



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: March 20, 2018 14:03

Project: SGPP - McCaffrey Street

Account #: 37191
Group Number: 1914911
SDG: SMC38
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	03/01/2018 09:20	9484983
GAC Midfluent Grab Drinking Water	03/01/2018 09:25	9484984
GAC Effluent Grab Drinking Water	03/01/2018 09:30	9484985
FTB-180301 Blank Water	03/01/2018 09:35	9484986
LTB-180301 Blank Water	03/01/2018	9484987

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 #: 1914911

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: 9484983, 9484984, 9484985, 9484986, 9484987

The recovery for native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

Batch #: 18065003 (Sample number(s): 9484983-9484987)

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

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

EPA 537 Version 1.1 Modified, Misc. Organics

Sample #s: 9484983, 9484984, 9484985

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Batch #: 18066006 (Sample number(s): 9484983-9484987)

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9484983, 9484984, 9484985, LCS

REVISED

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

C. T. Male Associates
ELLE Sample #: PW 9484983
ELLE Group #: 1914911
Matrix: Drinking Water

Project Name: SGPP - McCaffrey Street

Submission Date/Time: 03/02/2018 10:25
Collection Date/Time: 03/01/2018 09:20
SDG#: SMC38-01

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
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	18	4	1
14070	Perfluorohexanesulfonate	355-46-4	4 U	4	1
14070	Perfluorohexanoic acid	307-24-4	17	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	500	40	10
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 native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5 U	5	1
14473	Perfluorobutanoic acid	375-22-4	5 U	5	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	5 U	5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

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	18065003	03/12/2018 19:32	Devon M Whooley	1
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	18065003	03/15/2018 17:25	Devon M Whooley	10
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18066006	03/16/2018 01:28	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18065003	03/06/2018 10:00	Pamela Rothharpt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18066006	03/07/2018 08:25	Pamela Rothharpt	1

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

C. T. Male Associates
ELLE Sample #: PW 9484984
ELLE Group #: 1914911
Matrix: Drinking Water

Project Name: SGPP - McCaffrey Street

Submission Date/Time: 03/02/2018 10:25
Collection Date/Time: 03/01/2018 09:25
SDG#: SMC38-02

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
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 native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5 U	5	1
14473	Perfluorobutanoic acid	375-22-4	6	5	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	5 U	5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

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	18065003	03/12/2018 19:44	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18066006	03/16/2018 01:48	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18065003	03/06/2018 10:00	Pamela Rothharpt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18066006	03/07/2018 08:25	Pamela Rothharpt	1

REVISED

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

C. T. Male Associates
ELLE Sample #: PW 9484985
ELLE Group #: 1914911
Matrix: Drinking Water

Project Name: SGPP - McCaffrey Street

Submission Date/Time: 03/02/2018 10:25
Collection Date/Time: 03/01/2018 09:30
SDG#: SMC38-03

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
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 native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5 U	5	1
14473	Perfluorobutanoic acid	375-22-4	5 U	5	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	5 U	5	1

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

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	18065003	03/12/2018 19:55	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18066006	03/16/2018 02:09	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18065003	03/06/2018 10:00	Pamela Rothharp	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18066006	03/07/2018 08:25	Pamela Rothharp	1

REVISED

Sample Description: FTB-180301 Blank Water
SGPP-McCaffrey Street

C. T. Male Associates
ELLE Sample #: WW 9484986
ELLE Group #: 1914911
Matrix: Blank Water

Project Name: SGPP - McCaffrey Street

Submission Date/Time: 03/02/2018 10:25
Collection Date/Time: 03/01/2018 09:35
SDG#: SMC38-04TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
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 native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
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	18065003	03/12/2018 20:07	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18066006	03/16/2018 03:10	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18065003	03/06/2018 10:00	Pamela Rothharpt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18066006	03/07/2018 08:25	Pamela Rothharpt	1

REVISED

Sample Description: LTB-180301 Blank Water
SGPP-McCaffrey Street

C. T. Male Associates
ELLE Sample #: WW 9484987
ELLE Group #: 1914911
Matrix: Blank Water

Project Name: SGPP - McCaffrey Street

Submission Date/Time: 03/02/2018 10:25
Collection Date/Time: 03/01/2018
SDG#: SMC38-05TB

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1	ng/l	ng/l	
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

The recovery for native compound PFTeDA in the LFB is 71%; the LFB/LFBD RPD is 5.

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
Misc. Organics		EPA 537 Version 1.1 Modified	ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	8 U	8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5 U	5	1
14473	Perfluorobutanoic acid	375-22-4	5 U	5	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	5 U	5	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	18065003	03/12/2018 20:18	Devon M Whooley	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	18066006	03/16/2018 03:31	Jason W Knight	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	18065003	03/06/2018 10:00	Pamela Rothharpt	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	18066006	03/07/2018 08:25	Pamela Rothharpt	1

Quality Control Summary

Client Name: C. T. Male Associates
Reported: 03/20/2018 14:03

Group Number: 1914911

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: 18065003	Sample number(s): 9484983-9484987	
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: 18066006	Sample number(s): 9484983-9484987	
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

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: 18065003	Sample number(s): 9484983-9484987								
NEtFOSAA	4.00	3.49	4.00	4.36	87	109	70-130	22	30
NMeFOSAA	4.00	3.29	4.00	3.89	82	97	70-130	17	30
Perfluorobutanesulfonate	3.54	3.17	3.54	3.68	90	104	70-130	15	30
Perfluorodecanoic acid	4.00	3.60	4.00	4.02	90	101	70-130	11	30
Perfluorododecanoic acid	4.00	3.60	4.00	4.34	90	109	70-130	19	30
Perfluoroheptanoic acid	4.00	3.52	4.00	3.99	88	100	70-130	13	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: 03/20/2018 14:03

Group Number: 1914911

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
Perfluorohexanesulfonate	3.78	3.44	3.78	3.83	91	101	70-130	11	30
Perfluorohexanoic acid	4.00	3.78	4.00	4.21	94	105	70-130	11	30
Perfluorononanoic acid	4.00	3.63	4.00	4.02	91	101	70-130	10	30
Perfluoro-octanesulfonate	3.82	3.05	3.82	3.72	80	97	70-130	20	30
Perfluorooctanoic acid	4.00	4.02	4.00	3.96	101	99	70-130	1	30
Perfluorotetradecanoic acid	4.00	10 U	4.00	3.02	0*	76	70-130	200*	30
Perfluorotridecanoic acid	4.00	3.52	4.00	3.85	88	96	70-130	9	30
Perfluoroundecanoic acid	4.00	3.85	4.00	4.06	96	102	70-130	5	30
Batch number: 18066006 Sample number(s): 9484983-9484987									
6:2 fluorotelomersulfonate	15.17	16.05	15.17	17.72	106	117	70-130	10	30
8:2 fluorotelomersulfonate	15.33	17.14	15.33	15.59	112	102	70-130	9	30
Perfluorobutanoic acid	5.44	5.49	5.44	5.82	101	107	70-130	6	30
Perfluorodecanesulfonate	5.24	5.35	5.24	4.83	102	92	70-130	10	30
Perfluoroheptanesulfonate	5.18	4.73	5.18	4.92	91	95	70-130	4	30
Perfluorooctanesulfonamide	5.44	5.44	5.44	5.38	100	99	70-130	1	30
Perfluoropentanoic acid	5.44	5.44	5.44	5.37	100	99	70-130	1	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. 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: 18065003

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
9484983	130	120	105
9484984	118	116	111
9484985	119	118	120
9484986	106	106	108
9484987	108	103	104
Blank	104	102	94
LCS	100	97	99
LCSD	104	105	104
Limits:	70-130	70-130	70-130

Analysis Name: 7 PFAS Compounds
Batch number: 18066006

*- 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: 03/20/2018 14:03

Group Number: 1914911

Surrogate Quality Control (continued)

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: 7 PFAS Compounds
Batch number: 18066006

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
9484983	87	133	110	120	91	109
9484984	78	80	85	124	85	95
9484985	80	83	84	123	81	94
9484986	87	88	84	129	92	102
9484987	77	77	78	108	75	98
Blank	88	87	91	132	89	111
LCS	81	81	78	96	81	88
LCSD	81	82	78	107	87	109
Limits:	33-123	39-135	34-126	39-140	43-115	39-137

13C8-PFOSA

9484983	45*
9484984	64*
9484985	67*
9484986	80
9484987	73
Blank	77
LCS	69*
LCSD	73
Limits:	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.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 37191 Group # 1914911 Sample # 9484983-87

COC # 542553

Client Information				Matrix				Analysis Requested												For Lab Use Only					
Client: <u>C.T. Maie Associates</u>		Acct. #:		<input type="checkbox"/> Tissue		<input type="checkbox"/> Ground		<input type="checkbox"/> Surface		Preservation Codes												FSC: _____			
Project Name/#: <u>SGPP - McCaffrey</u>		PWSID #:		<input type="checkbox"/> Sediment		<input checked="" type="checkbox"/> Potable		<input type="checkbox"/> NPDES		<input type="checkbox"/> Drinking Water														SCR#: _____	
Project Manager: <u>Kirk Maie / Dan Reilly</u>		P.O. #: <u>144756</u>		<input type="checkbox"/> Soil		<input type="checkbox"/> Water		Other: _____														Preservation Codes H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ O=Other			
Sampler: <u>Chris Ormick</u>		Quote #:		<input type="checkbox"/> Composite																		Remarks			
State where samples were collected: <u>NY</u>		For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>																							
Sample Identification		Collected		Grab	Composite	Soil	Water	Other	Total # of Containers																
		Date	Time																						
<u>GAC Influent</u>		<u>3/1/18</u>	<u>0920</u>	<input checked="" type="checkbox"/>					<u>4</u>	<u>X</u>													<u>2 Trizma, 2 Unpreserved</u>		
<u>GAC Mid Influent</u>			<u>0925</u>	<input checked="" type="checkbox"/>					<u>4</u>	<u>X</u>															
<u>GAC Effluent</u>			<u>0930</u>	<input checked="" type="checkbox"/>					<u>4</u>	<u>X</u>															
<u>FTB-180301</u>			<u>0935</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<u>4</u>	<u>X</u>															
<u>LTB-180301</u>			<u>-</u>				<input checked="" type="checkbox"/>		<u>4</u>	<u>X</u>															

Turnaround Time (TAT) Requested (please circle) Standard <u>Standard</u> Rush (Rush TAT is subject to laboratory approval and surcharge.)		Relinquished by: <u>Christopher Cunningham</u>	Date: <u>3/1/18</u>	Time: <u>1630</u>	Received by: _____	Date: _____	Time: _____
Date results are needed: <u>10 Days</u>		Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
E-mail address: <u>K.Maie@CTMaie.com / D.Reilly@CTMaie.com</u>		Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Data Package Options (circle if required) Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only) Type III (Reduced non-CLP) NJ DKQP TX TRRP-13 NYSDEC Category A or B MA MCP CT RCP		Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: <u>3/2/18</u>	Time: <u>1025</u>
EDD Required? Yes No If yes, format: _____				Relinquished by Commercial Carrier: UPS _____ FedEx <input checked="" type="checkbox"/> Other _____			
Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)				Temperature upon receipt <u>0.2</u> °C			



Group Number(s):

1914911

Client: C.T. Male Associates

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 03/02/2018 10:25
 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 (250mL Plastic Bottles)

Unpacked by Wyatt Shiffler (12792) at 11:51 on 03/02/2018

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	0.2	IR	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

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

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