



## 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: February 16, 2018 15:56

**Project: SGPP - McCaffrey Street**

Account #: 37191  
Group Number: 1904257  
SDG: SMC32  
PO Number: 14.4756  
State of Sample Origin: NY

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

Respectfully Submitted,



Nancy Jean Bornholm  
Principal Specialist

(717) 556-7250



### SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
GAC Influent Grab Drinking Water	02/01/2018 09:12	9437815
GAC Midfluent Grab Drinking Water	02/01/2018 09:15	9437816
GAC Effluent Grab Drinking Water	02/01/2018 09:18	9437817
FTB-180201 Grab Rinse Water	02/01/2018 09:35	9437818
LTB-180201 Rinse Water	02/01/2018	9437819

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

Project Name: SGPP - McCaffrey Street  
ELLE Group #: 1904257

**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.

For dual column analyses, the surrogate (for multi-surrogate tests, at least one surrogate) must be within the acceptance limits on at least one of the two columns.

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

**Analysis Specific Comments:****EPA 537 Version 1.1, Misc. Organics****Sample #s: 9437818, 9437819**

The recovery for a target analyte(s) in the Laboratory Fortified Blank(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

**Batch #: 18041005 (Sample number(s): 9437818-9437819)**

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:  
Perfluorohexanoic acid

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD were outside acceptance windows: Perfluorohexanoic acid, Perfluorobutanesulfonate. When the individual % recovery is within the acceptance limits, the data is reported.

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) Blank, LCS

**Sample Description:** GAC Influent Grab Drinking Water  
SGPP - McCaffrey Street

**C. T. Male Associates**  
**ELLE Sample #:** PW 9437815  
**ELLE Group #:** 1904257  
**Matrix:** Drinking Water

**Project Name:** SGPP - McCaffrey Street

**Submission Date/Time:** 02/02/2018 10:30  
**Collection Date/Time:** 02/01/2018 09:12  
**SDG#:** SMC32-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1</b>	<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA	2991-50-6	5 U	5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA	2355-31-9	5 U	5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonate	375-73-5	5 U	5	1
14070	Perfluorodecanoic acid	335-76-2	5 U	5	1
14070	Perfluorododecanoic acid	307-55-1	5 U	5	1
14070	<b>Perfluoroheptanoic acid</b>	375-85-9	<b>15</b>	5	1
14070	Perfluorohexanesulfonate	355-46-4	5 U	5	1
14070	<b>Perfluorohexanoic acid</b>	307-24-4	<b>13</b>	5	1
14070	Perfluorononanoic acid	375-95-1	5 U	5	1
14070	Perfluoro-octanesulfonate	1763-23-1	5 U	5	1
14070	<b>Perfluorooctanoic acid</b>	335-67-1	<b>440</b>	50	10
14070	Perfluorotetradecanoic acid	376-06-7	9 U	9	1
14070	Perfluorotridecanoic acid	72629-94-8	5 U	5	1
14070	Perfluoroundecanoic acid	2058-94-8	9 U	9	1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
14473	6:2 fluorotelomersulfonate	27619-97-2	9 U	9	1
14473	8:2 fluorotelomersulfonate	39108-34-4	6 U	6	1
14473	Perfluorobutanoic acid	375-22-4	6 U	6	1
14473	Perfluorodecanesulfonate	335-77-3	2 U	2	1
14473	Perfluoroheptanesulfonate	375-92-8	2 U	2	1
14473	Perfluorooctanesulfonamide	754-91-6	3 U	3	1
14473	Perfluoropentanoic acid	2706-90-3	6 U	6	1

### Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### 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	18037009	02/07/2018 13:29	Marissa C Drexinger	1
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	18037009	02/09/2018 07:47	Marissa C Drexinger	10
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18037012	02/10/2018 07:16	Devon M Whooley	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18037009	02/06/2018 09:00	Pamela Rothhapt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18037012	02/06/2018 06:45	Pamela Rothhapt	1

**Sample Description:** GAC Midfluent Grab Drinking Water  
SGPP - McCaffrey Street

**C. T. Male Associates**  
**ELLE Sample #:** PW 9437816  
**ELLE Group #:** 1904257  
**Matrix:** Drinking Water

**Project Name:** SGPP - McCaffrey Street

**Submission Date/Time:** 02/02/2018 10:30  
**Collection Date/Time:** 02/01/2018 09:15  
**SDG#:** SMC32-02

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

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	6 U	6	1
14473	<b>Perfluorobutanoic acid</b>	375-22-4	<b>6</b>	6	1
14473	Perfluorodecanesulfonate	335-77-3	2 U	2	1
14473	Perfluoroheptanesulfonate	375-92-8	2 U	2	1
14473	Perfluorooctanesulfonamide	754-91-6	3 U	3	1
14473	Perfluoropentanoic acid	2706-90-3	6 U	6	1

### Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### 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	18037009	02/07/2018 13:40	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18037012	02/10/2018 07:37	Devon M Whooley	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18037009	02/06/2018 09:00	Pamela Rothharpt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18037012	02/06/2018 06:45	Pamela Rothharpt	1

**Sample Description:** GAC Effluent Grab Drinking Water  
SGPP - McCaffrey Street

**C. T. Male Associates**  
**ELLE Sample #:** PW 9437817  
**ELLE Group #:** 1904257  
**Matrix:** Drinking Water

**Project Name:** SGPP - McCaffrey Street

**Submission Date/Time:** 02/02/2018 10:30  
**Collection Date/Time:** 02/01/2018 09:18  
**SDG#:** SMC32-03

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1</b>	<b>ng/l</b>	<b>ng/l</b>	
14070	NEtFOSAA	2991-50-6	5 U	5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.				
14070	NMeFOSAA	2355-31-9	5 U	5	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.				
14070	Perfluorobutanesulfonate	375-73-5	5 U	5	1
14070	Perfluorodecanoic acid	335-76-2	5 U	5	1
14070	Perfluorododecanoic acid	307-55-1	5 U	5	1
14070	Perfluoroheptanoic acid	375-85-9	5 U	5	1
14070	Perfluorohexanesulfonate	355-46-4	5 U	5	1
14070	Perfluorohexanoic acid	307-24-4	5 U	5	1
14070	Perfluorononanoic acid	375-95-1	5 U	5	1
14070	Perfluoro-octanesulfonate	1763-23-1	5 U	5	1
14070	Perfluorooctanoic acid	335-67-1	5 U	5	1
14070	Perfluorotetradecanoic acid	376-06-7	10 U	10	1
14070	Perfluorotridecanoic acid	72629-94-8	5 U	5	1
14070	Perfluoroundecanoic acid	2058-94-8	10 U	10	1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
<b>Misc. Organics</b>		<b>EPA 537 Version 1.1 Modified</b>	<b>ng/l</b>	<b>ng/l</b>	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	6 U	6	1
14473	Perfluorobutanoic acid	375-22-4	6 U	6	1
14473	Perfluorodecanesulfonate	335-77-3	2 U	2	1
14473	Perfluoroheptanesulfonate	375-92-8	2 U	2	1
14473	Perfluorooctanesulfonamide	754-91-6	3 U	3	1
14473	Perfluoropentanoic acid	2706-90-3	6 U	6	1

### Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### 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	18037009	02/07/2018 13:52	Marissa C Drexinger	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18037012	02/10/2018 07:57	Devon M Whooley	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18037009	02/06/2018 09:00	Pamela Rothharp	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18037012	02/06/2018 06:45	Pamela Rothharp	1

**Sample Description:** FTB-180201 Grab Rinse Water  
SGPP - McCaffrey Street

**C. T. Male Associates**  
**ELLE Sample #:** WW 9437818  
**ELLE Group #:** 1904257  
**Matrix:** Rinse Water

**Project Name:** SGPP - McCaffrey Street

**Submission Date/Time:** 02/02/2018 10:30  
**Collection Date/Time:** 02/01/2018 09:35  
**SDG#:** SMC32-04TB

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

The recovery for a target analyte(s) in the Laboratory Fortified Blank(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

### Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### 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	18041005	02/12/2018 23:38	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18041005	02/11/2018 08:35	Danielle D McCully	1

**Sample Description:** LTB-180201 Rinse Water  
SGPP - McCaffrey Street

**C. T. Male Associates**  
**ELLE Sample #:** WW 9437819  
**ELLE Group #:** 1904257  
**Matrix:** Rinse Water

**Project Name:** SGPP - McCaffrey Street

**Submittal Date/Time:** 02/02/2018 10:30  
**Collection Date/Time:** 02/01/2018  
**SDG#:** SMC32-05TB

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

The recovery for a target analyte(s) in the Laboratory Fortified Blank(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

The recovery for the method blank surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

### Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### 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	18041005	02/12/2018 23:50	Marissa C Drexinger	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18041005	02/11/2018 08:35	Danielle D McCully	1



## Quality Control Summary

Client Name: C. T. Male Associates  
Reported: 02/16/2018 15:56

Group Number: 1904257

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 ng/l	LOQ ng/l
Batch number: 18037009	Sample number(s): 9437815-9437817	
NEtFOSAA	5 U	5
NMeFOSAA	5 U	5
Perfluorobutanesulfonate	5 U	5
Perfluorodecanoic acid	5 U	5
Perfluorododecanoic acid	5 U	5
Perfluoroheptanoic acid	5 U	5
Perfluorohexanesulfonate	5 U	5
Perfluorohexanoic acid	5 U	5
Perfluorononanoic acid	5 U	5
Perfluoro-octanesulfonate	5 U	5
Perfluorooctanoic acid	5 U	5
Perfluorotetradecanoic acid	10 U	10
Perfluorotridecanoic acid	5 U	5
Perfluoroundecanoic acid	10 U	10
Batch number: 18037012	Sample number(s): 9437815-9437817	
6:2 fluorotelomersulfonate	9 U	9
8:2 fluorotelomersulfonate	6 U	6
Perfluorobutanoic acid	6 U	6
Perfluorodecanesulfonate	2 U	2
Perfluoroheptanesulfonate	2 U	2
Perfluorooctanesulfonamide	3 U	3
Perfluoropentanoic acid	6 U	6
Batch number: 18041005	Sample number(s): 9437818-9437819	
NEtFOSAA	5 U	5
NMeFOSAA	5 U	5
Perfluorobutanesulfonate	5 U	5
Perfluorodecanoic acid	5 U	5
Perfluorododecanoic acid	5 U	5
Perfluoroheptanoic acid	5 U	5
Perfluorohexanesulfonate	5 U	5
Perfluorohexanoic acid	5 U	5
Perfluorononanoic acid	5 U	5
Perfluoro-octanesulfonate	5 U	5
Perfluorooctanoic acid	5 U	5
Perfluorotetradecanoic acid	10 U	10
Perfluorotridecanoic acid	5 U	5
Perfluoroundecanoic acid	10 U	10

\*- 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: 02/16/2018 15:56

Group Number: 1904257

### 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: 18037009									
Sample number(s): 9437815-9437817									
NEtFOSAA	80	66.73	80	68.78	83	86	70-130	3	30
NMeFOSAA	80	73.66	80	70.41	92	88	70-130	5	30
Perfluorobutanesulfonate	70.76	62.75	70.76	54.94	89	78	70-130	13	30
Perfluorodecanoic acid	80	75.62	80	75.16	95	94	70-130	1	30
Perfluorododecanoic acid	80	84.05	80	83.34	105	104	70-130	1	30
Perfluoroheptanoic acid	80	76.01	80	75.19	95	94	70-130	1	30
Perfluorohexanesulfonate	75.64	70.46	75.64	68.46	93	91	70-130	3	30
Perfluorohexanoic acid	80	69.61	80	56.13	87	70	70-130	21	30
Perfluorononanoic acid	80	76.6	80	80.03	96	100	70-130	4	30
Perfluoro-octanesulfonate	76.48	68.87	76.48	69.47	90	91	70-130	1	30
Perfluorooctanoic acid	80	79.17	80	81.74	99	102	70-130	3	30
Perfluorotetradecanoic acid	80	75.22	80	75.16	94	94	70-130	0	30
Perfluorotridecanoic acid	80	84.41	80	84.61	106	106	70-130	0	30
Perfluoroundecanoic acid	80	80.12	80	81.91	100	102	70-130	2	30
Batch number: 18037012									
Sample number(s): 9437815-9437817									
6:2 fluorotelomersulfonate	15.17	14.3	15.17	13.4	94	88	70-130	6	30
8:2 fluorotelomersulfonate	15.33	14.96	15.33	14.67	98	96	70-130	2	30
Perfluorobutanoic acid	5.44	5.31	5.44	5.36	98	99	70-130	1	30
Perfluorodecanesulfonate	5.24	5.91	5.24	5.30	113	101	70-130	11	30
Perfluoroheptanesulfonate	5.18	4.78	5.18	4.99	92	96	70-130	4	30
Perfluorooctanesulfonamide	5.44	5.36	5.44	6.18	99	114	70-130	14	30
Perfluoropentanoic acid	5.44	5.19	5.44	5.40	95	99	70-130	4	30
Batch number: 18041005									
Sample number(s): 9437818-9437819									
NEtFOSAA	20	21.07	20	21.11	105	106	70-130	0	30
NMeFOSAA	20	22.17	20	21.74	111	109	70-130	2	30
Perfluorobutanesulfonate	18.12	13.02	18.12	17.82	72	98	70-130	31*	30
Perfluorodecanoic acid	20.48	20.89	20.48	21.89	102	107	70-130	5	30
Perfluorododecanoic acid	20.48	22.47	20.48	24.52	110	120	70-130	9	30
Perfluoroheptanoic acid	20.48	21.49	20.48	22.18	105	108	70-130	3	30
Perfluorohexanesulfonate	19.36	19.2	19.36	18.6	99	96	70-130	3	30
Perfluorohexanoic acid	20.48	12.88	20.48	20.76	63*	101	70-130	47*	30
Perfluorononanoic acid	20.48	20.93	20.48	21.82	102	107	70-130	4	30
Perfluoro-octanesulfonate	19.58	19.37	19.58	18.74	99	96	70-130	3	30
Perfluorooctanoic acid	20.48	21.3	20.48	22.36	104	109	70-130	5	30
Perfluorotetradecanoic acid	20	20.47	20.48	22.77	102	111	70-130	11	30
Perfluorotridecanoic acid	20	20.93	20.48	23.44	105	114	70-130	11	30
Perfluoroundecanoic acid	20.48	21.57	20.48	23.9	105	117	70-130	10	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: 02/16/2018 15:56

Group Number: 1904257

### 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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: 14 PFAS Drinking Water List  
Batch number: 18037009

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
9437815	110	112	95
9437816	88	92	95
9437817	92	96	101
Blank	84	94	98
LCS	89	93	93
LCSD	71	94	92
Limits:	70-130	70-130	70-130

Analysis Name: 7 PFAS Compounds  
Batch number: 18037012

	13C4-PFBA	13C5-PFPeA	13C2-6:2-FTS	13C2-8:2-FTS	13C8-PFOA
9437815	88	114	111	104	82
9437816	86	88	119	95	107
9437817	95	93	108	91	104
Blank	101	96	125	115	114
LCS	87	88	107	90	110
LCSD	94	92	134	122	110
Limits:	33-123	39-135	39-140	39-137	70-130

Analysis Name: 14 PFAS Drinking Water List  
Batch number: 18041005

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
9437818	81	95	86
9437819	94	99	83
Blank	59*	87	100
LCS	55*	90	89
LCSD	93	101	101
Limits:	70-130	70-130	70-130

\*- 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: CT MALE

1904257

**Delivery and Receipt Information**

Delivery Method: Fed Ex Arrival Timestamp: 02/02/2018 10:30  
 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 $\geq$ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	2
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): Upnr. (1); TRIZMA (1)

Unpacked by Ruth Shank (12390) at 14:05 on 02/02/2018

**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	32170023	1.1	IR	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>mg</b>	milligram(s)
<b>C</b>	degrees Celsius	<b>mL</b>	milliliter(s)
<b>cfu</b>	colony forming units	<b>MPN</b>	Most Probable Number
<b>CP Units</b>	cobalt-chloroplatinate units	<b>N.D.</b>	non-detect
<b>F</b>	degrees Fahrenheit	<b>ng</b>	nanogram(s)
<b>g</b>	gram(s)	<b>NTU</b>	nephelometric turbidity units
<b>IU</b>	International Units	<b>pg/L</b>	picogram/liter
<b>kg</b>	kilogram(s)	<b>RL</b>	Reporting Limit
<b>L</b>	liter(s)	<b>TNTC</b>	Too Numerous To Count
<b>lb.</b>	pound(s)	<b>µg</b>	microgram(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
<b>meq</b>	milliequivalents	<b>umhos/cm</b>	micromhos/cm
<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.

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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
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.
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.