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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

C. T. Male Associates
50 Century Hill Drive
Latham NY 12110

Report Date: June 24, 2019 11:37

Project: Hoosick Falls WTP

Account #: 37191
Group Number: 2047945
SDG: HOO29
PO Number: 14.4756
State of Sample Origin: NY

Electronic Copy To	C. T. Male Associates	Attn: Kirk Moline
Electronic Copy To	C. T. Male Associates	Attn: Dan Reilly
Electronic Copy To	C. T. Male Associates	Attn: Jeff Marx
Electronic Copy To	Barr Engineering Company	Attn: Lauren Brady
Electronic Copy To	Environmental Standards	Attn: St. Gobain
Electronic Copy To	Barr Engineering Company	Attn: Data Mgt

Respectfully Submitted,

Nancy Jean Bornholm

Nancy Jean Bornholm
Principal Specialist

(717) 556-7250

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
GAC Influent Grab Drinking Water	06/06/2019 09:45	1076017
GAC Midfluent Grab Drinking Water	06/06/2019 09:47	1076018
GAC Effluent Grab Drinking Water	06/06/2019 09:50	1076019
LTB-190606 Blank Water	06/06/2019	1076020
FTB-190606 Grab Blank Water	06/06/2019 09:55	1076021

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: Hoosick Falls WTP
ELLE Group #: 2047945

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

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

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

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

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: **GAC Influent Grab Drinking Water**
Hoosick Falls Water Treatment Plant

Project Name: **Hoosick Falls WTP**

Submittal Date/Time: 06/07/2019 10:40
Collection Date/Time: 06/06/2019 09:45
SDG#: HOO29-01

C. T. Male Associates
ELLE Sample #: PW 1076017
ELLE Group #: 2047945
Matrix: Drinking Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**	**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	1.8 U	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA[1]	2355-31-9	1.8 U	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.8 U	1.8	1
14070	Perfluorodecanoic acid[1]	335-76-2	1.8 U	1.8	1
14070	Perfluorododecanoic acid[1]	307-55-1	1.8 U	1.8	1
14070	**Perfluoroheptanoic acid[1]**	375-85-9	**14**	1.8	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	1.8 U	1.8	1
14070	**Perfluorohexanoic acid[1]**	307-24-4	**15**	1.8	1
14070	Perfluorononanoic acid[1]	375-95-1	1.8 U	1.8	1
14070	**Perfluorooctanesulfonic acid[1]**	1763-23-1	**3.1**	1.8	1
14070	**Perfluorooctanoic acid[1]**	335-67-1	**590**	18	10
14070	Perfluorotetradecanoic acid[1]	376-06-7	1.8 U	1.8	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	1.8 U	1.8	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	1.8 U	1.8	1
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**	**ng/l**	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	1.8 U	1.8	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	5.4 U	5.4	1
14473	Perfluorobutanoic acid[1]	375-22-4	6.3 U	6.3	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	1.8 U	1.8	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	2.7 U	2.7	1
14473	Perfluoropentanoic acid[1]	2706-90-3	5.4 U	5.4	1

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/17/2019 20:35	Devon M Whooley	1
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/18/2019 10:59	Devon M Whooley	10
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19168004	06/21/2019 20:59	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19164011	06/13/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19168004	06/17/2019 06:55	Pamela Rothharpt	1

Sample Description: **GAC Midfluent Grab Drinking Water**
Hoosick Falls Water Treatment Plant

Project Name: **Hoosick Falls WTP**

Submittal Date/Time: 06/07/2019 10:40
Collection Date/Time: 06/06/2019 09:47
SDG#: HOO29-02

C. T. Male Associates
ELLE Sample #: PW 1076018
ELLE Group #: 2047945
Matrix: Drinking Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**		**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	1.8	U	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA[1]	2355-31-9	1.8	U	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.8	U	1.8	1
14070	Perfluorodecanoic acid[1]	335-76-2	1.8	U	1.8	1
14070	Perfluorododecanoic acid[1]	307-55-1	1.8	U	1.8	1
14070	Perfluoroheptanoic acid[1]	375-85-9	1.8	U	1.8	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	1.8	U	1.8	1
14070	Perfluorohexanoic acid[1]	307-24-4	1.8	U	1.8	1
14070	Perfluorononanoic acid[1]	375-95-1	1.8	U	1.8	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	1.8	U	1.8	1
14070	Perfluorooctanoic acid[1]	335-67-1	1.8	U	1.8	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	1.8	U	1.8	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	1.8	U	1.8	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	1.8	U	1.8	1
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**		**ng/l**	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	1.8	U	1.8	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	5.4	U	5.4	1
14473	Perfluorobutanoic acid[1]	375-22-4	6.3	U	6.3	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	1.8	U	1.8	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	1.8	U	1.8	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	2.7	U	2.7	1
14473	Perfluoropentanoic acid[1]	2706-90-3	5.4	U	5.4	1

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/17/2019 20:47	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19168004	06/21/2019 21:17	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19164011	06/13/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19168004	06/17/2019 06:55	Pamela Rothharpt	1

Sample Description: **GAC Effluent Grab Drinking Water**
Hoosick Falls Water Treatment Plant

Project Name: **Hoosick Falls WTP**

Submittal Date/Time: 06/07/2019 10:40
Collection Date/Time: 06/06/2019 09:50
SDG#: HOO29-03

C. T. Male Associates
ELLE Sample #: PW 1076019
ELLE Group #: 2047945
Matrix: Drinking Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**		**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	1.8	U	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA[1]	2355-31-9	1.8	U	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.8	U	1.8	1
14070	Perfluorodecanoic acid[1]	335-76-2	1.8	U	1.8	1
14070	Perfluorododecanoic acid[1]	307-55-1	1.8	U	1.8	1
14070	Perfluoroheptanoic acid[1]	375-85-9	1.8	U	1.8	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	1.8	U	1.8	1
14070	Perfluorohexanoic acid[1]	307-24-4	1.8	U	1.8	1
14070	Perfluorononanoic acid[1]	375-95-1	1.8	U	1.8	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	1.8	U	1.8	1
14070	Perfluorooctanoic acid[1]	335-67-1	1.8	U	1.8	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	1.8	U	1.8	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	1.8	U	1.8	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	1.8	U	1.8	1
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**		**ng/l**	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	1.8	U	1.8	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	5.4	U	5.4	1
14473	Perfluorobutanoic acid[1]	375-22-4	6.3	U	6.3	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	1.8	U	1.8	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	1.8	U	1.8	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	2.7	U	2.7	1
14473	Perfluoropentanoic acid[1]	2706-90-3	5.4	U	5.4	1

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/17/2019 20:58	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19168004	06/21/2019 21:27	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19164011	06/13/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19168004	06/17/2019 06:55	Pamela Rothharpt	1

Sample Description: **LTB-190606 Blank Water**
Hoosick Falls Water Treatment Plant

Project Name: **Hoosick Falls WTP**

Submittal Date/Time: 06/07/2019 10:40
Collection Date/Time: 06/06/2019
SDG#: HOO29-04TB

C. T. Male Associates
ELLE Sample #: PW 1076020
ELLE Group #: 2047945
Matrix: Blank Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**		**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	1.8	U	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA[1]	2355-31-9	1.8	U	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.8	U	1.8	1
14070	Perfluorodecanoic acid[1]	335-76-2	1.8	U	1.8	1
14070	Perfluorododecanoic acid[1]	307-55-1	1.8	U	1.8	1
14070	Perfluoroheptanoic acid[1]	375-85-9	1.8	U	1.8	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	1.8	U	1.8	1
14070	Perfluorohexanoic acid[1]	307-24-4	1.8	U	1.8	1
14070	Perfluorononanoic acid[1]	375-95-1	1.8	U	1.8	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	1.8	U	1.8	1
14070	Perfluorooctanoic acid[1]	335-67-1	1.8	U	1.8	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	1.8	U	1.8	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	1.8	U	1.8	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	1.8	U	1.8	1
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**		**ng/l**	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	1.8	U	1.8	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	5.3	U	5.3	1
14473	Perfluorobutanoic acid[1]	375-22-4	6.2	U	6.2	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	1.8	U	1.8	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	1.8	U	1.8	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	2.7	U	2.7	1
14473	Perfluoropentanoic acid[1]	2706-90-3	5.3	U	5.3	1

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/17/2019 21:10	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19168004	06/21/2019 21:36	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19164011	06/13/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19168004	06/17/2019 06:55	Pamela Rothharpt	1

Sample Description: **FTB-190606 Grab Blank Water**
Hoosick Falls Water Treatment Plant

Project Name: **Hoosick Falls WTP**

Submittal Date/Time: 06/07/2019 10:40
Collection Date/Time: 06/06/2019 09:55
SDG#: HOO29-05FB

C. T. Male Associates
ELLE Sample #: PW 1076021
ELLE Group #: 2047945
Matrix: Blank Water

CAT No.	Analysis Name	CAS Number	Result		Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1**		**ng/l**		**ng/l**	
14070	NEtFOSAA[1]	2991-50-6	1.8	U	1.8	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14070	NMeFOSAA[1]	2355-31-9	1.8	U	1.8	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14070	Perfluorobutanesulfonic acid[1]	375-73-5	1.8	U	1.8	1
14070	Perfluorodecanoic acid[1]	335-76-2	1.8	U	1.8	1
14070	Perfluorododecanoic acid[1]	307-55-1	1.8	U	1.8	1
14070	Perfluoroheptanoic acid[1]	375-85-9	1.8	U	1.8	1
14070	Perfluorohexanesulfonic acid[1]	355-46-4	1.8	U	1.8	1
14070	Perfluorohexanoic acid[1]	307-24-4	1.8	U	1.8	1
14070	Perfluorononanoic acid[1]	375-95-1	1.8	U	1.8	1
14070	Perfluorooctanesulfonic acid[1]	1763-23-1	1.8	U	1.8	1
14070	Perfluorooctanoic acid[1]	335-67-1	1.8	U	1.8	1
14070	Perfluorotetradecanoic acid[1]	376-06-7	1.8	U	1.8	1
14070	Perfluorotridecanoic acid[1]	72629-94-8	1.8	U	1.8	1
14070	Perfluoroundecanoic acid[1]	2058-94-8	1.8	U	1.8	1
LC/MS/MS Miscellaneous	**EPA 537 Version 1.1 Modified**		**ng/l**		**ng/l**	
14473	6:2-Fluorotelomersulfonic acid[1]	27619-97-2	2.0	U	2.0	1
14473	8:2-Fluorotelomersulfonic acid[1]	39108-34-4	6.1	U	6.1	1
14473	Perfluorobutanoic acid[1]	375-22-4	7.1	U	7.1	1
14473	Perfluorodecanesulfonic acid[1]	335-77-3	2.0	U	2.0	1
14473	Perfluoroheptanesulfonic acid[1]	375-92-8	2.0	U	2.0	1
14473	Perfluorooctanesulfonamide[1]	754-91-6	3.0	U	3.0	1
14473	Perfluoropentanoic acid[1]	2706-90-3	6.1	U	6.1	1

Sample Comments

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19164011	06/17/2019 21:22	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19168004	06/21/2019 21:45	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19164011	06/13/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19168004	06/17/2019 06:55	Pamela Rothharpt	1

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Quality Control Summary

Client Name: C. T. Male Associates
Reported: 06/24/2019 11:37

Group Number: 2047945

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result		LOQ
	ng/l		ng/l
Batch number: 19164011	Sample number(s): 1076017-1076021		
NEtFOSAA	2.0	U	2.0
NMeFOSAA	2.0	U	2.0
Perfluorobutanesulfonic acid	2.0	U	2.0
Perfluorodecanoic acid	2.0	U	2.0
Perfluorododecanoic acid	2.0	U	2.0
Perfluoroheptanoic acid	2.0	U	2.0
Perfluorohexanesulfonic acid	2.0	U	2.0
Perfluorohexanoic acid	2.0	U	2.0
Perfluorononanoic acid	2.0	U	2.0
Perfluorooctanesulfonic acid	2.0	U	2.0
Perfluorooctanoic acid	2.0	U	2.0
Perfluorotetradecanoic acid	2.0	U	2.0
Perfluorotridecanoic acid	2.0	U	2.0
Perfluoroundecanoic acid	2.0	U	2.0
Batch number: 19168004	Sample number(s): 1076017-1076021		
6:2-Fluorotelomersulfonic acid	2.0	U	2.0
8:2-Fluorotelomersulfonic acid	6.0	U	6.0
Perfluorobutanoic acid	6.0	U	6.0
Perfluorodecanesulfonic acid	2.0	U	2.0
Perfluoroheptanesulfonic acid	2.0	U	2.0
Perfluorooctanesulfonamide	3.0	U	3.0
Perfluoropentanoic acid	6.0	U	6.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19164011	Sample number(s): 1076017-1076021								
NEtFOSAA	20.48	16.62	20.48	18.25	81	89	70-130	9	30
NMeFOSAA	20.48	16.3	20.48	17.03	80	83	70-130	4	30
Perfluorobutanesulfonic acid	18.12	15.53	18.12	16.29	86	90	70-130	5	30
Perfluorodecanoic acid	20.48	19.72	20.48	19.59	96	96	70-130	1	30
Perfluorododecanoic acid	20.48	18.01	20.48	17.8	88	87	70-130	1	30
Perfluoroheptanoic acid	20.48	18.05	20.48	18.7	88	91	70-130	4	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: C. T. Male Associates
Reported: 06/24/2019 11:37

Group Number: 2047945

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorohexanesulfonic acid	18.68	17.23	18.68	17.86	92	96	70-130	4	30
Perfluorohexanoic acid	20.48	18.2	20.48	18.53	89	90	70-130	2	30
Perfluorononanoic acid	20.48	19.1	20.48	18.92	93	92	70-130	1	30
Perfluorooctanesulfonic acid	18.96	16.68	18.96	17.88	88	94	70-130	7	30
Perfluorooctanoic acid	20.48	19.57	20.48	18.66	96	91	70-130	5	30
Perfluorotetradecanoic acid	20.48	17.03	20.48	17.2	83	84	70-130	1	30
Perfluorotridecanoic acid	20.48	16.59	20.48	16.38	81	80	70-130	1	30
Perfluoroundecanoic acid	20.48	19.55	20.48	18.59	95	91	70-130	5	30
Batch number: 19168004	Sample number(s): 1076017-1076021								
6:2-Fluorotelomersulfonic acid	15.17	15.41	15.17	16.01	102	106	66-155	4	30
8:2-Fluorotelomersulfonic acid	15.33	15.37	15.33	19.43	100	127	66-148	23	30
Perfluorobutanoic acid	5.44	6.45	5.44	6.16	119	113	74-142	5	30
Perfluorodecanesulfonic acid	5.24	5.29	5.24	4.69	101	89	60-135	12	30
Perfluoroheptanesulfonic acid	5.18	5.06	5.18	4.89	98	95	64-135	3	30
Perfluorooctanesulfonamide	5.44	5.89	5.44	5.72	108	105	65-164	3	30
Perfluoropentanoic acid	5.44	5.58	5.44	5.90	103	108	74-134	6	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 14 PFAS Drinking Water List
Batch number: 19164011

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1076017	116	126	106
1076018	118	125	112
1076019	106	113	99
1076020	102	103	74
1076021	104	100	76
Blank	104	110	96
LCS	102	104	95
LCSD	104	106	100
Limits:	70-130	70-130	70-130

Analysis Name: 7 PFAS Compounds
Batch number: 19168004

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
1076017	83	100	88	100	77	100
1076018	92	94	84	111	83	92

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: C. T. Male Associates
Reported: 06/24/2019 11:37

Group Number: 2047945

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 7 PFAS Compounds
Batch number: 19168004

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
1076019	83	82	77	99	78	99
1076020	80	83	85	98	79	87
1076021	78	78	77	103	76	92
Blank	81	82	94	100	76	82
LCS	80	81	88	98	80	91
LCSD	83	84	88	88	78	71
Limits:	33-123	31-157	34-126	32-170	50-121	27-164

	13C8-PFOSA
1076017	71
1076018	86
1076019	81
1076020	87
1076021	62
Blank	81
LCS	78
LCSD	74
Limits:	11-127

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only

Acct. # 37191 Group # 2047945 Sample # 1076017-21

COC # 586426

Client Information

Client: CT Male Associates	Acct. #:
Project Name/#: Hoosick Falls WTP	PWSID #:
Project Manager: Kirk Moline	P.O. #: 14.4756
Sampler: CB	Quote #:
State where samples were collected: NY	For Compliance: Yes ☐ No ☐

For Lab Use Only
FSC:
SCR#:

Sample Identification	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	NPDES	Surface	Other: Rinse water	Total # of Containers	Analysis Requested: Preservation and Filtration Codes: Z	7 PFCs (EPA 537 mod.)	14 PFCs (EPA 537 Ver. 1.1)
GAC Influent	6/6/19	0945	✓					✓					4	✓	✓	✓
GAC Midfluent		0947	✓					✓					4	✓	✓	✓
GAC Effluent		0950	✓					✓					4	✓	✓	✓
LTB - 190606		—	✓									✓	4	✓	✓	✓
FTB - 190606		0955	✓									✓	4	✓	✓	✓

Remarks: Z = Trizma

2 Trizma + 2 Unpreserved

Preservation Codes

H=HCl	T=Thiosulfate
N=HNO_3	B=NaOH
S=H_2SO_4	P=H_3PO_4
F=Field Filtered	O=Other

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Requested TAT in business days:

E-mail address: K.moline@ctmale.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP)
Type III (Reduced non-CLP)
NYSDEC Category A or (B)
Type VI (Raw Data Only)
NJ DKQP
MA MCP
TX TRRP-13
CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6/6/19	1200			
			[signature]	6.8.19	1040

EDD Required? (Yes) No
If yes, format: 4 File

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS _____ FedEx _____ Other _____

Temperature upon receipt 0.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 250972

Group Number(s): 2047945

Client: CT Male Associates

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	06/07/2019 10:40
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	See Below
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Trip Blank Type(s): Unpreserved

Unpacked by Darian Jaynes (29952) at 16:04 on 06/07/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.3	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.