

Technical Report

for

Emerging Contaminants

prepared for:

Norman Bloom and Son LLC

7 Edgewater Place

Norwalk CT, 06855-2413

Attention: Richard Harris

Report Date: 02/14/2023

Client Project ID: 15.802 WILTON HIGH SCHOOL PLAYING FIELD

York Project (SDG) No.: 23B0250

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: 02/14/2023
Client Project ID: 15.802 WILTON HIGH SCHOOL PLAYING FIELD
York Project (SDG) No.: 23B0250

Norman Bloom and Son LLC
7 Edgewater Place
Norwalk CT, 06855-2413
Attention: Richard Harris

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 February 03, 2023 and listed below. The project was identified as your project: **15.802 WILTON HIGH SCHOOL PLAYING FIELD**.

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>
23B0250-01	WILTON POND OUTLET	Water	02/02/2023	02/03/2023
23B0250-02	BOTTLED WATER	Drinking Water	02/02/2023	02/03/2023
23B0250-03	Field Blank	Water	02/02/2023	02/03/2023

General Notes for York Project (SDG) No.: 23B0250

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: 02/14/2023





Sample Information

Client Sample ID: WILTON POND OUTLET

York Sample ID: 23B0250-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23B0250	15.802 WILTON HIGH SCHOOL PLAYING FIELD	Water	February 2, 2023 2:55 pm	02/03/2023

PFAS by EPA 537 m

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				
307-24-4	Perfluorohexanoic acid (PFHxA)	2.23		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.15		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.59		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	
335-67-1	Perfluorooctanoic acid (PFOA)	4.22		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	5.57		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	
2706-90-3	Perfluoropentanoic acid (PFPeA)	2.28		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
								02/13/2023 15:15	

Surrogate Recoveries

Result

Acceptance Range

Surrogate: M3PFBS	114 %	25-150
Surrogate: M5PFHxA	95.0 %	25-150
Surrogate: M4PFHpA	82.5 %	25-150
Surrogate: M3PFHxS	136 %	25-150
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	103 %	25-150
Surrogate: M6PFDA	111 %	25-150
Surrogate: M7PFUdA	97.3 %	25-150
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	91.6 %	25-150
Surrogate: M2PFTeDA	82.3 %	10-150
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	105 %	25-150
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	143 %	25-150
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	95.1 %	25-150
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	1.36 %	PFSu-L 10-150
Surrogate: d3-N-MeFOSAA	98.0 %	25-150
Surrogate: d5-N-EtFOSAA	94.4 %	25-150
Surrogate: M2-6:2 FTS	208 %	PFSu-H 25-200
Surrogate: M2-8:2 FTS	134 %	25-200
Surrogate: M9PFNA	104 %	25-150



Sample Information

Client Sample ID: BOTTLED WATER

York Sample ID: 23B0250-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

23B0250

15.802 WILTON HIGH SCHOOL PLAYING FIELD

Drinking Water

February 2, 2023 10:00 am

02/03/2023

PFAS, EPA 537.1 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

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)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
335-67-1	Perfluorooctanoic acid (PFOA)	ND		10		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		10		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
375-95-1	Perfluorononanoic acid (PFNA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
335-76-2	Perfluorodecanoic acid (PFDA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
72629-94-8	Perfluorotridecanoic acid (PFTrDA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
2355-31-9	N-MeFOSAA	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
2991-50-6	N-EtFOSAA	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
756426-58-1	9CL-PF3ONS	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
763051-92-9	11CL-PF3OUdS	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
13252-13-6	HFPO-DA (Gen-X)	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ
919005-14-4	ADONA	ND		0		ng/L	1.00	EPA 537.1 Certifications: NELAC-NY12058	02/08/2023 15:04 02/13/2023 21:38	ESJ

Surrogate Recoveries

Result

Acceptance Range

Surrogate: d5-N-EtFOSAA	117 %		70-130
Surrogate: MPFDA	149 %	PFSH	70-130
Surrogate: MPFHxA	108 %		70-130
Surrogate: M3HFPO-DA	116 %		70-130



Sample Information

Client Sample ID: Field Blank

York Sample ID: 23B0250-03

<u>York Project (SDG) No.</u> 23B0250	<u>Client Project ID</u> 15.802 WILTON HIGH SCHOOL PLAYING FIELD	<u>Matrix</u> Water	<u>Collection Date/Time</u> February 2, 2023 2:55 pm	<u>Date Received</u> 02/03/2023
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PFAS by EPA 537 m

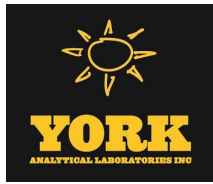
Log-in Notes:

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				
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	
335-67-1	Perfluorooctanoic acid (PFOA)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		0	ng/L	0.926	EPA 537m	02/10/2023 12:13	WEL
						Certifications:		02/13/2023 15:28	

Surrogate Recoveries	Result	Flag	Acceptance Range
Surrogate: M3PFBS	167 %	PFSu-H	25-150
Surrogate: M5PFHxA	137 %		25-150
Surrogate: M4PFHpA	129 %		25-150
Surrogate: M3PFHxS	182 %	PFSu-H	25-150
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	147 %		25-150
Surrogate: M6PFDA	122 %		25-150
Surrogate: M7PFUdA	96.8 %		25-150
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	62.2 %		25-150
Surrogate: M2PFTeDA	22.0 %		10-150
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	129 %		25-150
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	156 %	PFSu-H	25-150
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	122 %		25-150
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	40.5 %		10-150
Surrogate: d3-N-MeFOSAA	76.9 %		25-150
Surrogate: d5-N-EtFOSAA	74.7 %		25-150
Surrogate: M2-6:2 FTS	145 %		25-200
Surrogate: M2-8:2 FTS	138 %		25-200
Surrogate: M9PFNA	131 %		25-150



Analytical Batch Summary

Batch ID: BB30482

Preparation Method: EPA 537.1 SPE DVB

Prepared By: WJH

YORK Sample ID	Client Sample ID	Preparation Date
23B0250-02	BOTTLED WATER	02/08/23
BB30482-BLK1	Blank	02/08/23
BB30482-BS1	LCS	02/08/23
BB30482-BS2	LCS	02/08/23
BB30482-DUP1	Duplicate	02/08/23
BB30482-MS1	Matrix Spike	02/08/23

Batch ID: BB30624

Preparation Method: SPE Ext-PFAS-EPA 537.1M

Prepared By: WJH

YORK Sample ID	Client Sample ID	Preparation Date
23B0250-01	WILTON POND OUTLET	02/10/23
23B0250-03	Field Blank	02/10/23
BB30624-BLK1	Blank	02/10/23
BB30624-BS1	LCS	02/10/23
BB30624-BSD1	LCS Dup	02/10/23



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BB30482 - EPA 537.1 SPE DVB

Blank (BB30482-BLK1)

Prepared: 02/08/2023 Analyzed: 02/13/2023

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	"								
9CL-PF3ONS	ND	2.00	"								
11CL-PF3OUdS	ND	2.00	"								
HFPO-DA (Gen-X)	ND	2.00	"								
ADONA	ND	2.00	"								
<i>Surrogate: d5-N-EtFOSAA</i>	<i>341</i>		<i>"</i>	<i>320</i>		<i>106</i>	<i>70-130</i>				
<i>Surrogate: MPFDA</i>	<i>105</i>		<i>"</i>	<i>80.0</i>		<i>131</i>	<i>70-130</i>				
<i>Surrogate: MPFHxA</i>	<i>79.4</i>		<i>"</i>	<i>80.0</i>		<i>99.3</i>	<i>70-130</i>				
<i>Surrogate: M3HFPO-DA</i>	<i>86.5</i>		<i>"</i>	<i>80.0</i>		<i>108</i>	<i>70-130</i>				

LCS (BB30482-BS1)

Prepared: 02/08/2023 Analyzed: 02/13/2023

Perfluorobutanesulfonic acid (PFBS)	24.2	2.00	ng/L	35.4		68.3	70-130	Low Bias			
Perfluorohexanoic acid (PFHxA)	27.9	2.00	"	40.0		69.6	70-130	Low Bias			
Perfluoroheptanoic acid (PFHpA)	28.2	2.00	"	40.0		70.6	70-130				
Perfluorohexanesulfonic acid (PFHxS)	23.8	2.00	"	38.0		62.5	70-130	Low Bias			
Perfluorooctanoic acid (PFOA)	27.4	2.00	"	40.0		68.6	70-130	Low Bias			
Perfluorooctanesulfonic acid (PFOS)	25.9	2.00	"	38.4		67.4	70-130	Low Bias			
Perfluorononanoic acid (PFNA)	28.0	2.00	"	40.0		70.1	70-130				
Perfluorodecanoic acid (PFDA)	29.3	2.00	"	40.0		73.1	70-130				
Perfluoroundecanoic acid (PFUnA)	27.8	2.00	"	40.0		69.6	70-130	Low Bias			
Perfluorododecanoic acid (PFDoA)	27.1	2.00	"	40.0		67.8	70-130	Low Bias			
Perfluorotridecanoic acid (PFTriDA)	24.7	2.00	"	40.0		61.8	70-130	Low Bias			
Perfluorotetradecanoic acid (PFTA)	27.7	2.00	"	40.0		69.4	70-130	Low Bias			
N-MeFOSAA	26.1	2.00	"	40.0		65.2	70-130	Low Bias			
N-EtFOSAA	24.4	2.00	"	40.0		60.9	70-130	Low Bias			
9CL-PF3ONS	22.1	2.00	"	37.4		59.0	70-130	Low Bias			
11CL-PF3OUdS	24.8	2.00	"	37.8		65.5	70-130	Low Bias			
HFPO-DA (Gen-X)	25.1	2.00	"	40.0		62.7	70-130	Low Bias			
ADONA	25.8	2.00	"	37.8		68.4	70-130	Low Bias			
<i>Surrogate: d5-N-EtFOSAA</i>	<i>235</i>		<i>"</i>	<i>320</i>		<i>73.6</i>	<i>70-130</i>				
<i>Surrogate: MPFDA</i>	<i>71.9</i>		<i>"</i>	<i>80.0</i>		<i>89.9</i>	<i>70-130</i>				
<i>Surrogate: MPFHxA</i>	<i>63.1</i>		<i>"</i>	<i>80.0</i>		<i>78.9</i>	<i>70-130</i>				
<i>Surrogate: M3HFPO-DA</i>	<i>70.9</i>		<i>"</i>	<i>80.0</i>		<i>88.7</i>	<i>70-130</i>				



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

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BB30482 - EPA 537.1 SPE DVB

LCS (BB30482-BS2)

Prepared: 02/08/2023 Analyzed: 02/13/2023

Perfluorobutanesulfonic acid (PFBS)	3.34	2.00	ng/L	3.54		94.4	70-130				
Perfluorohexanoic acid (PFHxA)	5.06	2.00	"	4.00		126	70-130				
Perfluoroheptanoic acid (PFHpA)	4.38	2.00	"	4.00		110	70-130				
Perfluorohexanesulfonic acid (PFHxS)	3.54	2.00	"	3.80		93.2	70-130				
Perfluorooctanoic acid (PFOA)	4.23	2.00	"	4.00		106	70-130				
Perfluorooctanesulfonic acid (PFOS)	4.20	2.00	"	3.84		109	70-130				
Perfluorononanoic acid (PFNA)	4.58	2.00	"	4.00		114	70-130				
Perfluorodecanoic acid (PFDA)	4.43	2.00	"	4.00		111	70-130				
Perfluoroundecanoic acid (PFUnA)	4.37	2.00	"	4.00		109	70-130				
Perfluorododecanoic acid (PFDoA)	4.23	2.00	"	4.00		106	70-130				
Perfluorotridecanoic acid (PFTrDA)	4.12	2.00	"	4.00		103	70-130				
Perfluorotetradecanoic acid (PFTA)	4.54	2.00	"	4.00		114	70-130				
N-MeFOSAA	4.11	2.00	"	4.00		103	70-130				
N-EtFOSAA	3.45	2.00	"	4.00		86.2	70-130				
9CL-PF3ONS	3.36	2.00	"	3.74		89.9	70-130				
11CL-PF3OUdS	4.03	2.00	"	3.78		107	70-130				
HFPO-DA (Gen-X)	3.67	2.00	"	4.00		91.7	70-130				
ADONA	3.80	2.00	"	3.78		100	70-130				
Surrogate: d5-N-EtFOSAA	353		"	320		110	70-130				
Surrogate: MPFDA	118		"	80.0		147	70-130				
Surrogate: MPFHxA	86.5		"	80.0		108	70-130				
Surrogate: M3HFPO-DA	96.0		"	80.0		120	70-130				

Duplicate (BB30482-DUP1)

*Source sample: 23B0261-01 (Duplicate)

Prepared: 02/08/2023 Analyzed: 02/13/2023

Perfluorobutanesulfonic acid (PFBS)	1.11	1.85	ng/L		1.00				9.99	25	
Perfluorohexanoic acid (PFHxA)	3.72	1.85	"		3.59				3.74	25	
Perfluoroheptanoic acid (PFHpA)	2.19	1.85	"		2.00				9.28	25	
Perfluorohexanesulfonic acid (PFHxS)	1.24	1.85	"		0.954				26.3	25	Non-dir.
Perfluorooctanoic acid (PFOA)	5.40	1.85	"		5.13				5.05	25	
Perfluorooctanesulfonic acid (PFOS)	8.60	1.85	"		7.68				11.3	25	
Perfluorononanoic acid (PFNA)	ND	1.85	"		ND					25	
Perfluorodecanoic acid (PFDA)	ND	1.85	"		ND					25	
Perfluoroundecanoic acid (PFUnA)	ND	1.85	"		ND					25	
Perfluorododecanoic acid (PFDoA)	ND	1.85	"		ND					25	
Perfluorotridecanoic acid (PFTrDA)	ND	1.85	"		ND					25	
Perfluorotetradecanoic acid (PFTA)	ND	1.85	"		ND					25	
N-MeFOSAA	ND	1.85	"		ND					25	
N-EtFOSAA	ND	1.85	"		ND					25	
9CL-PF3ONS	ND	1.85	"		ND					25	
11CL-PF3OUdS	ND	1.85	"		ND					25	
HFPO-DA (Gen-X)	ND	1.85	"		ND					25	
ADONA	ND	1.85	"		ND					25	
Surrogate: d5-N-EtFOSAA	308		"	296		104	70-130				
Surrogate: MPFDA	101		"	74.1		136	70-130				
Surrogate: MPFHxA	76.0		"	74.1		103	70-130				
Surrogate: M3HFPO-DA	78.5		"	74.1		106	70-130				



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

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BB30482 - EPA 537.1 SPE DVB

Matrix Spike (BB30482-MS1)	*Source sample: 23B0278-02 (Matrix Spike)					Prepared: 02/08/2023 Analyzed: 02/13/2023		
Perfluorobutanesulfonic acid (PFBS)	42.9	1.79	ng/L	63.2	ND	67.9	70-130	Low Bias
Perfluorohexanoic acid (PFHxA)	48.3	1.79	"	71.4	ND	67.6	70-130	Low Bias
Perfluoroheptanoic acid (PFHpA)	50.5	1.79	"	71.4	ND	70.7	70-130	
Perfluorohexanesulfonic acid (PFHxS)	46.8	1.79	"	67.9	ND	69.0	70-130	Low Bias
Perfluorooctanoic acid (PFOA)	53.5	1.79	"	71.4	ND	74.9	70-130	
Perfluorooctanesulfonic acid (PFOS)	50.4	1.79	"	68.6	ND	73.5	70-130	
Perfluorononanoic acid (PFNA)	51.5	1.79	"	71.4	ND	72.1	70-130	
Perfluorodecanoic acid (PFDA)	53.1	1.79	"	71.4	ND	74.4	70-130	
Perfluoroundecanoic acid (PFUnA)	53.6	1.79	"	71.4	ND	75.0	70-130	
Perfluorododecanoic acid (PFDoA)	49.6	1.79	"	71.4	ND	69.4	70-130	Low Bias
Perfluorotridecanoic acid (PFTeDA)	45.7	1.79	"	71.4	ND	64.0	70-130	Low Bias
Perfluorotetradecanoic acid (PFTA)	47.5	1.79	"	71.4	ND	66.4	70-130	Low Bias
N-MeFOSAA	51.5	1.79	"	71.4	ND	72.1	70-130	
N-EtFOSAA	47.4	1.79	"	71.4	ND	66.4	70-130	Low Bias
9CL-PF3ONS	45.2	1.79	"	66.8	ND	67.7	70-130	Low Bias
11CL-PF3OUdS	44.7	1.79	"	67.5	ND	66.2	70-130	Low Bias
HFPO-DA (Gen-X)	45.4	1.79	"	71.4	ND	63.5	70-130	Low Bias
ADONA	45.5	1.79	"	67.5	ND	67.4	70-130	Low Bias
Surrogate: d5-N-EtFOSAA	234		"	286		81.9	70-130	
Surrogate: MPFDA	67.8		"	71.4		94.9	70-130	
Surrogate: MPFHxA	56.6		"	71.4		79.3	70-130	
Surrogate: M3HFPO-DA	60.5		"	71.4		84.7	70-130	

Batch BB30624 - SPE Ext-PFAS-EPA 537.1M

Blank (BB30624-BLK1)	Prepared: 02/10/2023 Analyzed: 02/13/2023							
Perfluorohexanoic acid (PFHxA)	ND	2.00	ng/L					
Perfluoroheptanoic acid (PFHpA)	ND	2.00	"					
Perfluorohexanesulfonic acid (PFHxS)	ND	2.00	"					
Perfluorooctanoic acid (PFOA)	ND	2.00	"					
Perfluorooctanesulfonic acid (PFOS)	ND	2.00	"					
Perfluoropentanoic acid (PFPeA)	ND	2.00	"					
Surrogate: M3PFBS	107		"	74.3		143	25-150	
Surrogate: M5PFHxA	89.9		"	80.0		112	25-150	
Surrogate: M4PFHpA	86.9		"	80.0		109	25-150	
Surrogate: M3PFHxS	110		"	75.7		146	25-150	
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	102		"	80.0		127	25-150	
Surrogate: M6PFDA	87.6		"	80.0		109	25-150	
Surrogate: M7PFUdA	78.4		"	80.0		97.9	25-150	
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	52.6		"	80.0		65.7	25-150	
Surrogate: M2PFTeDA	16.8		"	80.0		21.0	10-150	
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	88.4		"	80.0		110	25-150	
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	110		"	76.6		144	25-150	
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	81.0		"	80.0		101	25-150	
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	20.8		"	80.0		26.0	10-150	
Surrogate: d3-N-MeFOSAA	54.0		"	80.0		67.5	25-150	



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

York Analytical Laboratories, Inc. - Stratford

Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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Batch BB30624 - SPE Ext-PFAS-EPA 537.1M

Blank (BB30624-BLK1)

Prepared: 02/10/2023 Analyzed: 02/13/2023

Surrogate: d5-N-EtFOSAA	53.1		ng/L	80.0		66.3	25-150				
Surrogate: M2-6:2 FTS	86.7		"	75.9		114	25-200				
Surrogate: M2-8:2 FTS	86.1		"	76.6		112	25-200				
Surrogate: M9PFNA	94.5		"	80.0		118	25-150				

LCS (BB30624-BS1)

Prepared: 02/10/2023 Analyzed: 02/13/2023

Perfluorohexanoic acid (PFHxA)	79.2	2.00	ng/L	80.0		99.0	50-130				
Perfluoroheptanoic acid (PFHpA)	91.9	2.00	"	80.0		115	50-130				
Perfluorohexanesulfonic acid (PFHxS)	73.7	2.00	"	72.8		101	50-130				
Perfluorooctanoic acid (PFOA)	84.2	2.00	"	80.0		105	50-130				
Perfluorooctanesulfonic acid (PFOS)	73.2	2.00	"	74.0		99.0	50-130				
Perfluoropentanoic acid (PFPeA)	83.7	2.00	"	80.0		105	50-130				
Surrogate: M3PFBS	97.6		"	74.3		131	25-150				
Surrogate: M5PFHxA	94.6		"	80.0		118	25-150				
Surrogate: M4PFHpA	84.5		"	80.0		106	25-150				
Surrogate: M3PFHxS	101		"	75.7		133	25-150				
Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)	92.0		"	80.0		115	25-150				
Surrogate: M6PFDA	73.7		"	80.0		92.1	25-150				
Surrogate: M7PFUdA	57.8		"	80.0		72.3	25-150				
Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	43.0		"	80.0		53.7	25-150				
Surrogate: M2PFTeDA	14.8		"	80.0		18.5	10-150				
Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)	98.2		"	80.0		123	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	87.4		"	76.6		114	25-150				
Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	84.7		"	80.0		106	25-150				
Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	32.4		"	80.0		40.5	10-150				
Surrogate: d3-N-MeFOSAA	36.4		"	80.0		45.5	25-150				
Surrogate: d5-N-EtFOSAA	27.2		"	80.0		34.0	25-150				
Surrogate: M2-6:2 FTS	71.7		"	75.9		94.4	25-200				
Surrogate: M2-8:2 FTS	70.8		"	76.6		92.4	25-200				
Surrogate: M9PFNA	76.4		"	80.0		95.5	25-150				



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

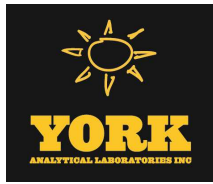
Analyte	Result	Reporting Limit	Units	Spike Level	Source* Result	%REC	%REC Limits	Flag	RPD	RPD Limit	Flag
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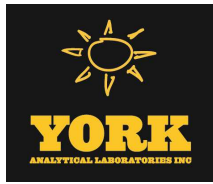
Batch BB30624 - SPE Ext-PFAS-EPA 537.1M

LCS Dup (BB30624-BSD1)

Prepared: 02/10/2023 Analyzed: 02/13/2023

Perfluorohexanoic acid (PFHxA)	86.0	2.00	ng/L	80.0		107	50-130		8.14	30	
Perfluoroheptanoic acid (PFHpA)	93.5	2.00	"	80.0		117	50-130		1.71	30	
Perfluorohexanesulfonic acid (PFHxS)	69.4	2.00	"	72.8		95.3	50-130		6.01	30	
Perfluorooctanoic acid (PFOA)	76.5	2.00	"	80.0		95.7	50-130		9.50	30	
Perfluorooctanesulfonic acid (PFOS)	66.5	2.00	"	74.0		89.8	50-130		9.70	30	
Perfluoropentanoic acid (PFPeA)	81.7	2.00	"	80.0		102	50-130		2.32	30	
<i>Surrogate: M3PFBS</i>	<i>123</i>		<i>"</i>	<i>74.3</i>		<i>166</i>	<i>25-150</i>				
<i>Surrogate: M5PFHxA</i>	<i>110</i>		<i>"</i>	<i>80.0</i>		<i>138</i>	<i>25-150</i>				
<i>Surrogate: M4PFHpA</i>	<i>104</i>		<i>"</i>	<i>80.0</i>		<i>130</i>	<i>25-150</i>				
<i>Surrogate: M3PFHxS</i>	<i>127</i>		<i>"</i>	<i>75.7</i>		<i>168</i>	<i>25-150</i>				
<i>Surrogate: Perfluoro-n-[13C8]octanoic acid (M8PFOA)</i>	<i>124</i>		<i>"</i>	<i>80.0</i>		<i>155</i>	<i>25-150</i>				
<i>Surrogate: M6PFDA</i>	<i>91.1</i>		<i>"</i>	<i>80.0</i>		<i>114</i>	<i>25-150</i>				
<i>Surrogate: M7PFUdA</i>	<i>52.6</i>		<i>"</i>	<i>80.0</i>		<i>65.7</i>	<i>25-150</i>				
<i>Surrogate: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)</i>	<i>19.7</i>		<i>"</i>	<i>80.0</i>		<i>24.7</i>	<i>25-150</i>				
<i>Surrogate: M2PFTeDA</i>	<i>1.70</i>		<i>"</i>	<i>80.0</i>		<i>2.13</i>	<i>10-150</i>				
<i>Surrogate: Perfluoro-n-[13C4]butanoic acid (MPFBA)</i>	<i>117</i>		<i>"</i>	<i>80.0</i>		<i>147</i>	<i>25-150</i>				
<i>Surrogate: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)</i>	<i>121</i>		<i>"</i>	<i>76.6</i>		<i>158</i>	<i>25-150</i>				
<i>Surrogate: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)</i>	<i>105</i>		<i>"</i>	<i>80.0</i>		<i>131</i>	<i>25-150</i>				
<i>Surrogate: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)</i>	<i>8.76</i>		<i>"</i>	<i>80.0</i>		<i>11.0</i>	<i>10-150</i>				
<i>Surrogate: d3-N-MeFOSAA</i>	<i>43.9</i>		<i>"</i>	<i>80.0</i>		<i>54.9</i>	<i>25-150</i>				
<i>Surrogate: d5-N-EtFOSAA</i>	<i>29.6</i>		<i>"</i>	<i>80.0</i>		<i>37.0</i>	<i>25-150</i>				
<i>Surrogate: M2-6:2 FTS</i>	<i>99.8</i>		<i>"</i>	<i>75.9</i>		<i>132</i>	<i>25-200</i>				
<i>Surrogate: M2-8:2 FTS</i>	<i>96.0</i>		<i>"</i>	<i>76.6</i>		<i>125</i>	<i>25-200</i>				
<i>Surrogate: M9PFNA</i>	<i>109</i>		<i>"</i>	<i>80.0</i>		<i>136</i>	<i>25-150</i>				



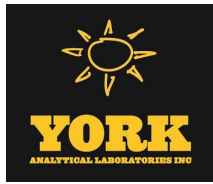


Sample and Data Qualifiers Relating to This Work Order

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
PFSu-L	The isotopically labeled surrogate recovered below lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSu-H	The isotopically labeled surrogate recovered above lab control limits due to a matrix effect. Isotope Dilution was applied.
PFSH	The recovery for this PFAS surrogate was above control limits
PFLl	The recovery for this PFAS compound was below control limits

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 accordingly.



Corrective Action: The lab received a Field Blank for the WO.





Field Chain-of-Custody Record

YORK Analytical Laboratories, Inc. (YORK)'s Standard Terms & Conditions are listed on the back side of this document. This document serves as your written authorization for YORK to proceed with the analyses requested below. Your signature binds you to YORK's Standard Terms & Conditions.

120 Research Drive Stratford, CT 06615

132-02 89th Ave Queens, NY 11418

clientservices@yorklab.com

www.yorklab.com

800-306-YORK

800-306-9675

YORK Project No.
23B0470

Page *1* of *1*

YOUR Information

Company: *NORMAN BLOOM & SCHILL*
Address: *4 EDGEWATER PLACE*
NORWALK, CT 06855
Phone: *203 246 6696*
Contact: *RICHARD HARRIS*
E-mail: *RBHARRIS39@GMAIL.COM*

Report To:

Company: *Same*
Address: *Same*
Phone: *Same*
Contact: *Same*
E-mail: *Same*

Invoice To:

Company: *Same*
Address: *Same*
Phone: *Same*
Contact: *Same*
E-mail: *Same*

Turn-Around Time

RUSH - Next Day
RUSH - Two Day
RUSH - Three Day
RUSH - Four Day
Standard (5-7 Day)

YOUR Project Number

15,802

YOUR Project Name

WILTON HIGH SCHOOL PLAYING FIELD DISINFECT

YOUR PO#:

AMERICAN EXPRESS 00 PILEZ

YORK Reg. Comp.

Compared to the following Regulation(s): (please fill in)

Standard Excel EDD
CT RCP DQA/DUE EQUIS (Standard)
NJDEP Reduced
Deliverables
NJDEP SRP HazSite
NJDKQP
Other:

CT RCP
NY ASP A Package
NY ASP B Package
Other:

Container Description

Polyprop 250ml

Samples From

New York
New Jersey
Connecticut
Pennsylvania
Other:

Matrix Codes

S - soil / solid
GW - groundwater
DW - drinking water
WW - wastewater
O - Oil
Other:

Sample Matrix

SURFACE WATER
DW

Date/Time Sampled

2/2/23 2:55pm
2/3/23 10:00A

Analysis Requested

*PFAS compounds in surface and drinking water;
Products of interest
PFOS, PFOA, PFHPA, PFHxA, PEPoA,*

Samples Collected by: (print AND sign your name)
Richard B. Harris

Sample Identification

WILTON FOOD COURT
BOTTLED WATER

Comments:

Preservation: (check all that apply)
HCl MeOH HNO3 H2SO4 NaOH
ZnAc Ascorbic Acid Other: *None*

1. Samples Relinquished by / Company <i>R York</i> Date/Time <i>2/3/23 11:19</i>	2. Samples Relinquished by / Company <i>R B Harris</i> Date/Time <i>2/3/23 11:19</i>	3. Samples Received by / Company <i>R B Harris</i> Date/Time <i>2/3/23 18:37</i>	4. Samples Received by / Company <i>R B Harris</i> Date/Time <i>2/3/23 18:37</i>
Special Instruction Field Filtered Lab to Filter		Date/Time <i>2/3/23</i>	Temperature <i>4.0</i> Degrees C