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ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
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Tel: (717)656-2300

Laboratory Job ID: 410-31526-1
Client Project/Site: Permanone 30-30

For:
PEER
962 Wayne Avenue
Suite 610
Silver Spring, Maryland 20910

Attn: Tim Whitehouse

Authorized for release by:
3/19/2021 11:42:47 AM

Dana Kauffman, Project Manager
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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.
· QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
· 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 is performed, unless otherwise specified in the method.
· Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

Test 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. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Dana Kauffman
Project Manager
3/19/2021 11:42:48 AM

Table of Contents

Definitions/Glossary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: PEER
Project/Site: Permanone 30-30

Job ID: 410-31526-1

Job ID: 410-31526-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-31526-1

Receipt
The samples were received on 3/8/2021 9:48 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.5°C

LCMS
Method PFC_IDA: The recovery for the labeled isotope(s) in the following sample: Field Blank Permanone 30-30 (410-31526-1) is outside the QC acceptance limits. Sufficient sample was not available to re-extract this sample.

Method PFC_IDA: The sample injection standard peak areas in the following sample: Permanone 30-30 (410-31526-2) are outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.The recovery for the labeled isotope(s) in the following sample: Permanone 30-30 (410-31526-2) are outside the QC acceptance limits. The signal to noise in the method blank was greater than 10:1, indicating the analysis had sufficient sensitivity to accurately quantify and correct the associated native compound for that recovery.

Method PFC_IDA: The recoveries for target analytes Perfluorododecanoic acid and 10:2-FTS are outside the QC acceptance limits in the opening continuing calibration verification standard. Since the results are high and targets Perfluorododecanoic acid and 10:2-FTS are not detected in the following samples: Permanone 30-30 (410-31526-2) , the data is reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Client Sample ID: Field Blank Permanone 30-30 — Lab Sample ID: 410-31526-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid	1.1	J B	1.6	0.40	ng/L	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid	0.63	J B	1.6	0.40	ng/L	1		537 IDA	Total/NA

Client Sample ID: Permanone 30-30 — Lab Sample ID: 410-31526-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid	3500	I	1000	250	ng/L	1		537 IDA	Total/NA
HFPODA	630	J	1500	250	ng/L	1		537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Client: PEER
Project/Site: Permanone 30-30

Job ID: 410-31526-1

Client Sample ID: Field Blank Permanone 30-30

Date Collected: 03/04/21 12:09
Date Received: 03/08/21 09:48

Lab Sample ID: 410-31526-1

Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluoroheptanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorooctanoic acid	**1.1**	**J B**	1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorononanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorodecanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorotridecanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorotetradecanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorobutanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorohexanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorooctanesulfonic acid	**0.63**	**J B**	1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
NEtFOSAA	ND		2.4	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
NMeFOSAA	ND		1.6	0.48	ng/L		03/10/21 08:01	03/11/21 17:19	1
10:2 FTS	ND		4.0	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluoropentanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluoroheptanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorononanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorodecanesulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.4	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorooctanesulfonamide	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorohexadecanoic acid	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorooctadecanoic acid	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorobutanoic acid	ND		4.0	1.6	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluoropentanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
NMeFOSE	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
NMeFOSA	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
NEtFOSE	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
NEtFOSA	ND		4.0	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1
HFPODA	ND		2.4	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
DONA	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
9Cl-PF3ONS	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
11Cl-PF3OUdS	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluorododecanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
4:2 Fluorotelomer sulfonic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
Perfluoroundecanoic acid	ND		1.6	0.40	ng/L		03/10/21 08:01	03/11/21 17:19	1
6:2 Fluorotelomer sulfonic acid	ND		4.0	1.6	ng/L		03/10/21 08:01	03/11/21 17:19	1
8:2 Fluorotelomer sulfonic acid	ND		2.4	0.80	ng/L		03/10/21 08:01	03/11/21 17:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*153*		*20 - 187*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
M2-8:2 FTS	*141*		*34 - 182*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
M2-6:2 FTS	*141*		*29 - 189*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C5 PFHxA	*144*	**5+*	*31 - 142*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C4 PFHpA	*152*	**5+*	*30 - 144*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C8 PFOA	*135*	**5+*	*49 - 127*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C9 PFNA	*120*		*47 - 136*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C6 PFDA	*124*		*47 - 128*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C7 PFUnA	*129*		*40 - 135*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C2-PFDoDA	*136*		*28 - 136*	*03/10/21 08:01*	*03/11/21 17:19*	*1*
13C2 PFTeDA	*122*		*10 - 144*	*03/10/21 08:01*	*03/11/21 17:19*	*1*

Client Sample ID: Field Blank Permanone 30-30
Lab Sample ID: 410-31526-1

Date Collected: 03/04/21 12:09
Matrix: Water
Date Received: 03/08/21 09:48

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	126		19 - 178	03/10/21 08:01	03/11/21 17:19	1
13C3 PFHxS	143		32 - 145	03/10/21 08:01	03/11/21 17:19	1
13C8 PFOS	120		49 - 126	03/10/21 08:01	03/11/21 17:19	1
d3-NMeFOSAA	123		32 - 151	03/10/21 08:01	03/11/21 17:19	1
d5-NEtFOSAA	122		37 - 164	03/10/21 08:01	03/11/21 17:19	1
13C8 FOSA	89		10 - 143	03/10/21 08:01	03/11/21 17:19	1
13C4 PFBA	123		41 - 132	03/10/21 08:01	03/11/21 17:19	1
13C5 PFPeA	123		33 - 155	03/10/21 08:01	03/11/21 17:19	1
d7-N-MeFOSE-M	83		10 - 143	03/10/21 08:01	03/11/21 17:19	1
d3-NMePFOSA	75		10 - 107	03/10/21 08:01	03/11/21 17:19	1
d9-N-EtFOSE-M	88		10 - 142	03/10/21 08:01	03/11/21 17:19	1
d5-NEtPFOSA	75		10 - 108	03/10/21 08:01	03/11/21 17:19	1
13C3 HFPO-DA	130		20 - 153	03/10/21 08:01	03/11/21 17:19	1

Client Sample ID: Permanone 30-30
Lab Sample ID: 410-31526-2

Date Collected: 03/04/21 12:15
Matrix: Water
Date Received: 03/08/21 09:48

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluoroheptanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorooctanoic acid	**3500**	**I**	1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorononanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorodecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorotridecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorotetradecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorobutanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorohexanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorooctanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
NEtFOSAA	ND		1500	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
NMeFOSAA	ND		1000	300	ng/L		03/11/21 11:01	03/16/21 10:36	1
10:2 FTS	ND		2500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluoropentanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluoroheptanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorononanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorodecanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1500	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorooctanesulfonamide	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorohexadecanoic acid	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorooctadecanoic acid	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorobutanoic acid	ND		2500	1000	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluoropentanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
NMeFOSE	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
NMeFOSA	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
NEtFOSE	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
NEtFOSA	ND		2500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1
HFPODA	**630**	**J**	1500	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
DONA	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Client Sample ID: Permanone 30-30
Lab Sample ID: 410-31526-2
Date Collected: 03/04/21 12:15
Matrix: Water
Date Received: 03/08/21 09:48

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9Cl-PF3ONS	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
11Cl-PF3OUdS	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluorododecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
4:2 Fluorotelomer sulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
Perfluoroundecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/16/21 10:36	1
6:2 Fluorotelomer sulfonic acid	ND		2500	1000	ng/L		03/11/21 11:01	03/16/21 10:36	1
8:2 Fluorotelomer sulfonic acid	ND		1500	500	ng/L		03/11/21 11:01	03/16/21 10:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*520*	**5+*	*20 - 187*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
M2-8:2 FTS	*211*	**5+*	*34 - 182*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
M2-6:2 FTS	*544*	**5+*	*29 - 189*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C5 PFHxA	*197*	**5+*	*31 - 142*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C4 PFHpA	*282*	**5+*	*30 - 144*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C8 PFOA	*77*		*49 - 127*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C9 PFNA	*104*		*47 - 136*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C6 PFDA	*68*		*47 - 128*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C7 PFUnA	*70*		*40 - 135*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C2-PFDoDA	*8*	**5-*	*28 - 136*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C2 PFTeDA	*75*		*10 - 144*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C3 PFBS	*72*		*19 - 178*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C3 PFHxS	*211*	**5+*	*32 - 145*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C8 PFOS	*83*		*49 - 126*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d3-NMeFOSAA	*56*		*32 - 151*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d5-NEtFOSAA	*140*		*37 - 164*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C8 FOSA	*59*		*10 - 143*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C4 PFBA	*80*		*41 - 132*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C5 PFPeA	*67*		*33 - 155*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d7-N-MeFOSE-M	*13*		*10 - 143*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d3-NMePFOSA	*17*		*10 - 107*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d9-N-EtFOSE-M	*129*		*10 - 142*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
d5-NEtPFOSA	*74*		*10 - 108*	*03/11/21 11:01*	*03/16/21 10:36*	*1*
13C3 HFPO-DA	*103*		*20 - 153*	*03/11/21 11:01*	*03/16/21 10:36*	*1*

Isotope Dilution Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS	M282FTS	M262FTS	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA
Lab Sample ID	Client Sample ID	(20-187)	(34-182)	(29-189)	(31-142)	(30-144)	(49-127)	(47-136)	(47-128)
410-31526-1	Field Blank Permanone 30-30	153	141	141	144 *5+	152 *5+	135 *5+	120	124
410-31526-2	Permanone 30-30	520 *5+	211 *5+	544 *5+	197 *5+	282 *5+	77	104	68
LCS 410-101498/2-A	Lab Control Sample	136	112	118	123	129	122	106	111
LCS 410-102145/2-B	Lab Control Sample	133	130	131	116	131	114	113	105
LCSD 410-101498/3-A	Lab Control Sample Dup	178	143	157	160 *5+	168 *5+	153 *5+	128	145 *5+
LCSD 410-102145/3-B	Lab Control Sample Dup	140	110	132	122	138	119	112	108
MB 410-101498/1-A	Method Blank	149	126	139	139	144	137 *5+	115	120
MB 410-102145/1-B	Method Blank	134	116	115	112	125	110	104	104

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		13C7PUA	PFDoDA	PFTDA	C3PFBS	C3PFHS	C8PFOS	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(40-135)	(28-136)	(10-144)	(19-178)	(32-145)	(49-126)	(32-151)	(37-164)
410-31526-1	Field Blank Permanone 30-30	129	136	122	126	143	120	123	122
410-31526-2	Permanone 30-30	70	8 *5-	75	72	211 *5+	83	56	140
LCS 410-101498/2-A	Lab Control Sample	117	114	110	108	122	109	110	109
LCS 410-102145/2-B	Lab Control Sample	104	112	98	111	127	111	82	74
LCSD 410-101498/3-A	Lab Control Sample Dup	137 *5+	150 *5+	142	140	162 *5+	136 *5+	139	131
LCSD 410-102145/3-B	Lab Control Sample Dup	106	107	94	106	132	110	97	100
MB 410-101498/1-A	Method Blank	128	127	114	120	138	118	114	118
MB 410-102145/1-B	Method Blank	105	109	95	107	120	103	92	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	PFBA	PFPeA	NMFM	d3NMFSA	NEFM	d5NPFSA	HFPODA
Lab Sample ID	Client Sample ID	(10-143)	(41-132)	(33-155)	(10-143)	(10-107)	(10-142)	(10-108)	(20-153)
410-31526-1	Field Blank Permanone 30-30	89	123	123	83	75	88	75	130
410-31526-2	Permanone 30-30	59	80	67	13	17	129	74	103
LCS 410-101498/2-A	Lab Control Sample	82	112	110	81	74	83	70	117
LCS 410-102145/2-B	Lab Control Sample	60	112	100	61	38	60	33	94
LCSD 410-101498/3-A	Lab Control Sample Dup	105	145 *5+	135	106	97	102	97	157 *5+
LCSD 410-102145/3-B	Lab Control Sample Dup	62	108	99	62	39	61	37	94
MB 410-101498/1-A	Method Blank	84	124	118	85	65	84	67	128
MB 410-102145/1-B	Method Blank	66	105	97	49	26	49	23	91

Surrogate Legend

M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
M262FTS = M2-6:2 FTS
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoDA = 13C2-PFDoDA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
PFOSA = 13C8 FOSA

Isotope Dilution Summary

Client: PEER

Job ID: 410-31526-1

Project/Site: Permanone 30-30

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA
HFPODA = 13C3 HFPO-DA

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-101498/1-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 101498

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorooctanoic acid	0.543	J	2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorooctanesulfonic acid	0.956	J	2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
NEtFOSAA	ND		3.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
NMeFOSAA	ND		2.0	0.60	ng/L		03/10/21 08:01	03/11/21 15:54	1
10:2 FTS	ND		5.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorononanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorohexadecanoic acid	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorooctadecanoic acid	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
NMeFOSE	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
NMeFOSA	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
NEtFOSE	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
NEtFOSA	ND		5.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
HFPODA	ND		3.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
DONA	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
9Cl-PF3ONS	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
11Cl-PF3OUdS	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		03/10/21 08:01	03/11/21 15:54	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		03/10/21 08:01	03/11/21 15:54	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		03/10/21 08:01	03/11/21 15:54	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*149*		*20 - 187*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
M2-8:2 FTS	*126*		*34 - 182*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
M2-6:2 FTS	*139*		*29 - 189*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C5 PFHxA	*139*		*31 - 142*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C4 PFHpA	*144*		*30 - 144*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C8 PFOA	*137*	*5+	*49 - 127*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C9 PFNA	*115*		*47 - 136*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C6 PFDA	*120*		*47 - 128*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C7 PFUnA	*128*		*40 - 135*	*03/10/21 08:01*	*03/11/21 15:54*	*1*
13C2-PFDoDA	*127*		*28 - 136*	*03/10/21 08:01*	*03/11/21 15:54*	*1*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: MB 410-101498/1-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 101498

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	114		10 - 144	03/10/21 08:01	03/11/21 15:54	1
13C3 PFBS	120		19 - 178	03/10/21 08:01	03/11/21 15:54	1
13C3 PFHxS	138		32 - 145	03/10/21 08:01	03/11/21 15:54	1
13C8 PFOS	118		49 - 126	03/10/21 08:01	03/11/21 15:54	1
d3-NMeFOSAA	114		32 - 151	03/10/21 08:01	03/11/21 15:54	1
d5-NEtFOSAA	118		37 - 164	03/10/21 08:01	03/11/21 15:54	1
13C8 FOSA	84		10 - 143	03/10/21 08:01	03/11/21 15:54	1
13C4 PFBA	124		41 - 132	03/10/21 08:01	03/11/21 15:54	1
13C5 PFPeA	118		33 - 155	03/10/21 08:01	03/11/21 15:54	1
d7-N-MeFOSE-M	85		10 - 143	03/10/21 08:01	03/11/21 15:54	1
d3-NMePFOSA	65		10 - 107	03/10/21 08:01	03/11/21 15:54	1
d9-N-EtFOSE-M	84		10 - 142	03/10/21 08:01	03/11/21 15:54	1
d5-NEtPFOSA	67		10 - 108	03/10/21 08:01	03/11/21 15:54	1
13C3 HFPO-DA	128		20 - 153	03/10/21 08:01	03/11/21 15:54	1

Lab Sample ID: LCS 410-101498/2-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.6	24.8		ng/L		97	66 - 137
Perfluoroheptanoic acid	25.6	25.2		ng/L		99	66 - 141
Perfluorooctanoic acid	25.6	29.7		ng/L		116	65 - 136
Perfluorononanoic acid	25.6	23.7		ng/L		93	65 - 140
Perfluorodecanoic acid	25.6	28.0		ng/L		109	63 - 137
Perfluorotridecanoic acid	25.6	29.1		ng/L		114	58 - 146
Perfluorotetradecanoic acid	25.6	23.7		ng/L		93	64 - 141
Perfluorobutanesulfonic acid	22.6	24.5		ng/L		108	65 - 132
Perfluorohexanesulfonic acid	24.2	22.4		ng/L		93	60 - 128
Perfluorooctanesulfonic acid	24.5	23.0		ng/L		94	51 - 126
NEtFOSAA	25.6	26.9		ng/L		105	54 - 134
NMeFOSAA	25.6	26.3		ng/L		103	58 - 143
10:2 FTS	24.7	23.3		ng/L		94	44 - 141
Perfluoropentanesulfonic acid	24.0	25.0		ng/L		104	71 - 136
Perfluoroheptanesulfonic acid	24.4	23.4		ng/L		96	67 - 135
Perfluorononanesulfonic acid	24.6	22.5		ng/L		91	67 - 137
Perfluorodecanesulfonic acid	24.7	23.7		ng/L		96	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	24.8	23.2		ng/L		94	54 - 136
Perfluorooctanesulfonamide	25.6	28.5		ng/L		112	55 - 130
Perfluorohexadecanoic acid	25.6	23.7		ng/L		92	52 - 149
Perfluorooctadecanoic acid	25.6	21.4		ng/L		83	32 - 167
Perfluorobutanoic acid	25.6	26.2		ng/L		103	62 - 156
Perfluoropentanoic acid	25.6	25.3		ng/L		99	72 - 139
NMeFOSE	25.6	24.1		ng/L		94	52 - 131
NMeFOSA	25.6	25.1		ng/L		98	49 - 141
NEtFOSE	25.6	24.5		ng/L		96	49 - 128
NEtFOSA	25.6	26.6		ng/L		104	50 - 136
HFPODA	25.6	22.7		ng/L		89	37 - 147

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-101498/2-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101498

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DONA			24.1	23.3		ng/L		97	49 - 158		
9Cl-PF3ONS			23.9	22.7		ng/L		95	52 - 135		
11Cl-PF3OUdS			24.1	24.5		ng/L		102	45 - 134		
Perfluorododecanoic acid			25.6	24.9		ng/L		97	63 - 140		
4:2 Fluorotelomer sulfonic acid			23.9	24.6		ng/L		103	59 - 130		
Perfluoroundecanoic acid			25.6	25.4		ng/L		99	62 - 138		
6:2 Fluorotelomer sulfonic acid			24.3	25.6		ng/L		105	57 - 137		
8:2 Fluorotelomer sulfonic acid			24.5	27.8		ng/L		114	56 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*136*		*20 - 187*
M2-8:2 FTS	*112*		*34 - 182*
M2-6:2 FTS	*118*		*29 - 189*
13C5 PFHxA	*123*		*31 - 142*
13C4 PFHpA	*129*		*30 - 144*
13C8 PFOA	*122*		*49 - 127*
13C9 PFNA	*106*		*47 - 136*
13C6 PFDA	*111*		*47 - 128*
13C7 PFUnA	*117*		*40 - 135*
13C2-PFDoDA	*114*		*28 - 136*
13C2 PFTeDA	*110*		*10 - 144*
13C3 PFBS	*108*		*19 - 178*
13C3 PFHxS	*122*		*32 - 145*
13C8 PFOS	*109*		*49 - 126*
d3-NMeFOSAA	*110*		*32 - 151*
d5-NEtFOSAA	*109*		*37 - 164*
13C8 FOSA	*82*		*10 - 143*
13C4 PFBA	*112*		*41 - 132*
13C5 PFPeA	*110*		*33 - 155*
d7-N-MeFOSE-M	*81*		*10 - 143*
d3-NMePFOSA	*74*		*10 - 107*
d9-N-EtFOSE-M	*83*		*10 - 142*
d5-NEtPFOSA	*70*		*10 - 108*
13C3 HFPO-DA	*117*		*20 - 153*

Lab Sample ID: LCSD 410-101498/3-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 101498

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid			25.6	24.5		ng/L		96	66 - 137	1	30
Perfluoroheptanoic acid			25.6	25.5		ng/L		100	66 - 141	1	30
Perfluorooctanoic acid			25.6	26.3		ng/L		103	65 - 136	12	30
Perfluorononanoic acid			25.6	26.0		ng/L		101	65 - 140	9	30
Perfluorodecanoic acid			25.6	26.3		ng/L		103	63 - 137	6	30
Perfluorotridecanoic acid			25.6	27.9		ng/L		109	58 - 146	4	30
Perfluorotetradecanoic acid			25.6	25.1		ng/L		98	64 - 141	6	30
Perfluorobutanesulfonic acid			22.6	24.5		ng/L		108	65 - 132	0	30
Perfluorohexanesulfonic acid			24.2	23.2		ng/L		96	60 - 128	4	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-101498/3-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 101498

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid			24.5	23.5		ng/L		96	51 - 126	2	30
NEtFOSAA			25.6	30.4		ng/L		119	54 - 134	12	30
NMeFOSAA			25.6	28.4		ng/L		111	58 - 143	8	30
10:2 FTS			24.7	24.9		ng/L		101	44 - 141	7	30
Perfluoropentanesulfonic acid			24.0	25.9		ng/L		108	71 - 136	4	30
Perfluoroheptanesulfonic acid			24.4	23.8		ng/L		98	67 - 135	2	30
Perfluorononanesulfonic acid			24.6	23.5		ng/L		96	67 - 137	4	30
Perfluorodecanesulfonic acid			24.7	24.6		ng/L		100	61 - 134	4	30
Perfluorododecanesulfonic acid (PFDoS)			24.8	23.2		ng/L		94	54 - 136	0	30
Perfluorooctanesulfonamide			25.6	29.0		ng/L		113	55 - 130	2	30
Perfluorohexadecanoic acid			25.6	23.5		ng/L		92	52 - 149	1	30
Perfluorooctadecanoic acid			25.6	20.3		ng/L		79	32 - 167	5	30
Perfluorobutanoic acid			25.6	26.1		ng/L		102	62 - 156	0	30
Perfluoropentanoic acid			25.6	25.8		ng/L		101	72 - 139	2	30
NMeFOSE			25.6	24.0		ng/L		94	52 - 131	0	30
NMeFOSA			25.6	26.4		ng/L		103	49 - 141	5	30
NEtFOSE			25.6	25.3		ng/L		99	49 - 128	3	30
NEtFOSA			25.6	26.7		ng/L		104	50 - 136	0	30
HFPODA			25.6	22.8		ng/L		89	37 - 147	0	30
DONA			24.1	23.8		ng/L		99	49 - 158	2	30
9Cl-PF3ONS			23.9	22.5		ng/L		94	52 - 135	1	30
11Cl-PF3OUdS			24.1	24.0		ng/L		100	45 - 134	2	30
Perfluorododecanoic acid			25.6	26.4		ng/L		103	63 - 140	6	30
4:2 Fluorotelomer sulfonic acid			23.9	25.3		ng/L		106	59 - 130	3	30
Perfluoroundecanoic acid			25.6	28.0		ng/L		109	62 - 138	10	30
6:2 Fluorotelomer sulfonic acid			24.3	27.2		ng/L		112	57 - 137	6	30
8:2 Fluorotelomer sulfonic acid			24.5	28.6		ng/L		117	56 - 140	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*178*		*20 - 187*
M2-8:2 FTS	*143*		*34 - 182*
M2-6:2 FTS	*157*		*29 - 189*
13C5 PFHxA	*160*	*5+	*31 - 142*
13C4 PFHpA	*168*	*5+	*30 - 144*
13C8 PFOA	*153*	*5+	*49 - 127*
13C9 PFNA	*128*		*47 - 136*
13C6 PFDA	*145*	*5+	*47 - 128*
13C7 PFUnA	*137*	*5+	*40 - 135*
13C2-PFDoDA	*150*	*5+	*28 - 136*
13C2 PFTeDA	*142*		*10 - 144*
13C3 PFBS	*140*		*19 - 178*
13C3 PFHxS	*162*	*5+	*32 - 145*
13C8 PFOS	*136*	*5+	*49 - 126*
d3-NMeFOSAA	*139*		*32 - 151*
d5-NEtFOSAA	*131*		*37 - 164*
13C8 FOSA	*105*		*10 - 143*
13C4 PFBA	*145*	*5+	*41 - 132*
13C5 PFPeA	*135*		*33 - 155*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-101498/3-A
Matrix: Water
Analysis Batch: 102185

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 101498

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
d7-N-MeFOSE-M	106		10 - 143
d3-NMePFOSA	97		10 - 107
d9-N-EtFOSE-M	102		10 - 142
d5-NEtPFOSA	97		10 - 108
13C3 HFPO-DA	157	*5+	20 - 153

Lab Sample ID: MB 410-102145/1-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102145

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluoroheptanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorooctanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorononanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorodecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorotridecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorotetradecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorobutanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorohexanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorooctanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
NEtFOSAA	ND		1500	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
NMeFOSAA	ND		1000	300	ng/L		03/11/21 11:01	03/12/21 18:58	1
10:2 FTS	ND		2500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluoropentanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluoroheptanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorononanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorodecanesulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1500	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorooctanesulfonamide	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorohexadecanoic acid	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorooctadecanoic acid	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorobutanoic acid	ND		2500	1000	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluoropentanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
NMeFOSE	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
NMeFOSA	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
NEtFOSE	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
NEtFOSA	ND		2500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1
HFPODA	ND		1500	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
DONA	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
9Cl-PF3ONS	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
11Cl-PF3OUdS	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluorododecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
4:2 Fluorotelomer sulfonic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
Perfluoroundecanoic acid	ND		1000	250	ng/L		03/11/21 11:01	03/12/21 18:58	1
6:2 Fluorotelomer sulfonic acid	ND		2500	1000	ng/L		03/11/21 11:01	03/12/21 18:58	1
8:2 Fluorotelomer sulfonic acid	ND		1500	500	ng/L		03/11/21 11:01	03/12/21 18:58	1

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	134		20 - 187	03/11/21 11:01	03/12/21 18:58	1
M2-8:2 FTS	116		34 - 182	03/11/21 11:01	03/12/21 18:58	1
M2-6:2 FTS	115		29 - 189	03/11/21 11:01	03/12/21 18:58	1
13C5 PFHxA	112		31 - 142	03/11/21 11:01	03/12/21 18:58	1
13C4 PFHpA	125		30 - 144	03/11/21 11:01	03/12/21 18:58	1
13C8 PFOA	110		49 - 127	03/11/21 11:01	03/12/21 18:58	1
13C9 PFNA	104		47 - 136	03/11/21 11:01	03/12/21 18:58	1
13C6 PFDA	104		47 - 128	03/11/21 11:01	03/12/21 18:58	1
13C7 PFUnA	105		40 - 135	03/11/21 11:01	03/12/21 18:58	1
13C2-PFDoDA	109		28 - 136	03/11/21 11:01	03/12/21 18:58	1
13C2 PFTeDA	95		10 - 144	03/11/21 11:01	03/12/21 18:58	1
13C3 PFBS	107		19 - 178	03/11/21 11:01	03/12/21 18:58	1
13C3 PFHxS	120		32 - 145	03/11/21 11:01	03/12/21 18:58	1
13C8 PFOS	103		49 - 126	03/11/21 11:01	03/12/21 18:58	1
d3-NMeFOSAA	92		32 - 151	03/11/21 11:01	03/12/21 18:58	1
d5-NEtFOSAA	90		37 - 164	03/11/21 11:01	03/12/21 18:58	1
13C8 FOSA	66		10 - 143	03/11/21 11:01	03/12/21 18:58	1
13C4 PFBA	105		41 - 132	03/11/21 11:01	03/12/21 18:58	1
13C5 PFPeA	97		33 - 155	03/11/21 11:01	03/12/21 18:58	1
d7-N-MeFOSE-M	49		10 - 143	03/11/21 11:01	03/12/21 18:58	1
d3-NMePFOSA	26		10 - 107	03/11/21 11:01	03/12/21 18:58	1
d9-N-EtFOSE-M	49		10 - 142	03/11/21 11:01	03/12/21 18:58	1
d5-NEtPFOSA	23		10 - 108	03/11/21 11:01	03/12/21 18:58	1
13C3 HFPO-DA	91		20 - 153	03/11/21 11:01	03/12/21 18:58	1

Lab Sample ID: LCS 410-102145/2-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	6400	5890		ng/L		92	66 - 137
Perfluoroheptanoic acid	6400	6000		ng/L		94	66 - 141
Perfluorooctanoic acid	6400	6580		ng/L		103	65 - 136
Perfluorononanoic acid	6400	5990		ng/L		94	65 - 140
Perfluorodecanoic acid	6400	6870		ng/L		107	63 - 137
Perfluorotridecanoic acid	6400	6200		ng/L		97	58 - 146
Perfluorotetradecanoic acid	6400	5810		ng/L		91	64 - 141
Perfluorobutanesulfonic acid	5660	5760		ng/L		102	65 - 132
Perfluorohexanesulfonic acid	6050	5440		ng/L		90	60 - 128
Perfluorooctanesulfonic acid	6120	5160		ng/L		84	51 - 126
NEtFOSAA	6400	6210		ng/L		97	54 - 134
NMeFOSAA	6400	5810		ng/L		91	58 - 143
10:2 FTS	6170	5420		ng/L		88	44 - 141
Perfluoropentanesulfonic acid	6000	6170		ng/L		103	71 - 136
Perfluoroheptanesulfonic acid	6090	5510		ng/L		90	67 - 135
Perfluorononanesulfonic acid	6140	6010		ng/L		98	67 - 137
Perfluorodecanesulfonic acid	6160	5510		ng/L		89	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	6200	5540		ng/L		89	54 - 136
Perfluorooctanesulfonamide	6400	6530		ng/L		102	55 - 130
Perfluorohexadecanoic acid	6400	5330		ng/L		83	52 - 149
Perfluorooctadecanoic acid	6400	3700		ng/L		58	32 - 167

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCS 410-102145/2-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid	6400	6940		ng/L		108	62 - 156
Perfluoropentanoic acid	6400	6340		ng/L		99	72 - 139
NMeFOSE	6400	5480		ng/L		86	52 - 131
NMeFOSA	6400	5520		ng/L		86	49 - 141
NEtFOSE	6400	5660		ng/L		88	49 - 128
NEtFOSA	6400	6120		ng/L		96	50 - 136
HFPODA	6400	5660		ng/L		88	37 - 147
DONA	6030	5200		ng/L		86	49 - 158
9Cl-PF3ONS	5960	5380		ng/L		90	52 - 135
11Cl-PF3OUdS	6030	5550		ng/L		92	45 - 134
Perfluorododecanoic acid	6400	6370		ng/L		100	63 - 140
4:2 Fluorotelomer sulfonic acid	5980	6000		ng/L		100	59 - 130
Perfluoroundecanoic acid	6400	6600		ng/L		103	62 - 138
6:2 Fluorotelomer sulfonic acid	6070	5830		ng/L		96	57 - 137
8:2 Fluorotelomer sulfonic acid	6130	6370		ng/L		104	56 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*133*		*20 - 187*
M2-8:2 FTS	*130*		*34 - 182*
M2-6:2 FTS	*131*		*29 - 189*
13C5 PFHxA	*116*		*31 - 142*
13C4 PFHpA	*131*		*30 - 144*
13C8 PFOA	*114*		*49 - 127*
13C9 PFNA	*113*		*47 - 136*
13C6 PFDA	*105*		*47 - 128*
13C7 PFUnA	*104*		*40 - 135*
13C2-PFDoDA	*112*		*28 - 136*
13C2 PFTeDA	*98*		*10 - 144*
13C3 PFBS	*111*		*19 - 178*
13C3 PFHxS	*127*		*32 - 145*
13C8 PFOS	*111*		*49 - 126*
d3-NMeFOSAA	*82*		*32 - 151*
d5-NEtFOSAA	*74*		*37 - 164*
13C8 FOSA	*60*		*10 - 143*
13C4 PFBA	*112*		*41 - 132*
13C5 PFPeA	*100*		*33 - 155*
d7-N-MeFOSE-M	*61*		*10 - 143*
d3-NMePFOSA	*38*		*10 - 107*
d9-N-EtFOSE-M	*60*		*10 - 142*
d5-NEtPFOSA	*33*		*10 - 108*
13C3 HFPO-DA	*94*		*20 - 153*

Lab Sample ID: LCSD 410-102145/3-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102145

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid	6400	5890		ng/L		92	66 - 137	0	30
Perfluoroheptanoic acid	6400	5850		ng/L		91	66 - 141	3	30

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-102145/3-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102145

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid			6400	6760		ng/L		106	65 - 136	3	30
Perfluorononanoic acid			6400	5940		ng/L		93	65 - 140	1	30
Perfluorodecanoic acid			6400	7000		ng/L		109	63 - 137	2	30
Perfluorotridecanoic acid			6400	6520		ng/L		102	58 - 146	5	30
Perfluorotetradecanoic acid			6400	5980		ng/L		93	64 - 141	3	30
Perfluorobutanesulfonic acid			5660	5820		ng/L		103	65 - 132	1	30
Perfluorohexanesulfonic acid			6050	5400		ng/L		89	60 - 128	1	30
Perfluorooctanesulfonic acid			6120	5180		ng/L		85	51 - 126	0	30
NEtFOSAA			6400	6230		ng/L		97	54 - 134	0	30
NMeFOSAA			6400	6290		ng/L		98	58 - 143	8	30
10:2 FTS			6170	6360		ng/L		103	44 - 141	16	30
Perfluoropentanesulfonic acid			6000	6150		ng/L		102	71 - 136	0	30
Perfluoroheptanesulfonic acid			6090	5570		ng/L		91	67 - 135	1	30
Perfluorononanesulfonic acid			6140	5560		ng/L		91	67 - 137	8	30
Perfluorodecanesulfonic acid			6160	5450		ng/L		88	61 - 134	1	30
Perfluorododecanesulfonic acid (PFDoS)			6200	5150		ng/L		83	54 - 136	7	30
Perfluorooctanesulfonamide			6400	6810		ng/L		106	55 - 130	4	30
Perfluorohexadecanoic acid			6400	5350		ng/L		84	52 - 149	0	30
Perfluorooctadecanoic acid			6400	3610		ng/L		56	32 - 167	2	30
Perfluorobutanoic acid			6400	6690		ng/L		105	62 - 156	4	30
Perfluoropentanoic acid			6400	6060		ng/L		95	72 - 139	4	30
NMeFOSE			6400	5240		ng/L		82	52 - 131	4	30
NMeFOSA			6400	6290		ng/L		98	49 - 141	13	30
NEtFOSE			6400	5700		ng/L		89	49 - 128	1	30
NEtFOSA			6400	6470		ng/L		101	50 - 136	6	30
HFPODA			6400	6010		ng/L		94	37 - 147	6	30
DONA			6030	5310		ng/L		88	49 - 158	2	30
9Cl-PF3ONS			5960	5130		ng/L		86	52 - 135	5	30
11Cl-PF3OUdS			6030	5610		ng/L		93	45 - 134	1	30
Perfluorododecanoic acid			6400	6540		ng/L		102	63 - 140	3	30
4:2 Fluorotelomer sulfonic acid			5980	6200		ng/L		104	59 - 130	3	30
Perfluoroundecanoic acid			6400	6380		ng/L		100	62 - 138	3	30
6:2 Fluorotelomer sulfonic acid			6070	5910		ng/L		97	57 - 137	2	30
8:2 Fluorotelomer sulfonic acid			6130	6980		ng/L		114	56 - 140	9	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*140*		*20 - 187*
M2-8:2 FTS	*110*		*34 - 182*
M2-6:2 FTS	*132*		*29 - 189*
13C5 PFHxA	*122*		*31 - 142*
13C4 PFHpA	*138*		*30 - 144*
13C8 PFOA	*119*		*49 - 127*
13C9 PFNA	*112*		*47 - 136*
13C6 PFDA	*108*		*47 - 128*
13C7 PFUnA	*106*		*40 - 135*
13C2-PFDoDA	*107*		*28 - 136*
13C2 PFTeDA	*94*		*10 - 144*
13C3 PFBS	*106*		*19 - 178*

Method: 537 IDA - EPA 537 Isotope Dilution (Continued)

Lab Sample ID: LCSD 410-102145/3-B
Matrix: Water
Analysis Batch: 102671

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102145

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C3 PFHxS	132		32 - 145
13C8 PFOS	110		49 - 126
d3-NMeFOSAA	97		32 - 151
d5-NEtFOSAA	100		37 - 164
13C8 FOSA	62		10 - 143
13C4 PFBA	108		41 - 132
13C5 PFPeA	99		33 - 155
d7-N-MeFOSE-M	62		10 - 143
d3-NMePFOSA	39		10 - 107
d9-N-EtFOSE-M	61		10 - 142
d5-NEtPFOSA	37		10 - 108
13C3 HFPO-DA	94		20 - 153

QC Association Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

LCMS

Prep Batch: 101498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-1	Field Blank Permanone 30-30	Total/NA	Water	537 IDA	
410-31526-1 - RA	Field Blank Permanone 30-30	Total/NA	Water	537 IDA	
MB 410-101498/1-A	Method Blank	Total/NA	Water	537 IDA	
LCS 410-101498/2-A	Lab Control Sample	Total/NA	Water	537 IDA	
LCSD 410-101498/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	

Prep Batch: 102145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-2 - RA	Permanone 30-30	Total/NA	Water	EPA 537 (Mod)	
410-31526-2	Permanone 30-30	Total/NA	Water	EPA 537 (Mod)	
MB 410-102145/1-B	Method Blank	Total/NA	Water	EPA 537 (Mod)	
LCS 410-102145/2-B	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	
LCSD 410-102145/3-B	Lab Control Sample Dup	Total/NA	Water	EPA 537 (Mod)	

Cleanup Batch: 102155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-2	Permanone 30-30	Total/NA	Water	Extract Aliquot	102145
410-31526-2 - RA	Permanone 30-30	Total/NA	Water	Extract Aliquot	102145
MB 410-102145/1-B	Method Blank	Total/NA	Water	Extract Aliquot	102145
LCS 410-102145/2-B	Lab Control Sample	Total/NA	Water	Extract Aliquot	102145
LCSD 410-102145/3-B	Lab Control Sample Dup	Total/NA	Water	Extract Aliquot	102145

Analysis Batch: 102185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-1	Field Blank Permanone 30-30	Total/NA	Water	537 IDA	101498
410-31526-1 - RA	Field Blank Permanone 30-30	Total/NA	Water	537 IDA	101498
MB 410-101498/1-A	Method Blank	Total/NA	Water	537 IDA	101498
LCS 410-101498/2-A	Lab Control Sample	Total/NA	Water	537 IDA	101498
LCSD 410-101498/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	101498

Analysis Batch: 102671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-2 - RA	Permanone 30-30	Total/NA	Water	537 IDA	102155
MB 410-102145/1-B	Method Blank	Total/NA	Water	537 IDA	102155
LCS 410-102145/2-B	Lab Control Sample	Total/NA	Water	537 IDA	102155
LCSD 410-102145/3-B	Lab Control Sample Dup	Total/NA	Water	537 IDA	102155

Analysis Batch: 103586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-31526-2	Permanone 30-30	Total/NA	Water	537 IDA	102155

Lab Chronicle

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Client Sample ID: Field Blank Permanone 30-30
Lab Sample ID: 410-31526-1

Date Collected: 03/04/21 12:09
Matrix: Water
Date Received: 03/08/21 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			101498	03/10/21 08:01	X4HV	ELLE
Total/NA	Analysis	537 IDA		1	102185	03/11/21 17:19	UUV6	ELLE
Total/NA	Prep	537 IDA	RA		101498	03/10/21 08:01	X4HV	ELLE
Total/NA	Analysis	537 IDA	RA	1	102185	03/12/21 02:38	UUV6	ELLE

Client Sample ID: Permanone 30-30
Lab Sample ID: 410-31526-2

Date Collected: 03/04/21 12:15
Matrix: Water
Date Received: 03/08/21 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 537 (Mod)	RA		102145	03/11/21 11:01	X4HV	ELLE
Total/NA	Cleanup	Extract Aliquot	RA		102155	03/11/21 11:18	X4HV	ELLE
Total/NA	Analysis	537 IDA	RA	1	102671	03/12/21 19:30	UUV6	ELLE
Total/NA	Prep	EPA 537 (Mod)			102145	03/11/21 11:01	X4HV	ELLE
Total/NA	Cleanup	Extract Aliquot			102155	03/11/21 11:18	X4HV	ELLE
Total/NA	Analysis	537 IDA		1	103586	03/16/21 10:36	OLN7	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	537 IDA	Water	10:2 FTS
537 IDA	537 IDA	Water	11Cl-PF3OUdS
537 IDA	537 IDA	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	9Cl-PF3ONS
537 IDA	537 IDA	Water	DONA
537 IDA	537 IDA	Water	HFPODA
537 IDA	537 IDA	Water	NEtFOSA
537 IDA	537 IDA	Water	NEtFOSAA
537 IDA	537 IDA	Water	NEtFOSE
537 IDA	537 IDA	Water	NMeFOSA
537 IDA	537 IDA	Water	NMeFOSAA
537 IDA	537 IDA	Water	NMeFOSE
537 IDA	537 IDA	Water	Perfluorobutanesulfonic acid
537 IDA	537 IDA	Water	Perfluorobutanoic acid
537 IDA	537 IDA	Water	Perfluorodecanesulfonic acid
537 IDA	537 IDA	Water	Perfluorodecanoic acid
537 IDA	537 IDA	Water	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	537 IDA	Water	Perfluorododecanoic acid
537 IDA	537 IDA	Water	Perfluoroheptanesulfonic acid
537 IDA	537 IDA	Water	Perfluoroheptanoic acid
537 IDA	537 IDA	Water	Perfluorohexadecanoic acid
537 IDA	537 IDA	Water	Perfluorohexanesulfonic acid
537 IDA	537 IDA	Water	Perfluorohexanoic acid
537 IDA	537 IDA	Water	Perfluorononanesulfonic acid
537 IDA	537 IDA	Water	Perfluorononanoic acid
537 IDA	537 IDA	Water	Perfluorooctadecanoic acid
537 IDA	537 IDA	Water	Perfluorooctanesulfonamide
537 IDA	537 IDA	Water	Perfluorooctanesulfonic acid
537 IDA	537 IDA	Water	Perfluorooctanoic acid
537 IDA	537 IDA	Water	Perfluoropentanesulfonic acid
537 IDA	537 IDA	Water	Perfluoropentanoic acid
537 IDA	537 IDA	Water	Perfluorotetradecanoic acid
537 IDA	537 IDA	Water	Perfluorotridecanoic acid
537 IDA	537 IDA	Water	Perfluoroundecanoic acid
537 IDA	EPA 537 (Mod)	Water	10:2 FTS
537 IDA	EPA 537 (Mod)	Water	11Cl-PF3OUdS
537 IDA	EPA 537 (Mod)	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	9Cl-PF3ONS
537 IDA	EPA 537 (Mod)	Water	DONA
537 IDA	EPA 537 (Mod)	Water	HFPODA
537 IDA	EPA 537 (Mod)	Water	NEtFOSA

Laboratory: Eurofins Lancaster Laboratories Env, LLC (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-21

537 IDA	EPA 537 (Mod)	Water	NEtFOSAA
537 IDA	EPA 537 (Mod)	Water	NEtFOSE
537 IDA	EPA 537 (Mod)	Water	NMeFOSA
537 IDA	EPA 537 (Mod)	Water	NMeFOSAA
537 IDA	EPA 537 (Mod)	Water	NMeFOSE
537 IDA	EPA 537 (Mod)	Water	Perfluorobutanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorobutanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorodecanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorodecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	EPA 537 (Mod)	Water	Perfluorododecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroheptanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroheptanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexadecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorononanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorononanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctadecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanesulfonamide
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoropentanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoropentanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorotetradecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorotridecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroundecanoic acid

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 IDA	537 IDA	Water	10:2 FTS
537 IDA	537 IDA	Water	11Cl-PF3OUdS
537 IDA	537 IDA	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	537 IDA	Water	9Cl-PF3ONS
537 IDA	537 IDA	Water	DONA
537 IDA	537 IDA	Water	HFPODA
537 IDA	537 IDA	Water	NEtFOSA
537 IDA	537 IDA	Water	NEtFOSAA
537 IDA	537 IDA	Water	NEtFOSE
537 IDA	537 IDA	Water	NMeFOSA
537 IDA	537 IDA	Water	NMeFOSAA
537 IDA	537 IDA	Water	NMeFOSE
537 IDA	537 IDA	Water	Perfluorobutanesulfonic acid
537 IDA	537 IDA	Water	Perfluorobutanoic acid
537 IDA	537 IDA	Water	Perfluorodecanesulfonic acid
537 IDA	537 IDA	Water	Perfluorodecanoic acid

Laboratory: Eurofins Lancaster Laboratories Env, LLC (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-21

537 IDA	537 IDA	Water	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	537 IDA	Water	Perfluorododecanoic acid
537 IDA	537 IDA	Water	Perfluoroheptanesulfonic acid
537 IDA	537 IDA	Water	Perfluoroheptanoic acid
537 IDA	537 IDA	Water	Perfluorohexadecanoic acid
537 IDA	537 IDA	Water	Perfluorohexanesulfonic acid
537 IDA	537 IDA	Water	Perfluorohexanoic acid
537 IDA	537 IDA	Water	Perfluorononanesulfonic acid
537 IDA	537 IDA	Water	Perfluorononanoic acid
537 IDA	537 IDA	Water	Perfluorooctadecanoic acid
537 IDA	537 IDA	Water	Perfluorooctanesulfonamide
537 IDA	537 IDA	Water	Perfluorooctanesulfonic acid
537 IDA	537 IDA	Water	Perfluorooctanoic acid
537 IDA	537 IDA	Water	Perfluoropentanesulfonic acid
537 IDA	537 IDA	Water	Perfluoropentanoic acid
537 IDA	537 IDA	Water	Perfluorotetradecanoic acid
537 IDA	537 IDA	Water	Perfluorotridecanoic acid
537 IDA	537 IDA	Water	Perfluoroundecanoic acid
537 IDA	EPA 537 (Mod)	Water	10:2 FTS
537 IDA	EPA 537 (Mod)	Water	11Cl-PF3OUdS
537 IDA	EPA 537 (Mod)	Water	4:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	6:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	8:2 Fluorotelomer sulfonic acid
537 IDA	EPA 537 (Mod)	Water	9Cl-PF3ONS
537 IDA	EPA 537 (Mod)	Water	DONA
537 IDA	EPA 537 (Mod)	Water	HFPODA
537 IDA	EPA 537 (Mod)	Water	NEtFOSA
537 IDA	EPA 537 (Mod)	Water	NEtFOSAA
537 IDA	EPA 537 (Mod)	Water	NEtFOSE
537 IDA	EPA 537 (Mod)	Water	NMeFOSA
537 IDA	EPA 537 (Mod)	Water	NMeFOSAA
537 IDA	EPA 537 (Mod)	Water	NMeFOSE
537 IDA	EPA 537 (Mod)	Water	Perfluorobutanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorobutanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorodecanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorodecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	EPA 537 (Mod)	Water	Perfluorododecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroheptanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroheptanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexadecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorohexanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorononanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorononanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctadecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanesulfonamide
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorooctanoic acid

Laboratory: Eurofins Lancaster Laboratories Env, LLC (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10670	04-01-21

537 IDA	EPA 537 (Mod)	Water	Perfluoropentanesulfonic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoropentanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorotetradecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluorotridecanoic acid
537 IDA	EPA 537 (Mod)	Water	Perfluoroundecanoic acid

Method Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
EPA 537 (Mod)	EPA 537 Isotope Dilution	EPA	ELLE
Extract Aliquot	Preparation, Extract Aliquot	None	ELLE

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: PEER
Job ID: 410-31526-1
Project/Site: Permanone 30-30

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-31526-1	Field Blank Permanone 30-30	Water	03/04/21 12:09	03/08/21 09:48	
410-31526-2	Permanone 30-30	Water	03/04/21 12:15	03/08/21 09:48	

410-31526 Chain of Custody

Chain of Custody Record

eurofins Environment Testing America

Tim Whitehouse	Sampler: Tim Whitehouse	Lab PM: Izzo, Mary Kate	Carrier Tracking No(s):	COC No: 410-14660-4885.1
	Phone: 240 246 4492	E-Mail: MaryKate.Izzo@eurofinset.com	State of Origin:	Page: Page 1 of 3
Company: PEER	PWSID:			Job #:

Address: 962 Wayne Avenue Suite 610	Due Date Requested:	
City: Silver Spring	TAT Requested (days):	
State, Zip: MD, 20910	Compliance Project: Δ Yes Δ No	
Phone: 202-265-7337(Tel)	PO #: Purchase Order not required	
Email: twhitehouse@peer.org	WO #:	
Project Name: Permanonc 30-30	Project #: 41001955	
Site: Poolesville MD	SSOW#:	

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS	PFC_IDA - Standard 32, plus 4 replacements	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Field Blank Permonanc 30-30	3-4-21	12:09	G				X		
Permanonc 30-30	3-4-21	12:15	G				X		

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: Kar L. Hunt	Date/Time: 1-28-21 0940	Company: ELE	Received by:	Date/Time:	Company
Relinquished by: Trinity Whiter	Date/Time: 3-5-21 1400	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/8/21 0948	Company: ELE

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 11/01/2020

3/19/2021

410-31526 Chain of Custody

Chain of Custody Record

eurofins Environment Testing America

Tim Whitehouse	Sampler: Tim Whitehouse	Lab PM: Izzo, Mary Kate	Carrier Tracking No(s):	COC No: 410-14660-4885.1
	Phone: 240 246 4492	E-Mail: MaryKate.Izzo@eurofinset.com	State of Origin:	Page: Page 1 of 3
Company: PEER	PWSID:	Analysis Requested		Job #:
Address: 962 Wayne Avenue Suite 610	Due Date Requested:			Preservation Codes:
City: Silver Spring	TAT Requested (days):			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: MD, 20910	Compliance Project: Δ Yes Δ No			
Phone: 202-265-7337(Tel)	PO #: Purchase Order not required			
Email: twhitehouse@peer.org	WO #:			Other:
Project Name: Permanonc 30-30	Project #: 41001955			
Site: Poolesville MD	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	PFC_IDA - Standard 32, plus 4 replacements	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N		
Field Blank Permanonc 30-30	3-4-21	12:09	G			X		
Permanonc 30-30	3-4-21	12:15	G			X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Kar L. Hunt	Date/Time: 1-28-21 0740	Company: ELLE	Received by:	Date/Time:	Company		
Relinquished by: Trinity Whiter	Date/Time: 3-5-21 1400	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 3/8/21 0948	Company: ELLE		

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.5° C

③ KM 2/23 3/8/21

Login Sample Receipt Checklist

Client: PEER

Job Number: 410-31526-1

Login Number: 31526

List Source: Eurofins Lancaster Laboratories Env

List Number: 1

Creator: Foreman, Leah M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	