



## ANALYSIS REPORT

Prepared by:

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2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

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

Report Date: May 20, 2019 14:12

### Project: Hoosick Falls WTP

Account #: 37191  
Group Number: 2042131  
SDG: HOO28  
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  
Principal Specialist

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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.



## SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
GAC Influent Grab Drinking Water	05/02/2019 09:23	1049438
GAC Midfluent Grab Drinking Water	05/02/2019 09:26	1049439
GAC Effluent Grab Drinking Water	05/02/2019 09:29	1049440
FTB-190502 Grab Blank Water	05/02/2019 09:32	1049441
LTB-190502 Blank Water	05/02/2019	1049442

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

Project Name: Hoosick Falls WTP  
ELLE Group #: 2042131

**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

**C. T. Male Associates**  
**ELLE Sample #:** PW 1049438  
**ELLE Group #:** 2042131  
**Matrix:** Drinking Water

**Project Name:** Hoosick Falls WTP

**Submission Date/Time:** 05/03/2019 10:00  
**Collection Date/Time:** 05/02/2019 09:23  
**SDG#:** HOO28-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	1.8 U	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	1.8 U	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	1.8 U	1.8	1
14070	Perfluorodecanoic acid	335-76-2	1.8 U	1.8	1
14070	Perfluorododecanoic acid	307-55-1	1.8 U	1.8	1
14070	<b>Perfluoroheptanoic acid</b>	375-85-9	<b>15</b>	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	1.8 U	1.8	1
14070	<b>Perfluorohexanoic acid</b>	307-24-4	<b>12</b>	1.8	1
14070	Perfluorononanoic acid	375-95-1	1.8 U	1.8	1
14070	<b>Perfluorooctanesulfonic acid</b>	1763-23-1	<b>2.8</b>	1.8	1
14070	<b>Perfluorooctanoic acid</b>	335-67-1	<b>520</b>	18	10
14070	Perfluorotetradecanoic acid	376-06-7	1.8 U	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	1.8 U	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	1.8 U	1.8	1
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified</b>			<b>ng/l</b>	<b>ng/l</b>	
14473	6:2-Fluorotelomersulfonic acid	27619-97-2	1.7 U	1.7	1
14473	8:2-Fluorotelomersulfonic acid	39108-34-4	5.2 U	5.2	1
14473	Perfluorobutanoic acid	375-22-4	6.1 U	6.1	1
14473	Perfluorodecanesulfonic acid	335-77-3	1.7 U	1.7	1
14473	Perfluoroheptanesulfonic acid	375-92-8	1.7 U	1.7	1
14473	Perfluorooctanesulfonamide	754-91-6	2.6 U	2.6	1
14473	Perfluoropentanoic acid	2706-90-3	5.2 U	5.2	1

### 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	19125003	05/08/2019 03:05	Marissa C Drexinger	1
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19125003	05/08/2019 19:36	Marissa C Drexinger	10
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19127009	05/16/2019 17:00	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19125003	05/05/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19127009	05/07/2019 14:50	Isaac Phillips-Cary	1

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

**C. T. Male Associates**  
**ELLE Sample #:** PW 1049439  
**ELLE Group #:** 2042131  
**Matrix:** Drinking Water

**Project Name:** Hoosick Falls WTP

**Submission Date/Time:** 05/03/2019 10:00  
**Collection Date/Time:** 05/02/2019 09:26  
**SDG#:** HOO28-02

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	1.8 U	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	1.8 U	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	1.8 U	1.8	1
14070	Perfluorodecanoic acid	335-76-2	1.8 U	1.8	1
14070	Perfluorododecanoic acid	307-55-1	1.8 U	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	1.8 U	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	1.8 U	1.8	1
14070	Perfluorohexanoic acid	307-24-4	1.8 U	1.8	1
14070	Perfluorononanoic acid	375-95-1	1.8 U	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	1.8 U	1.8	1
14070	Perfluorooctanoic acid	335-67-1	1.8 U	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	1.8 U	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	1.8 U	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	1.8 U	1.8	1

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified</b>			<b>ng/l</b>	<b>ng/l</b>			
14473	6:2-Fluorotelomersulfonic acid	27619-97-2	1.8 U	1.8	1		
14473	8:2-Fluorotelomersulfonic acid	39108-34-4	5.4 U	5.4	1		
14473	Perfluorobutanoic acid	375-22-4	6.3 U	6.3	1		
14473	Perfluorodecanesulfonic acid	335-77-3	1.8 U	1.8	1		
14473	Perfluoroheptanesulfonic acid	375-92-8	1.8 U	1.8	1		
14473	Perfluorooctanesulfonamide	754-91-6	2.7 U	2.7	1		
14473	Perfluoropentanoic acid	2706-90-3	5.4 U	5.4	1		

### 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	19125003	05/08/2019 03:17	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19127009	05/16/2019 17:09	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19125003	05/05/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19127009	05/07/2019 14:50	Isaac Phillips-Cary	1

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

**C. T. Male Associates**  
**ELLE Sample #:** PW 1049440  
**ELLE Group #:** 2042131  
**Matrix:** Drinking Water

**Project Name:** Hoosick Falls WTP

**Submission Date/Time:** 05/03/2019 10:00  
**Collection Date/Time:** 05/02/2019 09:29  
**SDG#:** HOO28-03

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	1.8 U	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	1.8 U	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	1.8 U	1.8	1
14070	Perfluorodecanoic acid	335-76-2	1.8 U	1.8	1
14070	Perfluorododecanoic acid	307-55-1	1.8 U	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	1.8 U	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	1.8 U	1.8	1
14070	Perfluorohexanoic acid	307-24-4	1.8 U	1.8	1
14070	Perfluorononanoic acid	375-95-1	1.8 U	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	1.8 U	1.8	1
14070	Perfluorooctanoic acid	335-67-1	1.8 U	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	1.8 U	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	1.8 U	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	1.8 U	1.8	1

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified</b>			<b>ng/l</b>	<b>ng/l</b>			
14473	6:2-Fluorotelomersulfonic acid	27619-97-2	1.7 U	1.7	1		
14473	8:2-Fluorotelomersulfonic acid	39108-34-4	5.2 U	5.2	1		
14473	Perfluorobutanoic acid	375-22-4	6.1 U	6.1	1		
14473	Perfluorodecanesulfonic acid	335-77-3	1.7 U	1.7	1		
14473	Perfluoroheptanesulfonic acid	375-92-8	1.7 U	1.7	1		
14473	Perfluorooctanesulfonamide	754-91-6	2.6 U	2.6	1		
14473	Perfluoropentanoic acid	2706-90-3	5.2 U	5.2	1		

### 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	19125003	05/08/2019 03:28	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19127009	05/16/2019 17:27	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19125003	05/05/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19127009	05/07/2019 14:50	Isaac Phillips-Cary	1

**Sample Description:** FTB-190502 Grab Blank Water  
Hoosick Falls Water Treatment Plant

**C. T. Male Associates**  
**ELLE Sample #:** PW 1049441  
**ELLE Group #:** 2042131  
**Matrix:** Blank Water

**Project Name:** Hoosick Falls WTP

**Submission Date/Time:** 05/03/2019 10:00  
**Collection Date/Time:** 05/02/2019 09:32  
**SDG#:** HOO28-04FB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	1.8 U	1.8	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	1.8 U	1.8	1
14070	Perfluorobutanesulfonic acid	375-73-5	1.8 U	1.8	1
14070	Perfluorodecanoic acid	335-76-2	1.8 U	1.8	1
14070	Perfluorododecanoic acid	307-55-1	1.8 U	1.8	1
14070	Perfluoroheptanoic acid	375-85-9	1.8 U	1.8	1
14070	Perfluorohexanesulfonic acid	355-46-4	1.8 U	1.8	1
14070	Perfluorohexanoic acid	307-24-4	1.8 U	1.8	1
14070	Perfluorononanoic acid	375-95-1	1.8 U	1.8	1
14070	Perfluorooctanesulfonic acid	1763-23-1	1.8 U	1.8	1
14070	Perfluorooctanoic acid	335-67-1	1.8 U	1.8	1
14070	Perfluorotetradecanoic acid	376-06-7	1.8 U	1.8	1
14070	Perfluorotridecanoic acid	72629-94-8	1.8 U	1.8	1
14070	Perfluoroundecanoic acid	2058-94-8	1.8 U	1.8	1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified</b>			<b>ng/l</b>	<b>ng/l</b>	
14473	6:2-Fluorotelomersulfonic acid	27619-97-2	1.7 U	1.7	1
14473	8:2-Fluorotelomersulfonic acid	39108-34-4	5.2 U	5.2	1
14473	Perfluorobutanoic acid	375-22-4	6.0 U	6.0	1
14473	Perfluorodecanesulfonic acid	335-77-3	1.7 U	1.7	1
14473	Perfluoroheptanesulfonic acid	375-92-8	1.7 U	1.7	1
14473	Perfluorooctanesulfonamide	754-91-6	2.6 U	2.6	1
14473	Perfluoropentanoic acid	2706-90-3	5.2 U	5.2	1

### 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	19125003	05/08/2019 03:40	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19127009	05/16/2019 17:36	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19125003	05/05/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19127009	05/07/2019 14:50	Isaac Phillips-Cary	1

**Sample Description:** LTB-190502 Blank Water  
Hoosick Falls Water Treatment Plant

**C. T. Male Associates**  
**ELLE Sample #:** PW 1049442  
**ELLE Group #:** 2042131  
**Matrix:** Blank Water

**Project Name:** Hoosick Falls WTP

**Submission Date/Time:** 05/03/2019 10:00  
**Collection Date/Time:** 05/02/2019  
**SDG#:** HOO28-05TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1</b>			<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	1.9 U	1.9	1
14070	NMeFOSAA NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	1.9 U	1.9	1
14070	Perfluorobutanesulfonic acid	375-73-5	1.9 U	1.9	1
14070	Perfluorodecanoic acid	335-76-2	1.9 U	1.9	1
14070	Perfluorododecanoic acid	307-55-1	1.9 U	1.9	1
14070	Perfluoroheptanoic acid	375-85-9	1.9 U	1.9	1
14070	Perfluorohexanesulfonic acid	355-46-4	1.9 U	1.9	1
14070	Perfluorohexanoic acid	307-24-4	1.9 U	1.9	1
14070	Perfluorononanoic acid	375-95-1	1.9 U	1.9	1
14070	Perfluorooctanesulfonic acid	1763-23-1	1.9 U	1.9	1
14070	Perfluorooctanoic acid	335-67-1	1.9 U	1.9	1
14070	Perfluorotetradecanoic acid	376-06-7	1.9 U	1.9	1
14070	Perfluorotridecanoic acid	72629-94-8	1.9 U	1.9	1
14070	Perfluoroundecanoic acid	2058-94-8	1.9 U	1.9	1

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
<b>LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified</b>			<b>ng/l</b>	<b>ng/l</b>			
14473	6:2-Fluorotelomersulfonic acid	27619-97-2	1.7 U	1.7	1		
14473	8:2-Fluorotelomersulfonic acid	39108-34-4	5.1 U	5.1	1		
14473	Perfluorobutanoic acid	375-22-4	6.0 U	6.0	1		
14473	Perfluorodecanesulfonic acid	335-77-3	1.7 U	1.7	1		
14473	Perfluoroheptanesulfonic acid	375-92-8	1.7 U	1.7	1		
14473	Perfluorooctanesulfonamide	754-91-6	2.6 U	2.6	1		
14473	Perfluoropentanoic acid	2706-90-3	5.1 U	5.1	1		

### 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	19125003	05/08/2019 03:51	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19127009	05/16/2019 17:45	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19125003	05/05/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19127009	05/07/2019 14:50	Isaac Phillips-Cary	1



## Quality Control Summary

Client Name: C. T. Male Associates  
Reported: 05/20/2019 14:12

Group Number: 2042131

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: 19125003	Sample number(s): 1049438-1049442	
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: 19127009	Sample number(s): 1049438-1049442	
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	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ng/l	ng/l	ng/l	ng/l					
Batch number: 19125003	Sample number(s): 1049438-1049442								
NEtFOSAA	80	67.9	80	72.79	85	91	70-130	7	30
NMeFOSAA	80	70.44	80	73.23	88	92	70-130	4	30
Perfluorobutanesulfonic acid	70.8	63.91	70.8	68.06	90	96	70-130	6	30
Perfluorodecanoic acid	80	71.02	80	80.85	89	101	70-130	13	30
Perfluorododecanoic acid	80	78.6	80	80.13	98	100	70-130	2	30
Perfluoroheptanoic acid	80	72.19	80	73.87	90	92	70-130	2	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: 05/20/2019 14:12

Group Number: 2042131

### 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	72.96	64.75	72.96	65.81	89	90	70-130	2	30
Perfluorohexanoic acid	80	70.74	80	71.63	88	90	70-130	1	30
Perfluorononanoic acid	80	78.06	80	76.64	98	96	70-130	2	30
Perfluorooctanesulfonic acid	74.04	65.45	74.04	69.28	88	94	70-130	6	30
Perfluorooctanoic acid	80	73.89	80	75.77	92	95	70-130	3	30
Perfluorotetradecanoic acid	80	75.87	80	79.08	95	99	70-130	4	30
Perfluorotridecanoic acid	80	78.07	80	81	98	101	70-130	4	30
Perfluoroundecanoic acid	80	71.02	80	73.7	89	92	70-130	4	30
Batch number: 19127009      Sample number(s): 1049438-1049442									
6:2-Fluorotelomersulfonic acid	15.17	14.14	15.17	12.97	93	86	66-155	9	30
8:2-Fluorotelomersulfonic acid	15.33	15.08	15.33	13.79	98	90	66-148	9	30
Perfluorobutanoic acid	5.44	5.86	5.44	5.68	108	104	74-142	3	30
Perfluorodecanesulfonic acid	5.24	4.96	5.24	5.25	95	100	60-135	6	30
Perfluoroheptanesulfonic acid	5.18	6.36	5.18	5.82	123	112	64-135	9	30
Perfluorooctanesulfonamide	5.44	4.99	5.44	5.42	92	100	65-164	8	30
Perfluoropentanoic acid	5.44	5.40	5.44	5.69	99	105	74-134	5	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: 19125003

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
1049438	95	102	96
1049439	101	100	91
1049440	100	100	85
1049441	96	103	96
1049442	93	99	91
Blank	99	109	96
LCS	103	100	92
LCSD	98	107	93
Limits:	70-130	70-130	70-130

Analysis Name: 7 PFAS Compounds  
Batch number: 19127009

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
1049438	89	91	104	93	87	94
1049439	80	78	76	81	80	91

\*- 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: 05/20/2019 14:12

Group Number: 2042131

### 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: 19127009

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
1049440	75	76	72	80	76	81
1049441	79	75	78	85	77	88
1049442	78	77	76	79	75	78
Blank	77	79	64	92	71	97
LCS	85	87	68	99	86	102
LCSD	86	86	69	97	87	97
Limits:	33-123	31-157	34-126	32-170	50-121	27-164

	13C8-PFOA
1049438	75
1049439	82
1049440	69
1049441	76
1049442	75
Blank	73
LCS	76
LCSD	81
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.





Client: C.T. Male Assoc.

**Hoosick Falls WTP**

**Delivery and Receipt Information**

Delivery Method: Fed Ex                      Arrival Timestamp: 05/03/2019 10:00  
 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): 2 Trizma, 2 Unpreserved

Unpacked by Nicole Reiff (25684) at 15:36 on 05/03/2019

**Samples Chilled Details: Hoosick Falls WTP**

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	0.6	DT	Wet	Y	Bagged	N

# Explanation of Symbols and Abbreviations

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

<b>BMQL</b>	Below Minimum Quantitation Level	<b>mL</b>	milliliter(s)
<b>C</b>	degrees Celsius	<b>MPN</b>	Most Probable Number
<b>cfu</b>	colony forming units	<b>N.D.</b>	non-detect
<b>CP Units</b>	cobalt-chloroplatinate units	<b>ng</b>	nanogram(s)
<b>F</b>	degrees Fahrenheit	<b>NTU</b>	nephelometric turbidity units
<b>g</b>	gram(s)	<b>pg/L</b>	picogram/liter
<b>IU</b>	International Units	<b>RL</b>	Reporting Limit
<b>kg</b>	kilogram(s)	<b>TNTC</b>	Too Numerous To Count
<b>L</b>	liter(s)	<b>µg</b>	microgram(s)
<b>lb.</b>	pound(s)	<b>µL</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>umhos/cm</b>	micromhos/cm
<b>meq</b>	milliequivalents	<b>MCL</b>	Maximum Contamination Limit
<b>mg</b>	milligram(s)		
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	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.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	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 $\geq$ 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.