

Technical Report

for

Emerging Contaminants

prepared for:

Brussee Environmental Corp.
14 Evans Lane
Miller Place NY, 11764
Attention: Kevin Brussee

Report Date: 10/14/2021
Client Project ID: 188 E 135th St
York Project (SDG) No.: 21J0088

CT Cert. No. PH-0723

New Jersey Cert. No. CT005 and NY037



New York Cert. Nos. 10854 and 12058

PA Cert. No. 68-04440

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ClientServices@yorklab.com

Report Date: 10/14/2021
Client Project ID: 188 E 135th St
York Project (SDG) No.: 21J0088

Brussee Environmental Corp.
14 Evans Lane
Miller Place NY, 11764
Attention: Kevin Brussee

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on October 04, 2021 and listed below. The project was identified as your project: **188 E 135th St.**

The analyses were conducted utilizing appropriate EPA methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

Please contact Client Services at 203.325.1371 with any questions regarding this report or e-mail clientservices@yorklab.com.

<u>York Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
21J0088-01	20MW1	Water	10/01/2021	10/04/2021
21J0088-02	20MW2	Water	10/01/2021	10/04/2021
21J0088-03	20MW3	Water	10/01/2021	10/04/2021

General Notes for York Project (SDG) No.: 21J0088

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: 

Cassie L. Mosher
Laboratory Manager

Date: 10/14/2021





Sample Information

Client Sample ID: 20MW1

York Sample ID: 21J0088-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
21J0088	188 E 135th St	Water	October 1, 2021 3:00 pm	10/04/2021

PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	2.01		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
307-24-4	* Perfluorohexanoic acid (PFHxA)	3.41		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
375-85-9	* Perfluoroheptanoic acid (PFHpA)	3.34		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
335-67-1	* Perfluorooctanoic acid (PFOA)	21.6		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	25.1		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
375-95-1	* Perfluorononanoic acid (PFNA)	5.78		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
335-76-2	* Perfluorodecanoic acid (PFDA)	2.01		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
72629-94-8	* Perfluorotridecanoic acid (PFTTrDA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
2355-31-9	* N-MeFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
2991-50-6	* N-EtFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
2706-90-3	* Perfluoropentanoic acid (PFPeA)	4.67		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		0		ng/L	4.63	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	



Sample Information

Client Sample ID: 20MW1

York Sample ID: 21J0088-01

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 3:00 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	5.84		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:42	
	Surrogate Recoveries	Result		Acceptance Range						
	Surrogate: M3PFBS	97.1 %		25-150						
	Surrogate: M5PFHxA	95.7 %		25-150						
	Surrogate: M4PFHpA	90.8 %		25-150						
	Surrogate: M3PFHxS	99.7 %		25-150						
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	90.2 %		25-150						
	Surrogate: M6PFDA	97.6 %		25-150						
	Surrogate: M7PFUdA	86.2 %		25-150						
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	77.1 %		25-150						
	Surrogate: M2PFTeDA	76.2 %		10-150						
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	88.9 %		25-150						
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	91.7 %		25-150						
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	89.6 %		25-150						
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	4.24 %	PFSu-L	10-150						
	Surrogate: d3-N-MeFOSAA	70.0 %		25-150						
	Surrogate: d5-N-EtFOSAA	69.7 %		25-150						
	Surrogate: M2-6:2 FTS	82.6 %		25-200						
	Surrogate: M2-8:2 FTS	111 %		25-200						
	Surrogate: M9PFNA	86.6 %		25-150						

Sample Information

Client Sample ID: 20MW2

York Sample ID: 21J0088-02

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 2:30 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						



Sample Information

Client Sample ID: 20MW2

York Sample ID: 21J0088-02

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 2:30 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	2.71		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
307-24-4	* Perfluorohexanoic acid (PFHxA)	8.74		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
375-85-9	* Perfluoroheptanoic acid (PFHpA)	8.82		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
335-67-1	* Perfluorooctanoic acid (PFOA)	35.3		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	25.5		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
375-95-1	* Perfluorononanoic acid (PFNA)	3.07		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
335-76-2	* Perfluorodecanoic acid (PFDA)	2.46		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
2355-31-9	* N-MeFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
2991-50-6	* N-EtFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
2706-90-3	* Perfluoropentanoic acid (PFPeA)	10.8		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		0		ng/L	4.63	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	10.0		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 01:54	



Sample Information

Client Sample ID: 20MW2

York Sample ID: 21J0088-02

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 2:30 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL	Units				
	Surrogate Recoveries	Result		Acceptance Range					
	Surrogate: M3PFBS	98.4 %		25-150					
	Surrogate: M5PFHxA	98.3 %		25-150					
	Surrogate: M4PFHpA	97.5 %		25-150					
	Surrogate: M3PFHxS	113 %		25-150					
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	101 %		25-150					
	Surrogate: M6PFDA	101 %		25-150					
	Surrogate: M7PFUdA	91.7 %		25-150					
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	90.4 %		25-150					
	Surrogate: M2PFTeDA	74.0 %		10-150					
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	89.9 %		25-150					
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	97.4 %		25-150					
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	92.2 %		25-150					
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	18.0 %		10-150					
	Surrogate: d3-N-MeFOSAA	64.2 %		25-150					
	Surrogate: d5-N-EtFOSAA	80.3 %		25-150					
	Surrogate: M2-6:2 FTS	75.1 %		25-200					
	Surrogate: M2-8:2 FTS	81.0 %		25-200					
	Surrogate: M9PFNA	89.6 %		25-150					

Sample Information

Client Sample ID: 20MW3

York Sample ID: 21J0088-03

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 3:30 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL	Units				
375-73-5	* Perfluorobutanesulfonic acid (PFBS)	2.49		0	ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
					Certifications:			10/14/2021 02:06	



Sample Information

Client Sample ID: 20MW3

York Sample ID: 21J0088-03

<u>York Project (SDG) No.</u> 21J0088	<u>Client Project ID</u> 188 E 135th St	<u>Matrix</u> Water	<u>Collection Date/Time</u> October 1, 2021 3:30 pm	<u>Date Received</u> 10/04/2021
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PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
307-24-4	* Perfluorohexanoic acid (PFHxA)	4.41		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
375-85-9	* Perfluoroheptanoic acid (PFHpA)	3.89		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
355-46-4	* Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
335-67-1	* Perfluorooctanoic acid (PFOA)	18.2		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
1763-23-1	* Perfluorooctanesulfonic acid (PFOS)	24.4		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
375-95-1	* Perfluorononanoic acid (PFNA)	4.41		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
335-76-2	* Perfluorodecanoic acid (PFDA)	1.88		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
2058-94-8	* Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
307-55-1	* Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
72629-94-8	* Perfluorotridecanoic acid (PFTrDA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
376-06-7	* Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
2355-31-9	* N-MeFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
2991-50-6	* N-EtFOSAA	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
2706-90-3	* Perfluoropentanoic acid (PFPeA)	5.36		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
754-91-6	* Perfluoro-1-octanesulfonamide (FOSA)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
375-92-8	* Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
335-77-3	* Perfluoro-1-decanesulfonic acid (PFDS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
27619-97-2	* 1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		0		ng/L	4.63	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
39108-34-4	* 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	
375-22-4	* Perfluoro-n-butanoic acid (PFBA)	6.29		0		ng/L	1.85	EPA 537m	10/12/2021 13:12	WL
									10/14/2021 02:06	

Surrogate Recoveries

Result

Acceptance Range



Sample Information

Client Sample ID: 20MW3

York Sample ID: 21J0088-03

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

21J0088

188 E 135th St

Water

October 1, 2021 3:30 pm

10/04/2021

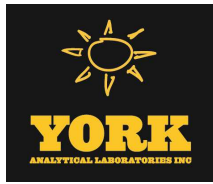
PFAS, NYSDEC Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: SPE Ext-PFAS-EPA 537.1M

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL	Units				
	Surrogate: M3PFBS	104 %		25-150					
	Surrogate: M5PFHxA	90.3 %		25-150					
	Surrogate: M4PFHpA	94.8 %		25-150					
	Surrogate: M3PFHxS	101 %		25-150					
	Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	90.2 %		25-150					
	Surrogate: M6PFDA	87.8 %		25-150					
	Surrogate: M7PFUdA	82.2 %		25-150					
	Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	83.0 %		25-150					
	Surrogate: M2PFTeDA	77.2 %		10-150					
	Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	91.0 %		25-150					
	Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	95.2 %		25-150					
	Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	91.2 %		25-150					
	Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	0.988 %	PFSu-L	10-150					
	Surrogate: d3-N-MeFOSAA	71.2 %		25-150					
	Surrogate: d5-N-EtFOSAA	78.0 %		25-150					
	Surrogate: M2-6:2 FTS	78.1 %		25-200					
	Surrogate: M2-8:2 FTS	95.9 %		25-200					
	Surrogate: M9PFNA	89.6 %		25-150					



Analytical Batch Summary

Batch ID: BJ10664

Preparation Method: SPE Ext-PFAS-EPA 537.1M

Prepared By: ER

YORK Sample ID	Client Sample ID	Preparation Date
21J0088-01	20MW1	10/12/21
21J0088-02	20MW2	10/12/21
21J0088-03	20MW3	10/12/21
BJ10664-BLK1	Blank	10/12/21
BJ10664-BS1	LCS	10/12/21
BJ10664-BSD1	LCS Dup	10/12/21



PFAS Target compounds by LC/MS-MS - Quality Control Data
York Analytical Laboratories, Inc.

Analyte	Result	Reporting	Units	Spike Level	Source*	%REC	%REC Limits	Flag	RPD	RPD	
		Limit			Result					Limit	Flag

Batch BJ10664 - SPE Ext-PFAS-EPA 537.1M

Blank (BJ10664-BLK1)

Prepared: 10/12/2021 Analyzed: 10/14/2021

Perfluorobutanesulfonic acid (PFBS)	ND	2.00	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	2.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"								
Perfluorooctanoic acid (PFOA)	ND	2.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"								
Perfluorononanoic acid (PFNA)	ND	2.00	"								
Perfluorodecanoic acid (PFDA)	ND	2.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	2.00	"								
Perfluorododecanoic acid (PFDoA)	ND	2.00	"								
Perfluorotridecanoic acid (PFTriDA)	ND	2.00	"								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
Perfluoropentanoic acid (PFPeA)	ND	2.00	"								
Perfluoro-1-octanesulfonamide (FOSA)	ND	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	2.00	"								
Perfluoro-1-decanesulfonic acid (PFDS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	5.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	2.00	"								
Perfluoro-n-butanoic acid (PFBA)	ND	2.00	"								
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Surrogate: M3PFBS	73.7		"	74.3		99.2	25-150				
Surrogate: M5PFHxA	80.6		"	80.0		101	25-150				
Surrogate: M4PFHpA	85.1		"	80.0		106	25-150				
Surrogate: M3PFHxS	72.6		"	75.7		95.9	25-150				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	80.4		"	80.0		101	25-150				
Surrogate: M6PFDA	84.4		"	80.0		105	25-150				
Surrogate: M7PFUdA	82.7		"	80.0		103	25-150				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	79.0		"	80.0		98.7	25-150				
Surrogate: M2PFTeDA	67.5		"	80.0		84.4	10-150				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	77.8		"	80.0		97.3	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	76.8		"	76.6		100	25-150				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	80.4		"	80.0		100	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	30.8		"	80.0		38.5	10-150				
Surrogate: d3-N-MeFOSAA	66.5		"	80.0		83.1	25-150				
Surrogate: d5-N-EtFOSAA	70.5		"	80.0		88.2	25-150				
Surrogate: M2-6:2 FTS	84.4		"	75.9		111	25-200				
Surrogate: M2-8:2 FTS	77.4		"	76.6		101	25-200				
Surrogate: M9PFNA	79.7		"	80.0		99.6	25-150				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BJ10664 - SPE Ext-PFAS-EPA 537.1M

LCS (BJ10664-BS1)

Prepared: 10/12/2021 Analyzed: 10/14/2021

Perfluorobutanesulfonic acid (PFBS)	67.1	2.00	ng/L	70.8		94.8	50-130				
Perfluorohexanoic acid (PFHxA)	80.3	2.00	"	80.0		100	50-130				
Perfluoroheptanoic acid (PFHpA)	76.8	2.00	"	80.0		96.0	50-130				
Perfluorohexanesulfonic acid (PFHxS)	70.7	2.00	"	73.0		96.9	50-130				
Perfluorooctanoic acid (PFOA)	77.3	2.00	"	80.0		96.6	50-130				
Perfluorooctanesulfonic acid (PFOS)	66.7	2.00	"	74.1		90.1	50-130				
Perfluorononanoic acid (PFNA)	78.4	2.00	"	80.0		98.0	50-130				
Perfluorodecanoic acid (PFDA)	71.5	2.00	"	80.0		89.3	50-130				
Perfluoroundecanoic acid (PFUnA)	76.7	2.00	"	80.0		95.9	50-130				
Perfluorododecanoic acid (PFDoA)	76.5	2.00	"	80.0		95.6	50-130				
Perfluorotridecanoic acid (PFTriDA)	77.0	2.00	"	80.0		96.3	50-130				
Perfluorotetradecanoic acid (PFTA)	73.3	2.00	"	80.0		91.7	50-130				
N-MeFOSAA	73.8	2.00	"	80.0		92.2	50-130				
N-EtFOSAA	82.8	2.00	"	80.0		104	50-130				
Perfluoropentanoic acid (PFPeA)	74.8	2.00	"	80.0		93.5	50-130				
Perfluoro-1-octanesulfonamide (FOSA)	68.1	2.00	"	80.0		85.1	50-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	66.1	2.00	"	76.0		87.0	50-130				
Perfluoro-1-decanesulfonic acid (PFDS)	63.7	2.00	"	77.2		82.5	50-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	75.7	5.00	"	76.0		99.6	50-175				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	68.5	2.00	"	76.8		89.2	50-175				
Perfluoro-n-butanoic acid (PFBA)	77.3	2.00	"	80.0		96.7	50-130				
Surrogate: M3PFBS	71.8		"	74.3		96.7	25-150				
Surrogate: M5PFHxA	77.0		"	80.0		96.3	25-150				
Surrogate: M4PFHpA	81.6		"	80.0		102	25-150				
Surrogate: M3PFHxS	75.6		"	75.7		99.9	25-150				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	78.0		"	80.0		97.5	25-150				
Surrogate: M6PFDA	86.2		"	80.0		108	25-150				
Surrogate: M7PFUdA	77.2		"	80.0		96.5	25-150				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	80.3		"	80.0		100	25-150				
Surrogate: M2PFTeDA	75.9		"	80.0		94.9	10-150				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	77.9		"	80.0		97.4	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	81.2		"	76.6		106	25-150				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	80.2		"	80.0		100	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	15.1		"	80.0		18.9	10-150				
Surrogate: d3-N-MeFOSAA	73.6		"	80.0		91.9	25-150				
Surrogate: d5-N-EtFOSAA	65.7		"	80.0		82.1	25-150				
Surrogate: M2-6:2 FTS	72.6		"	75.9		95.6	25-200				
Surrogate: M2-8:2 FTS	75.8		"	76.6		98.9	25-200				
Surrogate: M9PFNA	79.6		"	80.0		99.5	25-150				



PFAS Target compounds by LC/MS-MS - Quality Control Data

York Analytical Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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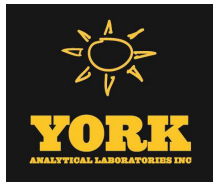
Batch BJ10664 - SPE Ext-PFAS-EPA 537.1M

LCS Dup (BJ10664-BSD1)

Prepared: 10/12/2021 Analyzed: 10/14/2021

Perfluorobutanesulfonic acid (PFBS)	74.0	2.00	ng/L	70.8		105	50-130		9.75	30	
Perfluorohexanoic acid (PFHxA)	78.8	2.00	"	80.0		98.4	50-130		1.92	30	
Perfluoroheptanoic acid (PFHpA)	82.3	2.00	"	80.0		103	50-130		6.86	30	
Perfluorohexanesulfonic acid (PFHxS)	74.1	2.00	"	73.0		102	50-130		4.62	30	
Perfluorooctanoic acid (PFOA)	85.3	2.00	"	80.0		107	50-130		9.87	30	
Perfluorooctanesulfonic acid (PFOS)	81.2	2.00	"	74.1		110	50-130		19.6	30	
Perfluorononanoic acid (PFNA)	76.0	2.00	"	80.0		95.0	50-130		3.10	30	
Perfluorodecanoic acid (PFDA)	78.0	2.00	"	80.0		97.5	50-130		8.76	30	
Perfluoroundecanoic acid (PFUnA)	79.3	2.00	"	80.0		99.1	50-130		3.23	30	
Perfluorododecanoic acid (PFDoA)	82.2	2.00	"	80.0		103	50-130		7.12	30	
Perfluorotridecanoic acid (PFTriDA)	76.6	2.00	"	80.0		95.8	50-130		0.510	30	
Perfluorotetradecanoic acid (PFTA)	86.0	2.00	"	80.0		107	50-130		15.9	30	
N-MeFOSAA	94.0	2.00	"	80.0		118	50-130		24.1	30	
N-EtFOSAA	80.5	2.00	"	80.0		101	50-130		2.87	30	
Perfluoropentanoic acid (PFPeA)	82.6	2.00	"	80.0		103	50-130		9.92	30	
Perfluoro-1-octanesulfonamide (FOSA)	82.5	2.00	"	80.0		103	50-130		19.2	30	
Perfluoro-1-heptanesulfonic acid (PFHpS)	76.5	2.00	"	76.0		101	50-130		14.6	30	
Perfluoro-1-decanesulfonic acid (PFDS)	74.9	2.00	"	77.2		97.0	50-130		16.2	30	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	69.3	5.00	"	76.0		91.2	50-175		8.87	30	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	64.3	2.00	"	76.8		83.8	50-175		6.32	30	
Perfluoro-n-butanoic acid (PFBA)	82.5	2.00	"	80.0		103	50-130		6.50	30	
Surrogate: M3PFBS	67.9		"	74.3		91.3	25-150				
Surrogate: M5PFHxA	77.3		"	80.0		96.7	25-150				
Surrogate: M4PFHpA	76.8		"	80.0		96.0	25-150				
Surrogate: M3PFHxS	72.9		"	75.7		96.3	25-150				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	72.9		"	80.0		91.2	25-150				
Surrogate: M6PFDA	80.8		"	80.0		101	25-150				
Surrogate: M7PFUdA	78.3		"	80.0		97.8	25-150				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	81.7		"	80.0		102	25-150				
Surrogate: M2PFTeDA	71.0		"	80.0		88.8	10-150				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	74.7		"	80.0		93.3	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	72.4		"	76.6		94.6	25-150				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	75.9		"	80.0		94.9	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	13.7		"	80.0		17.1	10-150				
Surrogate: d3-N-MeFOSAA	58.8		"	80.0		73.5	25-150				
Surrogate: d5-N-EtFOSAA	76.0		"	80.0		95.0	25-150				
Surrogate: M2-6:2 FTS	84.3		"	75.9		111	25-200				
Surrogate: M2-8:2 FTS	83.5		"	76.6		109	25-200				
Surrogate: M9PFNA	80.5		"	80.0		101	25-150				





Sample and Data Qualifiers Relating to This Work Order

PFSu-L The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.
MCL	This is the Maximum Contaminant Level in ng/L (ppt) established by the NYSDOH for these compounds where an MCL is reported. Exceedences are flagged according.

