

Technical Report

for

Emerging Contaminants

prepared for:

Hampton Bays Water District
18B Ponquoque Ave
Hampton Bays NY, 11946
Attention: Keith Tuthill Jr.

Report Date: 04/06/2023
Client Project ID: PFAS & 1,4 Dioxane 3/27/23
York Project (SDG) No.: 23C1538

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: 04/06/2023
Client Project ID: PFAS & 1,4 Dioxane 3/27/23
York Project (SDG) No.: 23C1538

Hampton Bays Water District
18B Ponquoque Ave
Hampton Bays NY, 11946
Attention: Keith Tuthill Jr.

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 March 27, 2023 and listed below. The project was identified as your project: **PFAS & 1,4 Dioxane 3/27/23**.

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>
23C1538-01	Blended Entry Point Plant #3	Drinking Water	03/27/2023	03/27/2023
23C1538-02	Blended Entry Point Plant #3 - Field Blank	Drinking Water	03/27/2023	03/27/2023

General Notes for York Project (SDG) No.: 23C1538

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.

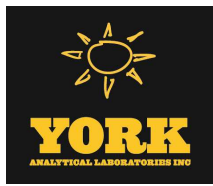
Approved By:



Cassie L. Mosher
Laboratory Manager

Date: 04/06/2023





Sample Information

Client Sample ID: Blended Entry Point Plant #3

York Sample ID: 23C1538-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
23C1538	PFAS & 1,4 Dioxane 3/27/23	Drinking Water	March 27, 2023 8:00 am	03/27/2023

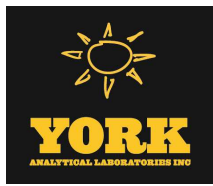
PFAS, EPA 533 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 533

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level MCL	Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
919005-14-4	ADONA	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
756426-58-1	9CL-PF3ONS	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
763051-92-9	11CL-PF3OUdS	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
13252-13-6	HFPO-DA (Gen-X)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
335-76-2	Perfluorodecanoic acid (PFDA)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
307-55-1	Perfluorododecanoic acid (PFDoA)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
307-24-4	Perfluorohexanoic acid (PFHxA)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
375-95-1	Perfluorononanoic acid (PFNA)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
335-67-1	Perfluorooctanoic acid (PFOA)	ND	-	10	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
2706-91-4	Perfluoro-1-pentanesulfonate (PFPeS)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
375-22-4	Perfluoro-n-butanoic acid (PFBA)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	-	-	ng/L	1.79	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	-	-	ng/L	1.79	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
375-92-8	Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND	-	-	ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
						Certifications:	NELAC-NY12058	04/05/2023 15:00	



Sample Information

Client Sample ID: Blended Entry Point Plant #3

York Sample ID: 23C1538-01

<u>York Project (SDG) No.</u> 23C1538	<u>Client Project ID</u> PFAS & 1,4 Dioxane 3/27/23	<u>Matrix</u> Drinking Water	<u>Collection Date/Time</u> March 27, 2023 8:00 am	<u>Date Received</u> 03/27/2023
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PFAS, EPA 533 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 533

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
863090-89-5	Perfluoro-5-oxaheptanoic acid (PFMBA)	ND		-		ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
							Certifications: NELAC-NY12058		04/05/2023 15:00	
377-73-1	Perfluoro-4-oxapentanoic acid (PFMPA)	ND		-		ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
							Certifications: NELAC-NY12058		04/05/2023 15:00	
151772-58-6	Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		-		ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
							Certifications: NELAC-NY12058		04/05/2023 15:00	
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	ND		-		ng/L	0.893	EPA 533	04/04/2023 12:41	ESJ
							Certifications: NELAC-NY12058		04/05/2023 15:00	

Surrogate Recoveries

Result

Acceptance Range

Surrogate: MPFDoA	89.6 %	50-200
Surrogate: MPFBA	92.5 %	50-200
Surrogate: M9PFNA	98.2 %	50-200
Surrogate: M8PFOS	84.2 %	50-200
Surrogate: M8PFOA	95.7 %	50-200
Surrogate: M7PFUdA	95.4 %	50-200
Surrogate: M6PFDA	90.7 %	50-200
Surrogate: M5PFPeA	88.7 %	50-200
Surrogate: M5PFHxA	88.5 %	50-200
Surrogate: M4PFHpA	98.5 %	50-200
Surrogate: M3PFHxS	84.2 %	50-200
Surrogate: M3PFBS	83.5 %	50-200
Surrogate: M3HFPO-DA	113 %	50-200
Surrogate: M2-8:2 FTS	79.4 %	50-200
Surrogate: M2-6:2 FTS	86.8 %	50-200
Surrogate: M2-4:2 FTS	90.1 %	50-200

PFAS, EPA 537.1 UCMR5 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

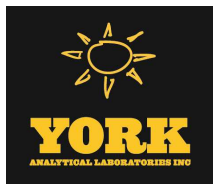
CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 14:48	
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 14:48	
2355-31-9	N-MeFOSAA	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 14:48	
2991-50-6	N-EtFOSAA	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 14:48	

Surrogate Recoveries

Result

Acceptance Range

Surrogate: d5-N-EtFOSAA	109 %	70-130
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Sample Information

Client Sample ID: Blended Entry Point Plant #3 **York Sample ID:** 23C1538-01
York Project (SDG) No.: 23C1538 **Client Project ID:** PFAS & 1,4 Dioxane 3/27/23 **Matrix:** Drinking Water **Collection Date/Time:** March 27, 2023 8:00 am **Date Received:** 03/27/2023

PFAS, EPA 537.1 UCMR5 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						
	Surrogate: MPFDA	89.1 %		70-130						
	Surrogate: MPFHxA	86.8 %		70-130						
	Surrogate: M3HFPO-DA	85.4 %		70-130						

Sample Information

Client Sample ID: Blended Entry Point Plant #3 - Field Blank **York Sample ID:** 23C1538-02
York Project (SDG) No.: 23C1538 **Client Project ID:** PFAS & 1,4 Dioxane 3/27/23 **Matrix:** Drinking Water **Collection Date/Time:** March 27, 2023 8:00 am **Date Received:** 03/27/2023

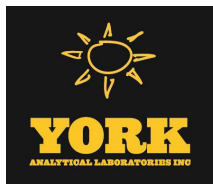
PFAS, EPA 533 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 533

CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
919005-14-4	ADONA	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
756426-58-1	9CL-PF3ONS	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
763051-92-9	11CL-PF3OUdS	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
13252-13-6	HFPO-DA (Gen-X)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
335-76-2	Perfluorodecanoic acid (PFDA)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
375-95-1	Perfluorononanoic acid (PFNA)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	
335-67-1	Perfluorooctanoic acid (PFOA)	ND		10		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
								NELAC-NY12058	04/05/2023 15:13	



Sample Information

Client Sample ID: Blended Entry Point Plant #3 - Field Blank

York Sample ID: 23C1538-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

23C1538

PFAS & 1,4 Dioxane 3/27/23

Drinking Water

March 27, 2023 8:00 am

03/27/2023

PFAS, EPA 533 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 533

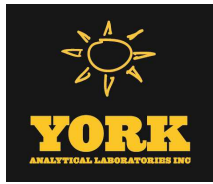
CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
757124-72-4	1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
2706-91-4	Perfluoro-1-pentanesulfonate (PFPeS)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
375-22-4	Perfluoro-n-butanoic acid (PFBA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
39108-34-4	1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND		-		ng/L	1.72	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
27619-97-2	1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND		-		ng/L	1.72	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
375-92-8	Perfluoro-1-heptanesulfonic acid (PFHpS)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
863090-89-5	Perfluoro-5-oxahexanoic acid (PFMBA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
377-73-1	Perfluoro-4-oxapentanoic acid (PFMPA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
151772-58-6	Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	
113507-82-7	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND		-		ng/L	0.862	EPA 533	04/04/2023 12:41	ESJ
							Certifications:	NELAC-NY12058	04/05/2023 15:13	

Surrogate Recoveries

Result

Acceptance Range

Surrogate: MPFDoA	94.5 %	50-200
Surrogate: MPFBA	85.5 %	50-200
Surrogate: M9PFNA	93.3 %	50-200
Surrogate: M8PFOS	90.4 %	50-200
Surrogate: M8PFOA	83.7 %	50-200
Surrogate: M7PFUdA	88.9 %	50-200
Surrogate: M6PFDA	88.3 %	50-200
Surrogate: M5PFPeA	83.7 %	50-200
Surrogate: M5PFHxA	80.9 %	50-200
Surrogate: M4PFHpA	95.3 %	50-200
Surrogate: M3PFHxS	77.3 %	50-200
Surrogate: M3PFBS	79.1 %	50-200
Surrogate: M3HFPO-DA	96.4 %	50-200
Surrogate: M2-8:2 FTS	73.5 %	50-200
Surrogate: M2-6:2 FTS	71.5 %	50-200
Surrogate: M2-4:2 FTS	54.5 %	50-200



Sample Information

Client Sample ID: Blended Entry Point Plant #3 - Field Blank

York Sample ID: 23C1538-02

York Project (SDG) No.

Client Project ID

Matrix

Collection Date/Time

Date Received

23C1538

PFAS & 1,4 Dioxane 3/27/23

Drinking Water

March 27, 2023 8:00 am

03/27/2023

PFAS, EPA 537.1 UCMR5 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 537.1 SPE DVB

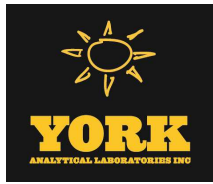
CAS No.	Parameter	Result	Flag	Maximum Contaminant Level		Units	Reported to LOQ	Reference Method	Date/Time Prep/Anal	Analyst
				MCL						
72629-94-8	Perfluorotridecanoic acid (PFTTrDA)	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 16:29	
376-06-7	Perfluorotetradecanoic acid (PFTA)	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 16:29	
2355-31-9	N-MeFOSAA	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 16:29	
2991-50-6	N-EtFOSAA	ND		-		ng/L	0.926	EPA 537.1	04/05/2023 13:16	ESJ
							Certifications: NELAC-NY12058		04/06/2023 16:29	

Surrogate Recoveries

Result

Acceptance Range

Surrogate: <i>d5-N-EtFOSAA</i>	115 %	70-130
Surrogate: <i>MPFDA</i>	88.3 %	70-130
Surrogate: <i>MPFHxA</i>	88.3 %	70-130
Surrogate: <i>M3HFPO-DA</i>	87.7 %	70-130



Analytical Batch Summary

Batch ID: BD30219

Preparation Method: EPA 533

Prepared By: BAMW

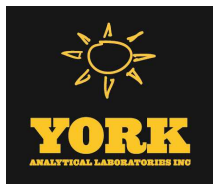
YORK Sample ID	Client Sample ID	Preparation Date
23C1538-01	Blended Entry Point Plant #3	04/04/23
23C1538-02	Blended Entry Point Plant #3 - 1	04/04/23
BD30219-BLK1	Blank	04/04/23
BD30219-BS1	LCS	04/04/23
BD30219-DUP1	Duplicate	04/04/23
BD30219-MS1	Matrix Spike	04/04/23

Batch ID: BD30325

Preparation Method: EPA 537.1 SPE DVB

Prepared By: DRP

YORK Sample ID	Client Sample ID	Preparation Date
23C1538-01	Blended Entry Point Plant #3	04/05/23
23C1538-02	Blended Entry Point Plant #3 - 1	04/05/23
BD30325-BLK1	Blank	04/05/23
BD30325-BS1	LCS	04/05/23
BD30325-DUP1	Duplicate	04/05/23
BD30325-MS1	Matrix Spike	04/05/23



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 BD30219 - EPA 533

Blank (BD30219-BLK1)

Prepared: 04/04/2023 Analyzed: 04/05/2023

ADONA	ND	1.00	ng/L								
9CL-PF3ONS	ND	1.00	"								
11CL-PF3OUdS	ND	1.00	"								
HFPO-DA (Gen-X)	ND	1.00	"								
Perfluorobutanesulfonic acid (PFBS)	ND	1.00	"								
Perfluorodecanoic acid (PFDA)	ND	1.00	"								
Perfluorododecanoic acid (PFDoA)	ND	1.00	"								
Perfluoroheptanoic acid (PFHpA)	ND	1.00	"								
Perfluorohexanesulfonic acid (PFHxS)	ND	1.00	"								
Perfluorohexanoic acid (PFHxA)	ND	1.00	"								
Perfluorononanoic acid (PFNA)	ND	1.00	"								
Perfluorooctanesulfonic acid (PFOS)	ND	1.00	"								
Perfluorooctanoic acid (PFOA)	ND	1.00	"								
Perfluoroundecanoic acid (PFUnA)	ND	1.00	"								
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	1.00	"								
Perfluoro-1-pentanesulfonate (PFPeS)	ND	1.00	"								
Perfluoro-n-butanoic acid (PFBA)	ND	1.00	"								
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	2.00	"								
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	2.00	"								
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	1.00	"								
Perfluoropentanoic acid (PFPeA)	ND	1.00	"								
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.00	"								
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.00	"								
Perfluoro-3,6-dioxahexanoic acid (NFDHA)	ND	1.00	"								
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.00	"								
Surrogate: MPFDoA	19.5		"	20.0		97.7	50-200				
Surrogate: MPFBA	20.7		"	20.0		104	50-200				
Surrogate: M9PFNA	23.3		"	20.0		117	50-200				
Surrogate: M8PFOS	19.5		"	19.2		102	50-200				
Surrogate: M8PFOA	21.6		"	20.0		108	50-200				
Surrogate: M7PFUdA	20.4		"	20.0		102	50-200				
Surrogate: M6PFDA	20.7		"	20.0		104	50-200				
Surrogate: M5PFPeA	20.9		"	20.0		104	50-200				
Surrogate: M5PFHxA	20.0		"	20.0		99.8	50-200				
Surrogate: M4PFHpA	23.0		"	20.0		115	50-200				
Surrogate: M3PFHxS	19.5		"	19.0		103	50-200				
Surrogate: M3PFBS	18.0		"	18.6		96.8	50-200				
Surrogate: M3HFPO-DA	21.6		"	20.0		108	50-200				
Surrogate: M2-8:2 FTS	93.5		"	76.8		122	50-200				
Surrogate: M2-6:2 FTS	70.8		"	76.0		93.1	50-200				
Surrogate: M2-4:2 FTS	54.9		"	75.2		73.0	50-200				



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 BD30219 - EPA 533

LCS (BD30219-BS1)

Prepared: 04/04/2023 Analyzed: 04/05/2023

ADONA	15.7	1.00	ng/L	18.9		83.0	70-130				
9CL-PF3ONS	17.3	1.00	"	18.7		92.4	70-130				
11CL-PF3OUdS	17.3	1.00	"	18.9		91.8	70-130				
HFPO-DA (Gen-X)	21.4	1.00	"	20.0		107	70-130				
Perfluorobutanesulfonic acid (PFBS)	17.5	1.00	"	17.8		98.5	70-130				
Perfluorodecanoic acid (PFDA)	18.0	1.00	"	20.0		90.0	70-130				
Perfluorododecanoic acid (PFDoA)	17.8	1.00	"	20.0		88.9	70-130				
Perfluoroheptanoic acid (PFHpA)	17.6	1.00	"	20.0		88.2	70-130				
Perfluorohexanesulfonic acid (PFHxS)	18.7	1.00	"	18.2		102	70-130				
Perfluorohexanoic acid (PFHxA)	19.1	1.00	"	20.0		95.4	70-130				
Perfluorononanoic acid (PFNA)	16.6	1.00	"	20.0		82.9	70-130				
Perfluorooctanesulfonic acid (PFOS)	18.7	1.00	"	18.6		101	70-130				
Perfluorooctanoic acid (PFOA)	21.5	1.00	"	20.0		107	70-130				
Perfluoroundecanoic acid (PFUnA)	18.6	1.00	"	20.0		93.0	70-130				
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	18.4	1.00	"	18.8		97.8	70-130				
Perfluoro-1-pentanesulfonate (PFPeS)	17.4	1.00	"	18.8		92.5	70-130				
Perfluoro-n-butanoic acid (PFBA)	19.0	1.00	"	20.0		95.2	70-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	19.8	2.00	"	19.2		103	70-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	17.7	2.00	"	19.0		93.1	70-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	19.0	1.00	"	19.1		99.5	70-130				
Perfluoropentanoic acid (PFPeA)	18.6	1.00	"	20.0		93.0	70-130				
Perfluoro-5-oxahexanoic acid (PFMBA)	18.9	1.00	"	20.0		94.4	70-130				
Perfluoro-4-oxapentanoic acid (PFMPA)	19.2	1.00	"	20.0		95.8	70-130				
Perfluoro-3,6-dioxahexanoic acid (NFDHA)	20.1	1.00	"	20.0		100	70-130				
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	17.2	1.00	"	17.8		96.5	70-130				
Surrogate: MPFDoA	20.8		"	20.0		104	50-200				
Surrogate: MPFBA	18.6		"	20.0		92.9	50-200				
Surrogate: M9PFNA	21.0		"	20.0		105	50-200				
Surrogate: M8PFOS	16.5		"	19.2		85.9	50-200				
Surrogate: M8PFOA	16.9		"	20.0		84.6	50-200				
Surrogate: M7PFUdA	20.0		"	20.0		99.8	50-200				
Surrogate: M6PFDA	20.9		"	20.0		105	50-200				
Surrogate: M5PFPeA	19.0		"	20.0		94.9	50-200				
Surrogate: M5PFHxA	19.9		"	20.0		99.7	50-200				
Surrogate: M4PFHpA	21.8		"	20.0		109	50-200				
Surrogate: M3PFHxS	16.5		"	19.0		86.9	50-200				
Surrogate: M3PFBS	16.3		"	18.6		87.7	50-200				
Surrogate: M3HFPO-DA	23.6		"	20.0		118	50-200				
Surrogate: M2-8:2 FTS	83.2		"	76.8		108	50-200				
Surrogate: M2-6:2 FTS	56.3		"	76.0		74.1	50-200				
Surrogate: M2-4:2 FTS	54.6		"	75.2		72.7	50-200				



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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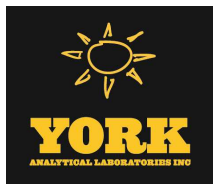
Batch BD30219 - EPA 533

Duplicate (BD30219-DUP1)

*Source sample: 23C1519-01 (Duplicate)

Prepared: 04/04/2023 Analyzed: 04/05/2023

ADONA	ND	1.28	ng/L		ND					30	
9CL-PF3ONS	ND	1.28	"		ND					30	
11CL-PF3OUdS	ND	1.28	"		ND					30	
HFPO-DA (Gen-X)	ND	1.28	"		ND					30	
Perfluorobutanesulfonic acid (PFBS)	ND	1.28	"		ND					30	
Perfluorodecanoic acid (PFDA)	ND	1.28	"		ND					30	
Perfluorododecanoic acid (PFDoA)	ND	1.28	"		ND					30	
Perfluoroheptanoic acid (PFHpA)	ND	1.28	"		ND					30	
Perfluorohexanesulfonic acid (PFHxS)	ND	1.28	"		ND					30	
Perfluorohexanoic acid (PFHxA)	ND	1.28	"		ND					30	
Perfluorononanoic acid (PFNA)	ND	1.28	"		ND					30	
Perfluorooctanesulfonic acid (PFOS)	ND	1.28	"		ND					30	
Perfluorooctanoic acid (PFOA)	ND	1.28	"		ND					30	
Perfluoroundecanoic acid (PFUnA)	ND	1.28	"		ND					30	
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	ND	1.28	"		ND					30	
Perfluoro-1-pentanesulfonate (PFPeS)	ND	1.28	"		ND					30	
Perfluoro-n-butanoic acid (PFBA)	ND	1.28	"		ND					30	
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	ND	2.56	"		ND					30	
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	ND	2.56	"		ND					30	
Perfluoro-1-heptanesulfonic acid (PFHpS)	ND	1.28	"		ND					30	
Perfluoropentanoic acid (PFPeA)	ND	1.28	"		ND					30	
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.28	"		ND					30	
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.28	"		ND					30	
Perfluoro-3,6-dioxahexanoic acid (NFDHA)	ND	1.28	"		ND					30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.28	"		ND					30	
Surrogate: MPFDoA	29.5		"	25.6		115	50-200				
Surrogate: MPFBA	27.1		"	25.6		106	50-200				
Surrogate: M9PFNA	28.1		"	25.6		109	50-200				
Surrogate: M8PFOS	25.4		"	24.6		104	50-200				
Surrogate: M8PFOA	26.9		"	25.6		105	50-200				
Surrogate: M7PFUdA	27.5		"	25.6		107	50-200				
Surrogate: M6PFDA	27.9		"	25.6		109	50-200				
Surrogate: M5PFPeA	27.0		"	25.6		105	50-200				
Surrogate: M5PFHxA	26.5		"	25.6		103	50-200				
Surrogate: M4PFHpA	30.2		"	25.6		118	50-200				
Surrogate: M3PFHxS	21.8		"	24.3		89.8	50-200				
Surrogate: M3PFBS	22.9		"	23.9		95.7	50-200				
Surrogate: M3HFPO-DA	22.1		"	25.6		86.2	50-200				
Surrogate: M2-8:2 FTS	101		"	98.5		102	50-200				
Surrogate: M2-6:2 FTS	98.7		"	97.4		101	50-200				
Surrogate: M2-4:2 FTS	103		"	96.4		107	50-200				



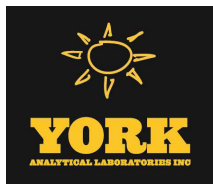
PFAS Target compounds by LC/MS-MS - Quality Control Data

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 BD30219 - EPA 533

Matrix Spike (BD30219-MS1)	*Source sample: 23C1675-03 (Matrix Spike)						Prepared: 04/04/2023 Analyzed: 04/05/2023				
ADONA	33.7	1.00	ng/L	37.8	ND	89.1	70-130				
9CL-PF3ONS	33.7	1.00	"	37.4	ND	90.2	70-130				
11CL-PF3OUdS	35.2	1.00	"	37.8	ND	93.1	70-130				
HFPO-DA (Gen-X)	46.8	1.00	"	40.0	ND	117	70-130				
Perfluorobutanesulfonic acid (PFBS)	40.3	1.00	"	35.5	1.87	108	70-130				
Perfluorodecanoic acid (PFDA)	38.2	1.00	"	40.0	ND	95.5	70-130				
Perfluorododecanoic acid (PFDoA)	39.0	1.00	"	40.0	ND	97.5	70-130				
Perfluoroheptanoic acid (PFHpA)	36.9	1.00	"	40.0	ND	92.2	70-130				
Perfluorohexanesulfonic acid (PFHxS)	36.8	1.00	"	36.5	1.12	98.0	70-130				
Perfluorohexanoic acid (PFHxA)	41.8	1.00	"	40.0	1.13	102	70-130				
Perfluorononanoic acid (PFNA)	36.7	1.00	"	40.0	ND	91.8	70-130				
Perfluorooctanesulfonic acid (PFOS)	41.2	1.00	"	37.1	2.83	103	70-130				
Perfluorooctanoic acid (PFOA)	42.1	1.00	"	40.0	1.61	101	70-130				
Perfluoroundecanoic acid (PFUnA)	39.1	1.00	"	40.0	ND	97.9	70-130				
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	38.0	1.00	"	37.5	ND	101	70-130				
Perfluoro-1-pentanesulfonate (PFPeS)	35.4	1.00	"	37.6	ND	94.2	70-130				
Perfluoro-n-butanoic acid (PFBA)	42.2	1.00	"	40.0	2.50	99.3	70-130				
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	41.4	2.00	"	38.4	ND	108	70-130				
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	38.1	2.00	"	38.1	ND	100	70-130				
Perfluoro-1-heptanesulfonic acid (PFHpS)	37.8	1.00	"	38.2	ND	99.1	70-130				
Perfluoropentanoic acid (PFPeA)	41.4	1.00	"	40.0	1.73	99.1	70-130				
Perfluoro-5-oxahexanoic acid (PFMBA)	36.9	1.00	"	40.0	ND	92.3	70-130				
Perfluoro-4-oxapentanoic acid (PFMPA)	39.0	1.00	"	40.0	ND	97.5	70-130				
Perfluoro-3,6-dioxahexanoic acid (NFDHA)	35.2	1.00	"	40.0	ND	87.9	70-130				
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	33.6	1.00	"	35.7	ND	94.3	70-130				
Surrogate: MPFDoA	22.3		"	20.0		112	50-200				
Surrogate: MPFBA	19.8		"	20.0		98.8	50-200				
Surrogate: M9PFNA	21.1		"	20.0		105	50-200				
Surrogate: M8PFOS	18.6		"	19.2		97.3	50-200				
Surrogate: M8PFOA	19.7		"	20.0		98.6	50-200				
Surrogate: M7PFUdA	21.6		"	20.0		108	50-200				
Surrogate: M6PFDA	20.2		"	20.0		101	50-200				
Surrogate: M5PFPeA	19.1		"	20.0		95.7	50-200				
Surrogate: M5PFHxA	17.7		"	20.0		88.6	50-200				
Surrogate: M4PFHpA	20.6		"	20.0		103	50-200				
Surrogate: M3PFHxS	17.5		"	19.0		92.5	50-200				
Surrogate: M3PFBS	16.4		"	18.6		88.2	50-200				
Surrogate: M3HFPO-DA	19.8		"	20.0		99.0	50-200				
Surrogate: M2-8:2 FTS	68.0		"	76.8		88.6	50-200				
Surrogate: M2-6:2 FTS	80.1		"	76.0		105	50-200				
Surrogate: M2-4:2 FTS	90.2		"	75.2		120	50-200				



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 BD30325 - EPA 537.1 SPE DVB

Blank (BD30325-BLK1)

Prepared: 04/05/2023 Analyzed: 04/06/2023

Perfluorotridecanoic acid (PFTTrDA)	ND	2.00	ng/L								
Perfluorotetradecanoic acid (PFTA)	ND	2.00	"								
N-MeFOSAA	ND	2.00	"								
N-EtFOSAA	ND	2.00	"								
<i>Surrogate: d5-N-EtFOSAA</i>	308		"	320		96.3	70-130				
<i>Surrogate: MPFDA</i>	69.6		"	80.0		87.1	70-130				
<i>Surrogate: MPFHxA</i>	68.5		"	80.0		85.6	70-130				
<i>Surrogate: M3HFPO-DA</i>	66.0		"	80.0		82.4	70-130				

LCS (BD30325-BS1)

Prepared: 04/05/2023 Analyzed: 04/06/2023

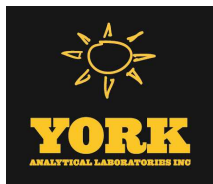
Perfluorotridecanoic acid (PFTTrDA)	30.0	2.00	ng/L	40.0		74.9	70-130				
Perfluorotetradecanoic acid (PFTA)	33.3	2.00	"	40.0		83.3	70-130				
N-MeFOSAA	39.9	2.00	"	40.0		99.7	70-130				
N-EtFOSAA	43.0	2.00	"	40.0		107	70-130				
<i>Surrogate: d5-N-EtFOSAA</i>	368		"	320		115	70-130				
<i>Surrogate: MPFDA</i>	85.5		"	80.0		107	70-130				
<i>Surrogate: MPFHxA</i>	76.9		"	80.0		96.2	70-130				
<i>Surrogate: M3HFPO-DA</i>	76.3		"	80.0		95.4	70-130				

Duplicate (BD30325-DUP1)

*Source sample: 23C1538-01 (Blended Entry Point Plant #3)

Prepared: 04/05/2023 Analyzed: 04/06/2023

Perfluorotridecanoic acid (PFTTrDA)	ND	0.926	ng/L		ND					25	
Perfluorotetradecanoic acid (PFTA)	ND	0.926	"		ND					25	
N-MeFOSAA	ND	0.926	"		ND					25	
N-EtFOSAA	ND	0.926	"		ND					25	
<i>Surrogate: d5-N-EtFOSAA</i>	ND		"	148			70-130				
<i>Surrogate: MPFDA</i>	ND		"	37.0			70-130				
<i>Surrogate: MPFHxA</i>	15.6		"	37.0		42.2	70-130				
<i>Surrogate: M3HFPO-DA</i>	15.2		"	37.0		41.1	70-130				

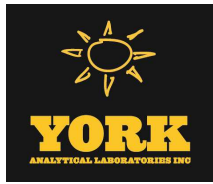


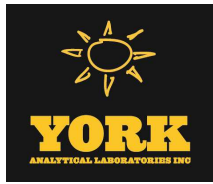
PFAS Target compounds by LC/MS-MS - Quality Control Data
York Analytical Laboratories, Inc. - Stratford

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

Batch BD30325 - EPA 537.1 SPE DVB

Matrix Spike (BD30325-MS1)	*Source sample: 23C1612-01 (Matrix Spike)						Prepared: 04/05/2023 Analyzed: 04/06/2023				
Perfluorotridecanoic acid (PFTTrDA)	ND	0.926	ng/L	37.0	ND		70-130	Low Bias			
Perfluorotetradecanoic acid (PFTA)	ND	0.926	"	37.0	ND		70-130	Low Bias			
N-MeFOSAA	ND	0.926	"	37.0	ND		70-130	Low Bias			
N-EtFOSAA	ND	0.926	"	37.0	ND		70-130	Low Bias			
<i>Surrogate: d5-N-EtFOSAA</i>	<i>ND</i>		<i>"</i>	<i>148</i>			<i>70-130</i>				
<i>Surrogate: MPFDA</i>	<i>ND</i>		<i>"</i>	<i>37.0</i>			<i>70-130</i>				
<i>Surrogate: MPFHxA</i>	<i>13.5</i>		<i>"</i>	<i>37.0</i>		<i>36.4</i>	<i>70-130</i>				
<i>Surrogate: M3HFPO-DA</i>	<i>13.9</i>		<i>"</i>	<i>37.0</i>		<i>37.4</i>	<i>70-130</i>				





Sample and Data Qualifiers Relating to This Work Order

PFSL The recovery for this PFAS surrogate was below control limits

PFL 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.

