.36	0.99	ng/L	1.986		119	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.48	0.99	ng/L	1.986		125	49-156			
N-MeFOSAA (NMeFOSAA)	1.83	0.99	ng/L	1.986		92.2	32-160			
N-EtFOSAA (NEtFOSAA)	1.92	0.99	ng/L	1.986		96.6	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	20.5	9.9	ng/L	19.86		103	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	21.1	9.9	ng/L	19.86		106	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.24	4.0	ng/L	7.945		104	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.24	4.0	ng/L	7.498		110	61-148			
9Cl-PF3ONS (F53B Minor)	7.90	4.0	ng/L	7.448		106	44-167			
11Cl-PF3OUdS (F53B Major)	7.23	4.0	ng/L	7.498		96.4	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	16.0	9.9	ng/L	19.86		80.4	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	87.7	50	ng/L	99.31		88.3	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	78.6	50	ng/L	99.31		79.1	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	4.52	2.0	ng/L	3.536		128	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.72	2.0	ng/L	3.973		93.6	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.22	2.0	ng/L	3.973		106	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.97	2.0	ng/L	3.973		100	47-160			
Surrogate: 13C4-PFBA	*80.6*		ng/L	99.31		81.2	10-130			
Surrogate: 13C5-PFPeA	*44.4*		ng/L	49.66		89.3	35-150			
Surrogate: 13C5-PFHxA	*19.7*		ng/L	24.83		79.2	55-150			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386824 - Draft Method 1633										
MRL Check (B386824-MRL1)				Prepared: 09/24/24 Analyzed: 09/26/24						
Surrogate: 13C4-PFHpA	*18.0*		ng/L	24.83		72.4	55-150			
Surrogate: 13C8-PFOA	*20.2*		ng/L	24.83		81.5	60-140			
Surrogate: 13C9-PFNA	*9.41*		ng/L	12.41		75.8	55-140			
Surrogate: 13C6-PFDA	*9.10*		ng/L	12.41		73.3	50-140			
Surrogate: 13C7-PFUnA	*9.45*		ng/L	12.41		76.1	30-140			
Surrogate: 13C2-PFDoA	*8.57*		ng/L	12.41		69.0	10-150			
Surrogate: 13C2-PFTeDA	*8.26*		ng/L	12.41		66.5	10-130			
Surrogate: 13C3-PFBS	*20.5*		ng/L	24.83		82.7	55-150			
Surrogate: 13C3-PFHxS	*19.3*		ng/L	24.83		77.9	55-150			
Surrogate: 13C8-PFOS	*19.0*		ng/L	24.83		76.5	45-140			
Surrogate: 13C2-4:2FTS	*35.8*		ng/L	49.66		72.2	60-200			
Surrogate: 13C2-6:2FTS	*36.8*		ng/L	49.66		74.1	60-200			
Surrogate: 13C2-8:2FTS	*33.1*		ng/L	49.66		66.6	50-200			
Surrogate: 13C8-PFOSA	*16.2*		ng/L	24.83		65.3	30-130			
Surrogate: D3-NMeFOSA	*13.0*		ng/L	24.83		52.3	15-130			
Surrogate: D5-NEtFOSA	*13.2*		ng/L	24.83		53.2	10-130			
Surrogate: D3-NMeFOSAA	*36.2*		ng/L	49.66		72.9	45-200			
Surrogate: D5-NEtFOSAA	*41.9*		ng/L	49.66		84.3	10-200			
Surrogate: D7-NMeFOSE	*152*		ng/L	248.3		61.2	10-150			
Surrogate: D9-NEtFOSE	*152*		ng/L	248.3		61.4	10-150			
Surrogate: 13C3-HFPO-DA	*69.3*		ng/L	99.31		69.8	25-160			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386255 - Draft Method 1633										
Blank (B386255-BLK1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B386255-BS1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	169	5.0	mg/L	200.0		84.5	51.5-130			
Batch B386256 - Draft Method 1633										
Blank (B386256-BLK1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B386256-BS1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	119	5.0	mg/L	200.0		59.5	51.5-130			
Batch B386341 - Draft Method 1633										
Blank (B386341-BLK1)				Prepared & Analyzed: 09/18/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B386341-BS1)				Prepared & Analyzed: 09/18/24						
Total Suspended Solids	188	5.0	mg/L	200.0		94.0	51.5-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
D-01	Sample extracted/prepared at a dilution due to sample matrix.
D-03	Sample diluted pre-extraction due to elevated TSS pre-analysis result.
D-04	Sample extracted at a dilution due to insufficient volume provided.
H-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV,CT
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV,CT
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV,CT
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV,CT
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV,CT
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV,CT
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV,CT
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV,CT
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV,CT
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV,CT
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV,CT
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV,CT
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV,CT
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV,CT
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV,CT
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV,CT
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV,CT
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV,CT
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV,CT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV,CT
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV,CT
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV,CT
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV,CT
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV,CT
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV,CT
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV,CT
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV,CT
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV,CT
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV,CT
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV,CT
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV,CT

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2025
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2025
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2025

5

24I2065 KS

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	NYSDEC
Address:	50 Circle Road, Stony Brook NY 11790
Phone:	631-444-0379
Project Name:	Brookhaven Landfill PFAS Plume Invesitgation
Project Location:	Horseblock Road, Brookhaven
Project Number:	June PFAS
Project Manager:	Chris Oommen/Francesca King
Pace Analytical Quote Name/Number:	Kyle Stuckey
Invoice Recipient:	NYSDEC
Sampled By:	Francesca King

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date: 30-Day

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: francesca.king@dec.ny.gov
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	TCLP Fluid pH	RCRA 8 - Metals TCLP, Including Mercury	Total Metals	Chlorides and Sulfate	1633 PFAS	# of Containers
1	FB-TOB-09102024	9-10-24 7:45 AM	11 A		✓	GW	—					X	2
2	130-VP8-09102024	9-10-24 8:35 AM	11 A		✓	GW	—					X	2
3	FB-TOB-09112024	9-11-24 10:00 AM	A A		✓	GW	—					X	2
4	110-VP8-09112024	9-11-24 10:25 AM	11 11		✓	GW	—					X	2
5	090-VP8-09112024	9-11-24 12:00 PM	11		✓	GW	—					X	2
6	070-VP8-09112024	9-11-24 12:00 PM	11		✓	GW	—					X	2

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[2] Preservation Code N/A
[3] Container Code G

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) Francesca King	Date/Time: 9/11/24 3:00PM	
Received by: (signature) Chris Oommen	Date/Time: 9/11/24 3:00PM	
Relinquished by: (signature)	Date/Time: 9/12/24 8:19AM	
Received by: (signature)	Date/Time: 9/12/24 8:20	
Relinquished by: (signature)	Date/Time: 9/12/24 1800	
Received by: (signature)	Date/Time: 9/12/24 17:20	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☑ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Anthony Green SEP 12 2023 2031
Anthony Green 9/13/24 0020 Rec'd 9/13/24 0210 Rec'd PACE 9/13/24 0600 PACE 9/13/24 0815 9/13/24 2.4 9/13/24 915

Page 33 of 35

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log In Back-Sheet

Client: N.Y.S. Division of Env. Remediation

Project: Brookhaven Landfill PFAS

MCP/RCP Required: no

Deliverable Package Requirement: NY Cat B

Location: Brookhaven, NY

PWSID# (When Applicable): n/a

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time: ER 9/13/24 0815

Back-Sheet By / Date / Time: MCM 9/16/24 2054

Temperature Method: Gun # 6

WV samples: Yes (see note*) / No (follow normal procedure)

Temp < 6° C Actual Temperature: 2.4

Rush Samples: Yes / No Notify: No

Short Hold: Yes / No Notify: No

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑	Analysis ☑	Sampler Name ☑	
Project ☑	IDs ☑	Collection Date/Time ☑	

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																				
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	1 Liter	Ambers																				
HCL																						
Sulfuric																						
Sulfuric	250mL																					
Phosphoric																						
HCl																						
Unpreserved	100mL																					
Unpreserved	1 Liter	Plastics																				
Sulfuric																						
Unpreserved	500mL		2	←																		
Sulfuric																						
Unpreserved	250mL																					
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved		VOA Vials																				
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact		Other / Fill in																				
Bal pick up.			1	←																		

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 30, 2024

Francesca King
NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012

Project Location: Horseblock Road, Brookhaven, NY
Client Job Number:
Project Number: June PFAS
Laboratory Work Order Number: 24I1932

Enclosed are results of analyses for samples as received by the laboratory on September 14, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Raymond J. McCarthy
Project Manager

Table of Contents

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYS Division of Environmental Remediation
625 Broadway 12th Floor
Albany, NY 12233-7012
ATTN: Francesca King

REPORT DATE: 9/30/2024

PURCHASE ORDER NUMBER: June PFAS

PROJECT NUMBER: June PFAS

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24I1932

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Horseblock Road, Brookhaven, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FB-TOB-09122024	24I1932-01	Field Blank		Draft Method 1633	
130-VP9-09122024	24I1932-02	Ground Water		Draft Method 1633	
FB-TOB-09132024	24I1932-03	Field Blank		Draft Method 1633	
050-VP9-09132024	24I1932-04	Ground Water		Draft Method 1633	

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Draft Method 1633

Qualifications:

D-03

Sample diluted pre-extraction due to elevated TSS pre-analysis result.

Analyte & Samples(s) Qualified:

24I1932-02[130-VP9-09122024], 24I1932-04[050-VP9-09132024]

D-04

Sample extracted at a dilution due to insufficient volume provided.

Analyte & Samples(s) Qualified:

24I1932-01[FB-TOB-09122024], 24I1932-03[FB-TOB-09132024]

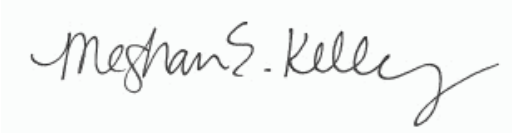
PF-23

Qualifier ion ratio <50% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorooctanoic acid (PFOA)
24I1932-03[FB-TOB-09132024]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09122024 Sampled: 9/12/2024 11:00

Sample ID: 24I1932-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.1	2.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoropentanoic acid (PFPeA)	ND	2.1	0.44	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorohexanoic acid (PFHxA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoroheptanoic acid (PFHpA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorooctanoic acid (PFOA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorodecanoic acid (PFDA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorobutanesulfonic acid (PFBS)	ND	1.0	0.22	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorooctanesulfonic acid (PFOS)	ND	1.0	0.39	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.1	0.77	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.1	3.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.35	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.37	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.41	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	0.84	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
9Cl-PF3ONS (F53B Minor)	ND	4.1	0.99	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	2.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	51	12	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	51	9.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1	0.36	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.1	0.57	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09122024 Sampled: 9/12/2024 11:00

Sample ID: 24I1932-01

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.1	0.55	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1	0.57	ng/L	1		Draft Method 1633	9/25/24	9/27/24 16:50	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	98.0	10-130		9/27/24 16:50
13C5-PFPeA	110	35-150		9/27/24 16:50
13C5-PFHxA	96.2	55-150		9/27/24 16:50
13C4-PFHpA	88.2	55-150		9/27/24 16:50
13C8-PFOA	95.2	60-140		9/27/24 16:50
13C9-PFNA	92.5	55-140		9/27/24 16:50
13C6-PFDA	102	50-140		9/27/24 16:50
13C7-PFUnA	102	30-140		9/27/24 16:50
13C2-PFDoA	96.9	10-150		9/27/24 16:50
13C2-PFTeDA	90.6	10-130		9/27/24 16:50
13C3-PFBS	95.2	55-150		9/27/24 16:50
13C3-PFHxS	94.7	55-150		9/27/24 16:50
13C8-PFOS	98.1	45-140		9/27/24 16:50
13C2-4:2FTS	85.3	60-200		9/27/24 16:50
13C2-6:2FTS	83.7	60-200		9/27/24 16:50
13C2-8:2FTS	85.0	50-200		9/27/24 16:50
13C8-PFOSA	88.3	30-130		9/27/24 16:50
D3-NMeFOSA	76.3	15-130		9/27/24 16:50
D5-NEtFOSA	77.6	10-130		9/27/24 16:50
D3-NMeFOSAA	96.5	45-200		9/27/24 16:50
D5-NEtFOSAA	107	10-200		9/27/24 16:50
D7-NMeFOSE	89.8	10-150		9/27/24 16:50
D9-NEtFOSE	90.7	10-150		9/27/24 16:50
13C3-HFPO-DA	90.6	25-160		9/27/24 16:50

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09122024 Sampled: 9/12/2024 11:00

Sample ID: 24I1932-01

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 8:19	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 130-VP9-09122024 Sampled: 9/12/2024 11:10

Sample ID: 24I1932-02

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	42	40	22	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoropentanoic acid (PFPeA)	20	20	4.3	ng/L	1	J	Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorohexanoic acid (PFHxA)	55	10	2.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoroheptanoic acid (PFHpA)	14	10	2.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorooctanoic acid (PFOA)	42	10	2.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorononanoic acid (PFNA)	2.9	10	1.9	ng/L	1	J	Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorodecanoic acid (PFDA)	ND	10	2.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoroundecanoic acid (PFUnA)	ND	10	2.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorododecanoic acid (PFDoA)	ND	10	2.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorotridecanoic acid (PFTrDA)	ND	10	3.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	10	2.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorobutanesulfonic acid (PFBS)	6.0	10	2.1	ng/L	1	J	Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoropentanesulfonic acid (PFPeS)	2.7	10	2.6	ng/L	1	J	Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorohexanesulfonic acid (PFHxS)	19	10	2.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	10	3.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorooctanesulfonic acid (PFOS)	7.9	10	3.8	ng/L	1	J	Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorononanesulfonic acid (PFNS)	ND	10	2.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorodecanesulfonic acid (PFDS)	ND	10	2.9	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	10	2.9	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	40	7.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	40	30	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	40	11	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluorooctanesulfonamide (PFOSA)	ND	10	2.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	10	3.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	10	3.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-MeFOSAA (NMeFOSAA)	ND	10	3.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-EtFOSAA (NEtFOSAA)	ND	10	4.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	100	27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	100	27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	40	10	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	40	8.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
9Cl-PF3ONS (F53B Minor)	ND	40	9.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
11Cl-PF3OUdS (F53B Major)	ND	40	11	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	100	22	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	500	110	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	500	95	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	20	3.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	20	5.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 130-VP9-09122024 Sampled: 9/12/2024 11:10

Sample ID: 24I1932-02

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	20	5.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	20	5.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:05	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	89.5	10-130		9/27/24 17:05
13C5-PFPeA	99.4	35-150		9/27/24 17:05
13C5-PFHxA	89.4	55-150		9/27/24 17:05
13C4-PFHpA	83.5	55-150		9/27/24 17:05
13C8-PFOA	91.4	60-140		9/27/24 17:05
13C9-PFNA	87.1	55-140		9/27/24 17:05
13C6-PFDA	91.8	50-140		9/27/24 17:05
13C7-PFUnA	95.8	30-140		9/27/24 17:05
13C2-PFDoA	84.5	10-150		9/27/24 17:05
13C2-PFTeDA	79.5	10-130		9/27/24 17:05
13C3-PFBS	91.9	55-150		9/27/24 17:05
13C3-PFHxS	89.4	55-150		9/27/24 17:05
13C8-PFOS	92.6	45-140		9/27/24 17:05
13C2-4:2FTS	103	60-200		9/27/24 17:05
13C2-6:2FTS	88.0	60-200		9/27/24 17:05
13C2-8:2FTS	80.0	50-200		9/27/24 17:05
13C8-PFOSA	80.2	30-130		9/27/24 17:05
D3-NMeFOSA	68.1	15-130		9/27/24 17:05
D5-NEtFOSA	66.0	10-130		9/27/24 17:05
D3-NMeFOSAA	88.7	45-200		9/27/24 17:05
D5-NEtFOSAA	103	10-200		9/27/24 17:05
D7-NMeFOSE	77.6	10-150		9/27/24 17:05
D9-NEtFOSE	79.6	10-150		9/27/24 17:05
13C3-HFPO-DA	82.5	25-160		9/27/24 17:05

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 130-VP9-09122024 Sampled: 9/12/2024 11:10

Sample ID: 24I1932-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	890	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 13:30	LL

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09132024 Sampled: 9/13/2024 08:00

Sample ID: 24I1932-03

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	4.1	2.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoropentanoic acid (PFPeA)	ND	2.0	0.44	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorohexanoic acid (PFHxA)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoroheptanoic acid (PFHpA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorooctanoic acid (PFOA)	0.27	1.0	0.27	ng/L	1	PF-23, J	Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorodecanoic acid (PFDA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.21	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.20	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorobutanesulfonic acid (PFBS)	ND	1.0	0.22	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	1.0	0.28	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.33	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorooctanesulfonic acid (PFOS)	ND	1.0	0.39	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.29	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.1	0.76	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.1	3.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.33	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.34	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.36	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.41	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	0.83	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
9Cl-PF3ONS (F53B Minor)	ND	4.1	0.98	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	2.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	51	11	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	51	9.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.35	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.56	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09132024 Sampled: 9/13/2024 08:00

Sample ID: 24I1932-03

Sample Matrix: Field Blank

Sample Flags: D-04

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.55	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.56	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:21	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	91.3	10-130		9/27/24 17:21
13C5-PFPeA	102	35-150		9/27/24 17:21
13C5-PFHxA	90.4	55-150		9/27/24 17:21
13C4-PFHpA	82.1	55-150		9/27/24 17:21
13C8-PFOA	92.3	60-140		9/27/24 17:21
13C9-PFNA	87.7	55-140		9/27/24 17:21
13C6-PFDA	89.3	50-140		9/27/24 17:21
13C7-PFUnA	93.0	30-140		9/27/24 17:21
13C2-PFDoA	83.5	10-150		9/27/24 17:21
13C2-PFTeDA	77.1	10-130		9/27/24 17:21
13C3-PFBS	89.3	55-150		9/27/24 17:21
13C3-PFHxS	89.3	55-150		9/27/24 17:21
13C8-PFOS	91.4	45-140		9/27/24 17:21
13C2-4:2FTS	77.8	60-200		9/27/24 17:21
13C2-6:2FTS	87.6	60-200		9/27/24 17:21
13C2-8:2FTS	78.8	50-200		9/27/24 17:21
13C8-PFOSA	80.2	30-130		9/27/24 17:21
D3-NMeFOSA	68.1	15-130		9/27/24 17:21
D5-NEtFOSA	71.0	10-130		9/27/24 17:21
D3-NMeFOSAA	88.7	45-200		9/27/24 17:21
D5-NEtFOSAA	101	10-200		9/27/24 17:21
D7-NMeFOSE	80.4	10-150		9/27/24 17:21
D9-NEtFOSE	80.0	10-150		9/27/24 17:21
13C3-HFPO-DA	82.7	25-160		9/27/24 17:21

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: FB-TOB-09132024 Sampled: 9/13/2024 08:00

Sample ID: 24I1932-03

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 5:28	LL

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 050-VP9-09132024 Sampled: 9/13/2024 08:50

Sample ID: 24I1932-04

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	20	11	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoropentanoic acid (PFPeA)	ND	9.9	2.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorohexanoic acid (PFHxA)	ND	5.0	1.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoroheptanoic acid (PFHpA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorooctanoic acid (PFOA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorononanoic acid (PFNA)	ND	5.0	0.93	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorodecanoic acid (PFDA)	ND	5.0	1.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoroundecanoic acid (PFUnA)	ND	5.0	1.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorododecanoic acid (PFDoA)	ND	5.0	0.99	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorotridecanoic acid (PFTrDA)	ND	5.0	1.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorotetradecanoic acid (PFTeDA)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorobutanesulfonic acid (PFBS)	ND	5.0	1.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoropentanesulfonic acid (PFPeS)	ND	5.0	1.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorohexanesulfonic acid (PFHxS)	ND	5.0	1.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoroheptanesulfonic acid (PFHpS)	ND	5.0	1.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorooctanesulfonic acid (PFOS)	ND	5.0	1.9	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorononanesulfonic acid (PFNS)	ND	5.0	1.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorodecanesulfonic acid (PFDS)	ND	5.0	1.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorododecanesulfonic acid (PFDoS)	ND	5.0	1.4	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	20	3.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	20	15	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	20	5.5	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluorooctanesulfonamide (PFOSA)	ND	5.0	1.2	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	5.0	1.6	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	5.0	1.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-MeFOSAA (NMeFOSAA)	ND	5.0	1.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-EtFOSAA (NEtFOSAA)	ND	5.0	2.0	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	50	14	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	50	13	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	4.1	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
9Cl-PF3ONS (F53B Minor)	ND	20	4.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
11Cl-PF3OUdS (F53B Major)	ND	20	5.3	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	50	11	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	250	56	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	250	47	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	9.9	1.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	9.9	2.8	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 050-VP9-09132024 Sampled: 9/13/2024 08:50

Sample ID: 24I1932-04

Sample Matrix: Ground Water

Sample Flags: D-03

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	9.9	2.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	9.9	2.7	ng/L	1		Draft Method 1633	9/25/24	9/27/24 17:37	AB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	91.5	10-130		9/27/24 17:37
13C5-PFPeA	106	35-150		9/27/24 17:37
13C5-PFHxA	93.8	55-150		9/27/24 17:37
13C4-PFHpA	86.2	55-150		9/27/24 17:37
13C8-PFOA	89.9	60-140		9/27/24 17:37
13C9-PFNA	87.2	55-140		9/27/24 17:37
13C6-PFDA	90.8	50-140		9/27/24 17:37
13C7-PFUnA	94.3	30-140		9/27/24 17:37
13C2-PFDoA	83.0	10-150		9/27/24 17:37
13C2-PFTeDA	75.3	10-130		9/27/24 17:37
13C3-PFBS	90.4	55-150		9/27/24 17:37
13C3-PFHxS	90.8	55-150		9/27/24 17:37
13C8-PFOS	91.7	45-140		9/27/24 17:37
13C2-4:2FTS	82.7	60-200		9/27/24 17:37
13C2-6:2FTS	85.1	60-200		9/27/24 17:37
13C2-8:2FTS	84.9	50-200		9/27/24 17:37
13C8-PFOSA	81.4	30-130		9/27/24 17:37
D3-NMeFOSA	71.2	15-130		9/27/24 17:37
D5-NEtFOSA	70.2	10-130		9/27/24 17:37
D3-NMeFOSAA	89.5	45-200		9/27/24 17:37
D5-NEtFOSAA	106	10-200		9/27/24 17:37
D7-NMeFOSE	82.1	10-150		9/27/24 17:37
D9-NEtFOSE	79.8	10-150		9/27/24 17:37
13C3-HFPO-DA	86.6	25-160		9/27/24 17:37

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Horseblock Road, Brookhaven, N Sample Description: Work Order: 24I1932

Date Received: 9/14/2024

Field Sample #: 050-VP9-09132024 Sampled: 9/13/2024 08:50

Sample ID: 24I1932-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	100	10	10	mg/L	1		Draft Method 1633	9/17/24	9/17/24 13:30	LL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I1932-02 [130-VP9-09122024]	B386255	50.0	09/17/24
24I1932-04 [050-VP9-09132024]	B386255	50.0	09/17/24

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
24I1932-01 [FB-TOB-09122024]	B386257	50.0	09/17/24
24I1932-03 [FB-TOB-09132024]	B386257	50.0	09/17/24

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 9/17/2024 per NO PREP in Batch B386257**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
24I1932-01 [FB-TOB-09122024]	B386974	487	5.00	09/25/24
24I1932-02 [130-VP9-09122024]	B386974	50.0	5.00	09/25/24
24I1932-03 [FB-TOB-09132024]	B386974	493	5.00	09/25/24
24I1932-04 [050-VP9-09132024]	B386974	101	5.00	09/25/24

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386974 - Draft Method 1633										
Blank (B386974-BLK1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*95.7*		ng/L	98.37		97.3	10-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386974 - Draft Method 1633										
Blank (B386974-BLK1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Surrogate: 13C5-PFPeA	*53.8*		ng/L	49.19		109	35-150			
Surrogate: 13C5-PFHxA	*24.0*		ng/L	24.59		97.7	55-150			
Surrogate: 13C4-PFHpA	*21.6*		ng/L	24.59		87.6	55-150			
Surrogate: 13C8-PFOA	*24.4*		ng/L	24.59		99.1	60-140			
Surrogate: 13C9-PFNA	*11.9*		ng/L	12.30		96.9	55-140			
Surrogate: 13C6-PFDA	*12.4*		ng/L	12.30		101	50-140			
Surrogate: 13C7-PFUnA	*12.9*		ng/L	12.30		105	30-140			
Surrogate: 13C2-PFDoA	*11.8*		ng/L	12.30		95.6	10-150			
Surrogate: 13C2-PFTeDA	*12.1*		ng/L	12.30		98.4	10-130			
Surrogate: 13C3-PFBS	*23.7*		ng/L	24.59		96.6	55-150			
Surrogate: 13C3-PFHxS	*24.8*		ng/L	24.59		101	55-150			
Surrogate: 13C8-PFOS	*23.6*		ng/L	24.59		95.8	45-140			
Surrogate: 13C2-4:2FTS	*42.0*		ng/L	49.19		85.3	60-200			
Surrogate: 13C2-6:2FTS	*43.0*		ng/L	49.19		87.5	60-200			
Surrogate: 13C2-8:2FTS	*41.2*		ng/L	49.19		83.8	50-200			
Surrogate: 13C8-PFOSA	*21.3*		ng/L	24.59		86.6	30-130			
Surrogate: D3-NMeFOSA	*17.3*		ng/L	24.59		70.3	15-130			
Surrogate: D5-NEtFOSA	*17.3*		ng/L	24.59		70.4	10-130			
Surrogate: D3-NMeFOSAA	*45.9*		ng/L	49.19		93.3	45-200			
Surrogate: D5-NEtFOSAA	*58.5*		ng/L	49.19		119	10-200			
Surrogate: D7-NMeFOSE	*221*		ng/L	245.9		89.7	10-150			
Surrogate: D9-NEtFOSE	*223*		ng/L	245.9		90.9	10-150			
Surrogate: 13C3-HFPO-DA	*79.9*		ng/L	98.37		81.2	25-160			
LCS (B386974-BS1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Perfluorobutanoic acid (PFBA)	98.3	3.9	ng/L	93.93		105	58-148			
Perfluoropentanoic acid (PFPeA)	50.5	2.0	ng/L	46.96		108	54-152			
Perfluorohexanoic acid (PFHxA)	25.1	0.98	ng/L	23.48		107	55-152			
Perfluoroheptanoic acid (PFHpA)	23.7	0.98	ng/L	23.48		101	54-154			
Perfluorooctanoic acid (PFOA)	23.5	0.98	ng/L	23.48		99.9	52-161			
Perfluorononanoic acid (PFNA)	24.1	0.98	ng/L	23.48		102	59-149			
Perfluorodecanoic acid (PFDA)	22.9	0.98	ng/L	23.48		97.5	52-147			
Perfluoroundecanoic acid (PFUnA)	24.3	0.98	ng/L	23.48		103	48-159			
Perfluorododecanoic acid (PFDoA)	24.6	0.98	ng/L	23.48		105	64-142			
Perfluorotridecanoic acid (PFTrDA)	24.3	0.98	ng/L	23.48		103	49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.6	0.98	ng/L	23.48		105	47-161			
Perfluorobutanesulfonic acid (PFBS)	21.2	0.98	ng/L	20.84		102	62-144			
Perfluoropentanesulfonic acid (PFPeS)	22.6	0.98	ng/L	22.07		102	59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.8	0.98	ng/L	21.49		96.6	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	24.0	0.98	ng/L	22.37		107	55-152			
Perfluorooctanesulfonic acid (PFOS)	22.3	0.98	ng/L	21.78		103	58-149			
Perfluorononanesulfonic acid (PFNS)	22.9	0.98	ng/L	22.60		101	52-148			
Perfluorodecanesulfonic acid (PFDS)	22.6	0.98	ng/L	22.66		99.9	51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.3	0.98	ng/L	22.78		93.3	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	99.1	3.9	ng/L	88.06		112	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	101	3.9	ng/L	89.23		113	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	96.2	3.9	ng/L	90.41		106	63-152			
Perfluorooctanesulfonamide (PFOSA)	23.4	0.98	ng/L	23.48		99.8	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	26.2	0.98	ng/L	23.48		112	63-145			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386974 - Draft Method 1633										
LCS (B386974-BS1)				Prepared: 09/25/24 Analyzed: 09/27/24						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	27.3	0.98	ng/L	23.48		116	65-139			
N-MeFOSAA (NMeFOSAA)	29.7	0.98	ng/L	23.48		127	58-144			
N-EtFOSAA (NEtFOSAA)	21.4	0.98	ng/L	23.48		91.1	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	244	9.8	ng/L	234.8		104	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	239	9.8	ng/L	234.8		102	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	108	3.9	ng/L	93.93		115	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	106	3.9	ng/L	88.65		119	68-146			
9Cl-PF3ONS (F53B Minor)	102	3.9	ng/L	88.06		116	56-156			
11Cl-PF3OUdS (F53B Major)	96.4	3.9	ng/L	88.65		109	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	188	9.8	ng/L	234.8		79.9	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1160	49	ng/L	1174		98.8	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1060	49	ng/L	1174		90.6	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	45.8	2.0	ng/L	41.80		110	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	38.4	2.0	ng/L	46.96		81.7	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	44.0	2.0	ng/L	46.96		93.7	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	37.6	2.0	ng/L	46.96		80.1	48-161			
Surrogate: 13C4-PFBA	*91.8*		ng/L	97.84		93.9	10-130			
Surrogate: 13C5-PFPeA	*51.9*		ng/L	48.92		106	35-150			
Surrogate: 13C5-PFHxA	*22.0*		ng/L	24.46		89.9	55-150			
Surrogate: 13C4-PFHpA	*21.2*		ng/L	24.46		86.6	55-150			
Surrogate: 13C8-PFOA	*23.8*		ng/L	24.46		97.2	60-140			
Surrogate: 13C9-PFNA	*11.4*		ng/L	12.23		93.2	55-140			
Surrogate: 13C6-PFDA	*11.6*		ng/L	12.23		94.9	50-140			
Surrogate: 13C7-PFUnA	*12.1*		ng/L	12.23		98.9	30-140			
Surrogate: 13C2-PFDoA	*10.6*		ng/L	12.23		86.8	10-150			
Surrogate: 13C2-PFTeDA	*10.1*		ng/L	12.23		82.8	10-130			
Surrogate: 13C3-PFBS	*22.9*		ng/L	24.46		93.5	55-150			
Surrogate: 13C3-PFHxS	*22.9*		ng/L	24.46		93.6	55-150			
Surrogate: 13C8-PFOS	*22.9*		ng/L	24.46		93.5	45-140			
Surrogate: 13C2-4:2FTS	*42.4*		ng/L	48.92		86.6	60-200			
Surrogate: 13C2-6:2FTS	*43.4*		ng/L	48.92		88.7	60-200			
Surrogate: 13C2-8:2FTS	*42.9*		ng/L	48.92		87.6	50-200			
Surrogate: 13C8-PFOSA	*21.0*		ng/L	24.46		86.0	30-130			
Surrogate: D3-NMeFOSA	*17.1*		ng/L	24.46		70.1	15-130			
Surrogate: D5-NEtFOSA	*17.4*		ng/L	24.46		71.0	10-130			
Surrogate: D3-NMeFOSAA	*44.4*		ng/L	48.92		90.7	45-200			
Surrogate: D5-NEtFOSAA	*53.3*		ng/L	48.92		109	10-200			
Surrogate: D7-NMeFOSE	*211*		ng/L	244.6		86.1	10-150			
Surrogate: D9-NEtFOSE	*213*		ng/L	244.6		87.1	10-150			
Surrogate: 13C3-HFPO-DA	*80.2*		ng/L	97.84		82.0	25-160			
MRL Check (B386974-MRL1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Perfluorobutanoic acid (PFBA)	7.62	3.9	ng/L	7.802		97.7	44-157			
Perfluoropentanoic acid (PFPeA)	3.82	2.0	ng/L	3.901		98.0	57-148			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386974 - Draft Method 1633										
MRL Check (B386974-MRL1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Perfluorohexanoic acid (PFHxA)	1.89	0.98	ng/L	1.950		96.7	62-149			
Perfluoroheptanoic acid (PFHpA)	1.86	0.98	ng/L	1.950		95.4	56-150			
Perfluorooctanoic acid (PFOA)	1.79	0.98	ng/L	1.950		91.9	57-161			
Perfluorononanoic acid (PFNA)	1.82	0.98	ng/L	1.950		93.4	53-157			
Perfluorodecanoic acid (PFDA)	1.93	0.98	ng/L	1.950		98.8	43-158			
Perfluoroundecanoic acid (PFUnA)	1.79	0.98	ng/L	1.950		92.0	50-155			
Perfluorododecanoic acid (PFDoA)	1.74	0.98	ng/L	1.950		89.3	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.81	0.98	ng/L	1.950		92.6	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.84	0.98	ng/L	1.950		94.3	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.60	0.98	ng/L	1.731		92.2	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.74	0.98	ng/L	1.833		95.2	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.77	0.98	ng/L	1.785		98.9	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.89	0.98	ng/L	1.858		102	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.94	0.98	ng/L	1.809		107	43-162			
Perfluorononanesulfonic acid (PFNS)	1.74	0.98	ng/L	1.877		92.6	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.73	0.98	ng/L	1.882		91.9	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.65	0.98	ng/L	1.892		87.4	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	6.96	3.9	ng/L	7.314		95.1	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.66	3.9	ng/L	7.412		103	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.23	3.9	ng/L	7.509		96.3	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.79	0.98	ng/L	1.950		91.9	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.11	0.98	ng/L	1.950		108	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.19	0.98	ng/L	1.950		112	49-156			
N-MeFOSAA (NMeFOSAA)	2.17	0.98	ng/L	1.950		111	32-160			
N-EtFOSAA (NEtFOSAA)	1.67	0.98	ng/L	1.950		85.5	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	18.1	9.8	ng/L	19.50		92.9	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	18.1	9.8	ng/L	19.50		92.9	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.13	3.9	ng/L	7.802		91.4	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	7.06	3.9	ng/L	7.363		95.9	61-148			
9Cl-PF3ONS (F53B Minor)	6.74	3.9	ng/L	7.314		92.2	44-167			
11Cl-PF3OUdS (F53B Major)	6.19	3.9	ng/L	7.363		84.1	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	15.0	9.8	ng/L	19.50		77.0	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	87.7	49	ng/L	97.52		90.0	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	80.7	49	ng/L	97.52		82.8	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.46	2.0	ng/L	3.472		99.6	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.81	2.0	ng/L	3.901		72.1	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.38	2.0	ng/L	3.901		86.5	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.19	2.0	ng/L	3.901		81.7	47-160			
Surrogate: 13C4-PFBA	*90.6*		ng/L	97.52		92.9	10-130			
Surrogate: 13C5-PFPeA	*51.3*		ng/L	48.76		105	35-150			
Surrogate: 13C5-PFHxA	*22.3*		ng/L	24.38		91.3	55-150			

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386974 - Draft Method 1633										
MRL Check (B386974-MRL1)				Prepared: 09/25/24 Analyzed: 09/27/24						
Surrogate: 13C4-PFHpA	*20.8*		ng/L	24.38		85.3	55-150			
Surrogate: 13C8-PFOA	*24.1*		ng/L	24.38		98.9	60-140			
Surrogate: 13C9-PFNA	*10.7*		ng/L	12.19		88.1	55-140			
Surrogate: 13C6-PFDA	*10.9*		ng/L	12.19		89.4	50-140			
Surrogate: 13C7-PFUnA	*11.4*		ng/L	12.19		93.2	30-140			
Surrogate: 13C2-PFDoA	*10.5*		ng/L	12.19		86.2	10-150			
Surrogate: 13C2-PFTeDA	*10.4*		ng/L	12.19		85.6	10-130			
Surrogate: 13C3-PFBS	*23.3*		ng/L	24.38		95.5	55-150			
Surrogate: 13C3-PFHxS	*23.1*		ng/L	24.38		94.7	55-150			
Surrogate: 13C8-PFOS	*22.1*		ng/L	24.38		90.7	45-140			
Surrogate: 13C2-4:2FTS	*41.7*		ng/L	48.76		85.6	60-200			
Surrogate: 13C2-6:2FTS	*43.1*		ng/L	48.76		88.3	60-200			
Surrogate: 13C2-8:2FTS	*42.7*		ng/L	48.76		87.6	50-200			
Surrogate: 13C8-PFOSA	*19.9*		ng/L	24.38		81.7	30-130			
Surrogate: D3-NMeFOSA	*16.8*		ng/L	24.38		68.8	15-130			
Surrogate: D5-NEtFOSA	*17.7*		ng/L	24.38		72.5	10-130			
Surrogate: D3-NMeFOSAA	*43.1*		ng/L	48.76		88.4	45-200			
Surrogate: D5-NEtFOSAA	*48.3*		ng/L	48.76		99.0	10-200			
Surrogate: D7-NMeFOSE	*204*		ng/L	243.8		83.8	10-150			
Surrogate: D9-NEtFOSE	*209*		ng/L	243.8		85.8	10-150			
Surrogate: 13C3-HFPO-DA	*82.3*		ng/L	97.52		84.4	25-160			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B386255 - Draft Method 1633										
Blank (B386255-BLK1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B386255-BS1)				Prepared & Analyzed: 09/17/24						
Total Suspended Solids	169	5.0	mg/L	200.0		84.5	51.5-130			

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
D-03	Sample diluted pre-extraction due to elevated TSS pre-analysis result.
D-04	Sample extracted at a dilution due to insufficient volume provided.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
PF-23	Qualifier ion ratio <50% of associated calibration. Detection is suspect.

con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV,CT
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV,CT
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV,CT
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV,CT
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV,CT
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV,CT
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV,CT
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV,CT
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV,CT
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV,CT
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV,CT
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV,CT
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV,CT
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV,CT
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV,CT
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV,CT
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV,CT
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV,CT
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV,CT
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV,CT
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV,CT
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV,CT
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV,CT
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV,CT
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV,CT
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV,CT
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV,CT
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV,CT
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV,CT
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV,CT
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV,CT
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV,CT
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV,CT
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV,CT
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV,CT
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV,CT
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV,CT
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV,CT

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2025
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2025
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2025
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2025

5

24I1932

Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	NYSDEC
Address:	50 Circle Road, Stony Brook NY 11790
Phone:	631-444-0379
Project Name:	Brookhaven Landfill PFAS Plume Invesitgation
Project Location:	Horseblock Road, Brookhaven
Project Number:	June PFAS
Project Manager:	Chris Oommen/Francesca King
Pace Analytical Quote Name/Number:	Kyle Stuckey
Invoice Recipient:	NYSDEC
Sampled By:	Francesca King

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date: 30-Day

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other:
CLP Like Data Pkg Required: ☐
Email To: francesca.king@dec.ny.gov
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#		Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	TCLP Fluid pH	RCRA 8 - Metals TCLP, Including Mercury	Total Metals	Chlorides and Sulfate	1633 PFAS
	1	FB-TOB-09122024	9-12-24 11:00	-7		✓	GW	—					X
	2	130-VP9-09122024	9-12-24 [illegible]	-7		✓	GW	—					X
	3	FB-TOB09132024	9-13-24 9:00	-7		✓	GW	—					X
	4	050-TOB-VP9-09132024	9-13-24 8:50	-7		✓	GW	—					X

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

# of Containers NA
[2] Preservation Code N/A
[3] Container Code G

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:
T°C = 4.4

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 9-13-24
Received by: (signature)	Date/Time: 9/13/24 11:22
Relinquished by: (signature)	Date/Time: 9/13/24 1800
Received by: (signature) MS MA (AAL)	Date/Time: 9/13 1900
Relinquished by: (signature) MS MA (AAL)	Date/Time: 9/13 2000
Received by: (signature) Anthony Green	Date/Time: SEP 13 2023 2215

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☑ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Anthony Green 9/14/24 0130
Anthony Green 9/14/24 0130
PACE 9/14/24 0700
PACE 9/14/24 096
9/14/24 0900

9/16

Page 27 of 29

Table of Contents

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log in Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Client NYDEC

Project Brookhaven Landfill

MCP/RCP Required no

Deliverable Package Requirement no

Location NY

PWSID# (When Applicable) NA

Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐

Received By / Date / Time GL 9/14/24 916

Back-Sheet By / Date / Time GL 9/16/24 1221

Temperature Method GM # 6

WV samples: Yes (see note*) / No (follow normal procedure)

Temp < 6° C Actual Temperature 4.0

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑	Analysis ☑	Sampler Name ☑	
Project ☑	IDs ☑	Collection Date/Time ☑	

All Samples Proper pH: (N/A) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist

Effective Date: 06/11/2024

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	Soils Jars (Circle Amb/Clear)																					
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	Ambers	1 Liter																				
HCL																						
Sulfuric																						
Sulfuric		250mL																				
Phosphoric																						
HCl																						
Unpreserved		100mL																				
Unpreserved	Plastics	1 Liter																				
Sulfuric																						
Unpreserved		500mL	2	2	2	2																
Sulfuric																						
Unpreserved		250mL																				
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved	VOA Vials																					
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact	Other / Fill in																					
125 Plastic			—	—	—	—																

Table of Contents