



ANALYSIS REPORT

Prepared by:

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2425 New Holland Pike
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Prepared for:

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

Report Date: January 14, 2019 14:22

Project: Hoosick Falls WTP

Account #: 37191
Group Number: 2022045
SDG: HOO21
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>
LTB02-181224 Blank Water	12/24/2018	9955763
FTB02-181224 Grab Blank Water	12/24/2018 08:45	9955764
PV1-25 Grab Drinking Water	12/24/2018 08:15	9955765
PV1-50 Grab Drinking Water	12/24/2018 08:20	9955766
PV1-75 Grab Drinking Water	12/24/2018 08:25	9955767
PV2-25 Grab Drinking Water	12/24/2018 08:30	9955768
PV2-50 Grab Drinking Water	12/24/2018 08:35	9955769
PV2-75 Grab Drinking Water	12/24/2018 08:40	9955770

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 #: 2022045

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: LTB02-181224 Blank Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: WW 9955763
ELLE Group #: 2022045
Matrix: Blank Water

Project Name: Hoosick Falls WTP

Submittal Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018
SDG#: HOO21-01TB

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.8 U	1.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.4 U	5.4	1
14473	Perfluorobutanoic acid	375-22-4	5.4 U	5.4	1
14473	Perfluorodecanesulfonate	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonate	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	19003006	01/08/2019 22:27	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:03	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: FTB02-181224 Grab Blank Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: WW 9955764
ELLE Group #: 2022045
Matrix: Blank Water

Project Name: Hoosick Falls WTP

Submission Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:45
SDG#: HOO21-02FB

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.8 U	1.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.4 U	5.4	1
14473	Perfluorobutanoic acid	375-22-4	5.4 U	5.4	1
14473	Perfluorodecanesulfonate	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonate	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	19003006	01/08/2019 22:39	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:12	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV1-25 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955765
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submission Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:15
SDG#: HOO21-03

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.8 U	1.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.5 U	5.5	1
14473	Perfluorobutanoic acid	375-22-4	10	5.5	1
14473	Perfluorodecanesulfonate	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonate	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	5.5 U	5.5	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	19003006	01/08/2019 23:02	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:21	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV1-50 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955766
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submittal Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:20
SDG#: HOO21-04

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.9 U	1.9	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.8 U	5.8	1
14473	Perfluorobutanoic acid	375-22-4	5.8 U	5.8	1
14473	Perfluorodecanesulfonate	335-77-3	1.9 U	1.9	1
14473	Perfluoroheptanesulfonate	375-92-8	1.9 U	1.9	1
14473	Perfluorooctanesulfonamide	754-91-6	2.9 U	2.9	1
14473	Perfluoropentanoic acid	2706-90-3	5.8 U	5.8	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	19003006	01/08/2019 23:13	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:30	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV1-75 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955767
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submission Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:25
SDG#: HOO21-05

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.8 U	1.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.4 U	5.4	1
14473	Perfluorobutanoic acid	375-22-4	5.4 U	5.4	1
14473	Perfluorodecanesulfonate	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonate	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	19003006	01/08/2019 23:25	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:39	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV2-25 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955768
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submission Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:30
SDG#: HOO21-06

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 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	Perfluorobutanesulfonate	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	8.7	1.8	1
14070	Perfluorohexanesulfonate	355-46-4	1.8 U	1.8	1
14070	Perfluorohexanoic acid	307-24-4	14	1.8	1
14070	Perfluorononanoic acid	375-95-1	1.8 U	1.8	1
14070	Perfluoro-octanesulfonate	1763-23-1	1.8 U	1.8	1
14070	Perfluorooctanoic acid	335-67-1	180	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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified					ng/l		
14473	6:2 fluorotelomersulfonate	27619-97-2	1.9 U		1.9		1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.6 U		5.6		1
14473	Perfluorobutanoic acid	375-22-4	5.6		5.6		1
14473	Perfluorodecanesulfonate	335-77-3	1.9 U		1.9		1
14473	Perfluoroheptanesulfonate	375-92-8	1.9 U		1.9		1
14473	Perfluorooctanesulfonamide	754-91-6	2.8 U		2.8		1
14473	Perfluoropentanoic acid	2706-90-3	5.6 U		5.6		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	19003006	01/08/2019 23:37	Joshua P Trost	1
14070	14 PFAS Drinking Water List	EPA 537 Version 1.1	1	19003006	01/09/2019 17:45	Marissa C Drexinger	10
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:48	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV2-50 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955769
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submittal Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:35
SDG#: HOO21-07

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	355-46-4	1.9 U	1.9	1
14070	Perfluorohexanoic acid	307-24-4	5.0	1.9	1
14070	Perfluorononanoic acid	375-95-1	1.9 U	1.9	1
14070	Perfluoro-octanesulfonate	1763-23-1	1.9 U	1.9	1
14070	Perfluorooctanoic acid	335-67-1	6.5	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
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified					ng/l		
14473	6:2 fluorotelomersulfonate	27619-97-2	1	19003006	01/08/2019 23:48	Joshua P Trost	1
14473	8:2 fluorotelomersulfonate	39108-34-4	1	19003001	01/04/2019 16:57	Christine E Dolman	1
14473	Perfluorobutanoic acid	375-22-4					
14473	Perfluorodecanesulfonate	335-77-3	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14473	Perfluoroheptanesulfonate	375-92-8	1	19003001	01/03/2019 07:55	Courtney J Fatta	1
14473	Perfluorooctanesulfonamide	754-91-6					
14473	Perfluoropentanoic acid	2706-90-3	1	19003001			

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	19003006	01/08/2019 23:48	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 16:57	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Sample Description: PV2-75 Grab Drinking Water
Hoosick Falls Water Treatment Plant

C. T. Male Associates
ELLE Sample #: PW 9955770
ELLE Group #: 2022045
Matrix: Drinking Water

Project Name: Hoosick Falls WTP

Submission Date/Time: 12/27/2018 09:45
Collection Date/Time: 12/24/2018 08:40
SDG#: HOO21-08

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 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	Perfluorobutanesulfonate	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	Perfluorohexanesulfonate	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	Perfluoro-octanesulfonate	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	CAS Number	Result	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	
14473	6:2 fluorotelomersulfonate	27619-97-2	1.8 U	1.8	1
14473	8:2 fluorotelomersulfonate	39108-34-4	5.4 U	5.4	1
14473	Perfluorobutanoic acid	375-22-4	8.5	5.4	1
14473	Perfluorodecanesulfonate	335-77-3	1.8 U	1.8	1
14473	Perfluoroheptanesulfonate	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	19003006	01/09/2019 00:00	Joshua P Trost	1
14473	7 PFAS Compounds	EPA 537 Version 1.1 Modified	1	19003001	01/04/2019 17:06	Christine E Dolman	1
14381	DW PFAS Prep	EPA 537 Version 1.1	1	19003006	01/03/2019 16:00	Anthony C Polaski	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19003001	01/03/2019 07:55	Courtney J Fatta	1

Quality Control Summary

Client Name: C. T. Male Associates
Reported: 01/14/2019 14:22

Group Number: 2022045

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: 19003001	Sample number(s): 9955763-9955770	
6:2 fluorotelomersulfonate	2.0 U	2.0
8:2 fluorotelomersulfonate	6.0 U	6.0
Perfluorobutanoic acid	6.0 U	6.0
Perfluorodecanesulfonate	2.0 U	2.0
Perfluoroheptanesulfonate	2.0 U	2.0
Perfluorooctanesulfonamide	3.0 U	3.0
Perfluoropentanoic acid	6.0 U	6.0
Batch number: 19003006	Sample number(s): 9955763-9955770	
NETFOSAA	2.0 U	2.0
NMeFOSAA	2.0 U	2.0
Perfluorobutanesulfonate	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
Perfluorohexanesulfonate	2.0 U	2.0
Perfluorohexanoic acid	2.0 U	2.0
Perfluorononanoic acid	2.0 U	2.0
Perfluoro-octanesulfonate	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

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: 19003001	Sample number(s): 9955763-9955770								
6:2 fluorotelomersulfonate	15.17	16.21	15.17	17.12	107	113	66-155	5	30
8:2 fluorotelomersulfonate	15.33	16.02	15.33	13.62	104	89	66-148	16	30
Perfluorobutanoic acid	5.44	6.89	5.44	6.26	127	115	74-142	10	30
Perfluorodecanesulfonate	5.24	5.88	5.24	5.67	112	108	60-135	4	30
Perfluoroheptanesulfonate	5.18	6.52	5.18	5.76	126	111	64-135	12	30
Perfluorooctanesulfonamide	5.44	6.01	5.44	4.95	110	91	65-164	19	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: 01/14/2019 14:22

Group Number: 2022045

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
Perfluoropentanoic acid	5.44	6.10	5.44	6.32	112	116	74-134	4	30
Batch number: 19003006	Sample number(s): 9955763-9955770								
NEtFOSAA	20	19.18	20	19.3	96	97	70-130	1	30
NMeFOSAA	20	21.01	20	20.97	105	105	70-130	0	30
Perfluorobutanesulfonate	18.12	17.4	18.12	18.88	96	104	70-130	8	30
Perfluorodecanoic acid	20.48	19.11	20.48	19.39	93	95	70-130	1	30
Perfluorododecanoic acid	20.48	19.35	20.48	18.89	94	92	70-130	2	30
Perfluoroheptanoic acid	20.48	17.91	20.48	18.85	87	92	70-130	5	30
Perfluorohexanesulfonate	19.36	18.91	19.36	20.33	98	105	70-130	7	30
Perfluorohexanoic acid	20.48	18.23	20.48	18.53	89	90	70-130	2	30
Perfluorononanoic acid	20.48	19.69	20.48	19.12	96	93	70-130	3	30
Perfluoro-octanesulfonate	19.58	16.58	19.58	18.52	85	95	70-130	11	30
Perfluorooctanoic acid	20.48	18.79	20.48	19.74	92	96	70-130	5	30
Perfluorotetradecanoic acid	20.48	18.48	20.48	18.36	90	90	70-130	1	30
Perfluorotridecanoic acid	20.48	19.54	20.48	20.29	95	99	70-130	4	30
Perfluoroundecanoic acid	20.48	19.88	20.48	19.15	97	94	70-130	4	30

Labeled Isotope Quality Control

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: 19003001

	13C4-PFBA	13C5-PFPeA	13C3-PFHxS	13C2-6:2-FTS	13C8-PFOS	13C2-8:2-FTS
9955763	74	77	76	82	69	73
9955764	73	73	72	79	73	78
9955765	76	79	86	88	72	88
9955766	85	90	102	109	87	95
9955767	84	79	90	91	82	90
9955768	80	98	99	91	74	89
9955769	73	77	75	80	71	82
9955770	89	94	93	98	92	86
Blank	79	82	90	96	78	79
LCS	67	66	59	87	68	81
LCSD	75	70	72	92	75	96
Limits:	33-123	31-157	34-126	32-170	50-121	27-164

13C8-PFOSA

9955763	65
---------	----

*- 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: 01/14/2019 14:22

Group Number: 2022045

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: 19003001

	13C8-PFOSA
9955764	74
9955765	76
9955766	81
9955767	86
9955768	80
9955769	78
9955770	75
Blank	65
LCS	63
LCSD	73

Limits: 11-127

Analysis Name: 14 PFAS Drinking Water List
Batch number: 19003006

	13C2-PFHxA	13C2-PFDA	D5-NetFOSAA
9955763	98	108	97
9955764	98	107	100
9955765	100	104	96
9955766	100	104	95
9955767	98	99	106
9955768	111	113	100
9955769	99	93	106
9955770	106	106	109
Blank	102	107	95
LCS	95	96	92
LCSD	92	97	91

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.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 37191 Group # 2022045 Sample # 9955763-70

COC # 571995

Client Information				Matrix				Analysis Requested										For Lab Use Only						
Client: <u>CT Male Associates</u>		Acct. #:		Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue <input type="checkbox"/>	Potable <input type="checkbox"/> Ground <input type="checkbox"/>	NPDES <input type="checkbox"/> Surface <input type="checkbox"/>	Other: <u>Raise Water</u>	Total # of Containers	Preservation and Filtration Codes										FSC: _____	SCR#: _____				
Project Name/##: <u>Horsick Falls WTP</u>		PWSID #:																	Preservation Codes					
Project Manager: <u>Kirk Malone</u>		P.O. #: <u>14.4756</u>												H=HCl T=Thiosulfate N=HNO ₃ B=NaOH S=H ₂ SO ₄ P=H ₃ PO ₄ F=Field Filtered O=Other										
Sampler: <u>Jonathan Dippert</u>		Quote #:												Remarks										
State where samples were collected: <u>NY</u>		For Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>												<u>Z = Trizma</u>										
Sample Identification		Collected		Grab	Composite	Soil	Water	Other	Total # of Containers															
Date	Time																							
<u>L7B02 - 181224</u>	<u>12/24/18</u>	<u>-</u>						<input checked="" type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>F7B02 - 181224</u>		<u>0845</u>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV1 - 25</u>		<u>0815</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV1 - 50</u>		<u>0820</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV1 - 75</u>		<u>0825</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV2 - 25</u>		<u>0830</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV2 - 50</u>		<u>0835</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													
<u>PV2 - 75</u>	<u>12/24/18</u>	<u>0840</u>	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<u>4</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													

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. malone @ ctmale.com

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: <u>[Signature]</u>	Date: <u>12/24/18</u>	Time: <u>1035</u>	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: <u>[Signature]</u>	Date: <u>12/27/18</u>	Time: <u>0945</u>
EDD Required? <u>Yes</u> No			Relinquished by Commercial Carrier:		
If yes, format: <u>FWQS</u>			UPS _____ FedEx <u>X</u> Other _____		
Site-Specific QC (MS/MSD/Dup)? Yes No			Temperature upon receipt <u>2.1</u> °C		
(If yes, indicate QC sample and submit triplicate sample volume.)					



Client: C.T. Male Assoc.

Hoosick Falls WTP

Delivery and Receipt Information

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>12/27/2018 9:45</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>NY</u>		

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:	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 12:50 on 12/27/2018

Samples Chilled Details: Hoosick Falls WTP

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

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT146	2.1	DT	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	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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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.