eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-17071-1
Client Project/Site: PEER

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

Attn: Tim Whitehouse

Marrissa Williams

Authorized for release by:
10/23/2020 4:33:47 PM
Marrissa Williams, Project Manager
(717)556-7246
marrissawilliams@eurofinsus.com

Designee for

Mary Kate Izzo, Project Manager
(717)556-4656
marykateizzo@eurofinsus.com

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 recoveries that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result.

* 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 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.

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 LANACASTER 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.

Marrissa Williams
Project Manager
10/23/2020 4:33:47 PM

Table of Contents

Definitions/Glossary

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*5	Isotope dilution analyte is outside acceptance limits.
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

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Job ID: 410-17071-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-17071-1

Receipt
The samples were received on 10/13/2020 5:03 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

Receipt Exceptions
The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. No Project or Site was listed on the COC.

LCMS
Method PFC_IDA: The recovery for the labeled isotope(s) in the following samples: Anvil #1 (410-17071-2) and Anvil #2 (410-17071-3). is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the sample, 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
Project/Site: PEER

Job ID: 410-17071-1

Client Sample ID: Field Blank #1 — Lab Sample ID: 410-17071-1

No Detections.

Client Sample ID: Anvil #1 — Lab Sample ID: 410-17071-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HFPODA	260	J	1500	250	ng/L	1		537 IDA	Total/NA

Client Sample ID: Anvil #2 — Lab Sample ID: 410-17071-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Client Sample ID: Field Blank #1
Date Collected: 10/13/20 09:00
Date Received: 10/13/20 17:03

Lab Sample ID: 410-17071-1
Matrix: Water

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluoroheptanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorooctanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorononanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorodecanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorotridecanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorotetradecanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorobutanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorohexanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorooctanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
NEtFOSAA	ND		2.7	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
NMeFOSAA	ND		1.8	0.55	ng/L		10/15/20 17:09	10/20/20 14:30	1
10:2 FTS	ND		4.6	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluoropentanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluoroheptanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorononanesulfonic acid	ND	*	1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorodecanesulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.7	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorooctanesulfonamide	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorohexadecanoic acid	ND	*	2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorooctadecanoic acid	ND		2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorobutanoic acid	ND		4.6	1.8	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluoropentanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
NMeFOSE	ND		2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
NMeFOSA	ND		2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
NEtFOSE	ND		2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
NEtFOSA	ND		4.6	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1
HFPODA	ND		2.7	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
DONA	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
9Cl-PF3ONS	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
11Cl-PF3OUdS	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluorododecanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
4:2 Fluorotelomer sulfonic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
Perfluoroundecanoic acid	ND		1.8	0.46	ng/L		10/15/20 17:09	10/20/20 14:30	1
6:2 Fluorotelomer sulfonic acid	ND		4.6	1.8	ng/L		10/15/20 17:09	10/20/20 14:30	1
8:2 Fluorotelomer sulfonic acid	ND		2.7	0.91	ng/L		10/15/20 17:09	10/20/20 14:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*104*		*20 - 187*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
M2-8:2 FTS	*97*		*34 - 182*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
M2-6:2 FTS	*118*		*29 - 189*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C5 PFHxA	*96*		*31 - 142*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C4 PFHpA	*99*		*30 - 144*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C8 PFOA	*102*		*49 - 127*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C9 PFNA	*95*		*47 - 136*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C6 PFDA	*88*		*47 - 128*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C7 PFUnA	*95*		*40 - 135*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C2-PFDoDA	*94*		*28 - 136*	*10/15/20 17:09*	*10/20/20 14:30*	*1*
13C2 PFTeDA	*88*		*10 - 144*	*10/15/20 17:09*	*10/20/20 14:30*	*1*

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Client Sample ID: Field Blank #1

Lab Sample ID: 410-17071-1

Date Collected: 10/13/20 09:00
Matrix: Water
Date Received: 10/13/20 17:03

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	87		19 - 178	10/15/20 17:09	10/20/20 14:30	1
13C3 PFHxS	95		32 - 145	10/15/20 17:09	10/20/20 14:30	1
13C8 PFOS	88		49 - 126	10/15/20 17:09	10/20/20 14:30	1
d3-NMeFOSAA	103		32 - 151	10/15/20 17:09	10/20/20 14:30	1
d5-NEtFOSAA	112		37 - 164	10/15/20 17:09	10/20/20 14:30	1
13C8 FOSA	84		10 - 143	10/15/20 17:09	10/20/20 14:30	1
13C4 PFBA	94		41 - 132	10/15/20 17:09	10/20/20 14:30	1
13C5 PFPeA	97		33 - 155	10/15/20 17:09	10/20/20 14:30	1
d7-N-MeFOSE-M	65		10 - 143	10/15/20 17:09	10/20/20 14:30	1
d3-NMePFOSA	26		10 - 107	10/15/20 17:09	10/20/20 14:30	1
d9-N-EtFOSE-M	62		10 - 142	10/15/20 17:09	10/20/20 14:30	1
d5-NEtPFOSA	26		10 - 108	10/15/20 17:09	10/20/20 14:30	1
13C3 HFPO-DA	98		20 - 153	10/15/20 17:09	10/20/20 14:30	1

Client Sample ID: Anvil #1

Lab Sample ID: 410-17071-2

Date Collected: 10/13/20 09:00
Matrix: Water
Date Received: 10/13/20 17:03

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		10/18/20 11:12	10/20/20 15:11	1
Perfluoroheptanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorooctanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorononanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorodecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorotridecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorotetradecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorobutanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorohexanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorooctanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
NEtFOSAA	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
NMeFOSAA	ND		1000	300	ng/L		10/18/20 11:12	10/20/20 15:11	1
10:2 FTS	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluoropentanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluoroheptanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorononanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorodecanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorooctanesulfonamide	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorohexadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorooctadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorobutanoic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluoropentanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
NMeFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
NMeFOSA	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
NEtFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
NEtFOSA	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1
HFPODA	**260**	**J**	1500	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
DONA	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1

Client Sample ID: Anvil #1

Date Collected: 10/13/20 09:00
Date Received: 10/13/20 17:03

Lab Sample ID: 410-17071-2
Matrix: Water

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		10/18/20 11:12	10/20/20 15:11	1
11Cl-PF3OUdS	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluorododecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
4:2 Fluorotelomer sulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
Perfluoroundecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:11	1
6:2 Fluorotelomer sulfonic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 15:11	1
8:2 Fluorotelomer sulfonic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*114*		*20 - 187*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
M2-8:2 FTS	*287*	**5*	*34 - 182*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
M2-6:2 FTS	*168*		*29 - 189*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C5 PFHxA	*93*		*31 - 142*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C4 PFHpA	*103*		*30 - 144*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C8 PFOA	*96*		*49 - 127*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C9 PFNA	*136*		*47 - 136*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C6 PFDA	*92*		*47 - 128*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C7 PFUnA	*85*		*40 - 135*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C2-PFDoDA	*37*		*28 - 136*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C2 PFTeDA	*76*		*10 - 144*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C3 PFBS	*94*		*19 - 178*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C3 PFHxS	*80*		*32 - 145*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C8 PFOS	*98*		*49 - 126*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d3-NMeFOSAA	*165*	**5*	*32 - 151*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d5-NEtFOSAA	*206*	**5*	*37 - 164*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C8 FOSA	*63*		*10 - 143*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C4 PFBA	*98*		*41 - 132*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C5 PFPeA	*99*		*33 - 155*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d7-N-MeFOSE-M	*53*		*10 - 143*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d3-NMePFOSA	*59*		*10 - 107*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d9-N-EtFOSE-M	*174*	**5*	*10 - 142*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
d5-NEtPFOSA	*94*		*10 - 108*	*10/18/20 11:12*	*10/20/20 15:11*	*1*
13C3 HFPO-DA	*54*		*20 - 153*	*10/18/20 11:12*	*10/20/20 15:11*	*1*

Client Sample ID: Anvil #2

Date Collected: 10/13/20 09:00
Date Received: 10/13/20 17:03

Lab Sample ID: 410-17071-3
Matrix: Water

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		10/18/20 11:12	10/20/20 15:20	1
Perfluoroheptanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorooctanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorononanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorodecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorotridecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorotetradecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorobutanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorohexanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorooctanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
NEtFOSAA	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 15:20	1

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Client Sample ID: Anvil #2
Date Collected: 10/13/20 09:00
Date Received: 10/13/20 17:03

Lab Sample ID: 410-17071-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	ND		1000	300	ng/L		10/18/20 11:12	10/20/20 15:20	1
10:2 FTS	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluoropentanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluoroheptanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorononanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorodecanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorooctanesulfonamide	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorohexadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorooctadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorobutanoic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluoropentanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
NMeFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
NMeFOSA	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
NEtFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
NEtFOSA	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1
HFPODA	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
DONA	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
9Cl-PF3ONS	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
11Cl-PF3OUdS	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluorododecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
4:2 Fluorotelomer sulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
Perfluoroundecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 15:20	1
6:2 Fluorotelomer sulfonic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 15:20	1
8:2 Fluorotelomer sulfonic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 15:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*136*		*20 - 187*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
M2-8:2 FTS	*309*	**5*	*34 - 182*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
M2-6:2 FTS	*209*	**5*	*29 - 189*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C5 PFHxA	*96*		*31 - 142*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C4 PFHpA	*106*		*30 - 144*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C8 PFOA	*103*		*49 - 127*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C9 PFNA	*144*	**5*	*47 - 136*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C6 PFDA	*99*		*47 - 128*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C7 PFUnA	*93*		*40 - 135*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C2-PFDoDA	*42*		*28 - 136*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C2 PFTeDA	*85*		*10 - 144*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C3 PFBS	*93*		*19 - 178*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C3 PFHxS	*81*		*32 - 145*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C8 PFOS	*103*		*49 - 126*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
d3-NMeFOSAA	*181*	**5*	*32 - 151*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
d5-NEtFOSAA	*231*	**5*	*37 - 164*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C8 FOSA	*71*		*10 - 143*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C4 PFBA	*100*		*41 - 132*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
13C5 PFPeA	*105*		*33 - 155*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
d7-N-MeFOSE-M	*59*		*10 - 143*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
d3-NMePFOSA	*69*		*10 - 107*	*10/18/20 11:12*	*10/20/20 15:20*	*1*
d9-N-EtFOSE-M	*179*	**5*	*10 - 142*	*10/18/20 11:12*	*10/20/20 15:20*	*1*

Client Sample ID: Anvil #2
Date Collected: 10/13/20 09:00
Date Received: 10/13/20 17:03

Lab Sample ID: 410-17071-3
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtPFOSA	101		10 - 108	10/18/20 11:12	10/20/20 15:20	1
13C3 HFPO-DA	70		20 - 153	10/18/20 11:12	10/20/20 15:20	1

Isotope Dilution Summary

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

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)
410-17071-1	Field Blank #1	104	97	118	96	99	102	95	88
410-17071-2	Anvil #1	114	287 *5	168	93	103	96	136	92
410-17071-3	Anvil #2	136	309 *5	209 *5	96	106	103	144 *5	99
LCS 410-54916/2-A	Lab Control Sample	97	113	105	94	95	96	96	94
LCS 410-55638/2-B	Lab Control Sample	99	98	99	87	99	93	104	89
LCSD 410-54916/3-A	Lab Control Sample Dup	102	107	109	101	96	102	102	91
LCSD 410-55638/3-B	Lab Control Sample Dup	117	124	113	104	102	104	112	111
MB 410-54916/1-A	Method Blank	90	105	102	93	88	94	89	90
MB 410-55638/1-B	Method Blank	108	117	101	103	98	96	105	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)
410-17071-1	Field Blank #1	95	94	88	87	95	88	103	112
410-17071-2	Anvil #1	85	37	76	94	80	98	165 *5	206 *5
410-17071-3	Anvil #2	93	42	85	93	81	103	181 *5	231 *5
LCS 410-54916/2-A	Lab Control Sample	100	95	91	87	90	91	104	111
LCS 410-55638/2-B	Lab Control Sample	87	84	88	92	94	103	89	86
LCSD 410-54916/3-A	Lab Control Sample Dup	95	94	85	88	93	89	108	104
LCSD 410-55638/3-B	Lab Control Sample Dup	109	113	110	107	99	109	116	98
MB 410-54916/1-A	Method Blank	91	89	82	82	85	84	103	106
MB 410-55638/1-B	Method Blank	100	100	98	92	93	99	101	91

		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)
410-17071-1	Field Blank #1	84	94	97	65	26	62	26	98
410-17071-2	Anvil #1	63	98	99	53	59	174 *5	94	54
410-17071-3	Anvil #2	71	100	105	59	69	179 *5	101	70
LCS 410-54916/2-A	Lab Control Sample	85	93	94	63	14	55	11	91
LCS 410-55638/2-B	Lab Control Sample	82	93	98	73	64	75	57	81
LCSD 410-54916/3-A	Lab Control Sample Dup	86	95	99	66	27	64	22	101
LCSD 410-55638/3-B	Lab Control Sample Dup	103	108	112	102	86	100	76	106
MB 410-54916/1-A	Method Blank	78	87	88	61	19	57	16	82
MB 410-55638/1-B	Method Blank	91	98	99	90	75	92	71	99

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

Isotope Dilution Summary

Client: PEER

Job ID: 410-17071-1

Project/Site: PEER

d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
PFOSA = 13C8 FOSA
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 410-54916/1-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
NEtFOSAA	ND		3.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
NMeFOSAA	ND		2.0	0.60	ng/L		10/15/20 17:09	10/20/20 08:41	1
10:2 FTS	ND		5.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorononanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorohexadecanoic acid	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorooctadecanoic acid	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
NMeFOSE	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
NMeFOSA	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
NEtFOSE	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
NEtFOSA	ND		5.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
HFPODA	ND		3.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
DONA	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
9Cl-PF3ONS	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
11Cl-PF3OUdS	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		10/15/20 17:09	10/20/20 08:41	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		10/15/20 17:09	10/20/20 08:41	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		10/15/20 17:09	10/20/20 08:41	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*90*		*20 - 187*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
M2-8:2 FTS	*105*		*34 - 182*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
M2-6:2 FTS	*102*		*29 - 189*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C5 PFHxA	*93*		*31 - 142*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C4 PFHpA	*88*		*30 - 144*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C8 PFOA	*94*		*49 - 127*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C9 PFNA	*89*		*47 - 136*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C6 PFDA	*90*		*47 - 128*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C7 PFUnA	*91*		*40 - 135*	*10/15/20 17:09*	*10/20/20 08:41*	*1*
13C2-PFDoDA	*89*		*28 - 136*	*10/15/20 17:09*	*10/20/20 08:41*	*1*

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

Lab Sample ID: MB 410-54916/1-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54916

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	82		10 - 144	10/15/20 17:09	10/20/20 08:41	1
13C3 PFBS	82		19 - 178	10/15/20 17:09	10/20/20 08:41	1
13C3 PFHxS	85		32 - 145	10/15/20 17:09	10/20/20 08:41	1
13C8 PFOS	84		49 - 126	10/15/20 17:09	10/20/20 08:41	1
d3-NMeFOSAA	103		32 - 151	10/15/20 17:09	10/20/20 08:41	1
d5-NEtFOSAA	106		37 - 164	10/15/20 17:09	10/20/20 08:41	1
13C8 FOSA	78		10 - 143	10/15/20 17:09	10/20/20 08:41	1
13C4 PFBA	87		41 - 132	10/15/20 17:09	10/20/20 08:41	1
13C5 PFPeA	88		33 - 155	10/15/20 17:09	10/20/20 08:41	1
d7-N-MeFOSE-M	61		10 - 143	10/15/20 17:09	10/20/20 08:41	1
d3-NMePFOSA	19		10 - 107	10/15/20 17:09	10/20/20 08:41	1
d9-N-EtFOSE-M	57		10 - 142	10/15/20 17:09	10/20/20 08:41	1
d5-NEtPFOSA	16		10 - 108	10/15/20 17:09	10/20/20 08:41	1
13C3 HFPO-DA	82		20 - 153	10/15/20 17:09	10/20/20 08:41	1

Lab Sample ID: LCS 410-54916/2-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.6	31.4		ng/L		122	66 - 137
Perfluoroheptanoic acid	25.6	32.4		ng/L		126	66 - 141
Perfluorooctanoic acid	25.6	28.9		ng/L		113	65 - 136
Perfluorononanoic acid	25.6	30.1		ng/L		117	65 - 140
Perfluorodecanoic acid	25.6	30.1		ng/L		118	63 - 137
Perfluorotridecanoic acid	25.6	35.2		ng/L		138	58 - 146
Perfluorotetradecanoic acid	25.6	30.4		ng/L		119	64 - 141
Perfluorobutanesulfonic acid	22.6	25.3		ng/L		112	65 - 132
Perfluorohexanesulfonic acid	24.2	24.1		ng/L		99	60 - 128
Perfluorooctanesulfonic acid	24.5	22.3		ng/L		91	51 - 126
NEtFOSAA	25.6	28.7		ng/L		112	54 - 134
NMeFOSAA	25.6	32.4		ng/L		126	58 - 143
10:2 FTS	24.7	25.2		ng/L		102	44 - 141
Perfluoropentanesulfonic acid	24.0	28.3		ng/L		118	71 - 136
Perfluoroheptanesulfonic acid	24.4	28.5		ng/L		117	67 - 135
Perfluorononanesulfonic acid	24.6	30.5		ng/L		124	67 - 137
Perfluorodecanesulfonic acid	24.7	30.0		ng/L		122	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	24.8	27.2		ng/L		110	54 - 136
Perfluorooctanesulfonamide	25.6	29.0		ng/L		113	55 - 130
Perfluorohexadecanoic acid	25.6	35.0		ng/L		137	52 - 149
Perfluorooctadecanoic acid	25.6	29.2		ng/L		114	32 - 167
Perfluorobutanoic acid	25.6	32.6		ng/L		127	62 - 156
Perfluoropentanoic acid	25.6	31.4		ng/L		123	72 - 139
NMeFOSE	25.6	24.8		ng/L		97	52 - 131
NMeFOSA	25.6	30.6		ng/L		120	49 - 141
NEtFOSE	25.6	24.8		ng/L		97	49 - 128
NEtFOSA	25.6	26.8		ng/L		105	50 - 136
HFPODA	25.6	26.5		ng/L		104	37 - 147

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

Lab Sample ID: LCS 410-54916/2-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54916

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
DONA			24.1	29.5		ng/L		122	49 - 158		
9Cl-PF3ONS			23.9	25.2		ng/L		106	52 - 135		
11Cl-PF3OUdS			24.1	26.3		ng/L		109	45 - 134		
Perfluorododecanoic acid			25.6	31.2		ng/L		122	63 - 140		
4:2 Fluorotelomer sulfonic acid			23.9	26.0		ng/L		109	59 - 130		
Perfluoroundecanoic acid			25.6	29.8		ng/L		116	62 - 138		
6:2 Fluorotelomer sulfonic acid			24.3	27.3		ng/L		112	57 - 137		
8:2 Fluorotelomer sulfonic acid			24.5	25.8		ng/L		105	56 - 140		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*97*		*20 - 187*
M2-8:2 FTS	*113*		*34 - 182*
M2-6:2 FTS	*105*		*29 - 189*
13C5 PFHxA	*94*		*31 - 142*
13C4 PFHpA	*95*		*30 - 144*
13C8 PFOA	*96*		*49 - 127*
13C9 PFNA	*96*		*47 - 136*
13C6 PFDA	*94*		*47 - 128*
13C7 PFUnA	*100*		*40 - 135*
13C2-PFDoDA	*95*		*28 - 136*
13C2 PFTeDA	*91*		*10 - 144*
13C3 PFBS	*87*		*19 - 178*
13C3 PFHxS	*90*		*32 - 145*
13C8 PFOS	*91*		*49 - 126*
d3-NMeFOSAA	*104*		*32 - 151*
d5-NEtFOSAA	*111*		*37 - 164*
13C8 FOSA	*85*		*10 - 143*
13C4 PFBA	*93*		*41 - 132*
13C5 PFPeA	*94*		*33 - 155*
d7-N-MeFOSE-M	*63*		*10 - 143*
d3-NMePFOSA	*14*		*10 - 107*
d9-N-EtFOSE-M	*55*		*10 - 142*
d5-NEtPFOSA	*11*		*10 - 108*
13C3 HFPO-DA	*91*		*20 - 153*

Lab Sample ID: LCSD 410-54916/3-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54916

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid			25.6	31.0		ng/L		121	66 - 137	1	30
Perfluoroheptanoic acid			25.6	33.1		ng/L		129	66 - 141	2	30
Perfluorooctanoic acid			25.6	27.7		ng/L		108	65 - 136	4	30
Perfluorononanoic acid			25.6	30.9		ng/L		121	65 - 140	3	30
Perfluorodecanoic acid			25.6	30.4		ng/L		119	63 - 137	1	30
Perfluorotridecanoic acid			25.6	34.7		ng/L		136	58 - 146	1	30
Perfluorotetradecanoic acid			25.6	31.2		ng/L		122	64 - 141	3	30
Perfluorobutanesulfonic acid			22.6	26.6		ng/L		117	65 - 132	5	30
Perfluorohexanesulfonic acid			24.2	24.6		ng/L		102	60 - 128	2	30

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

Lab Sample ID: LCSD 410-54916/3-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54916

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid			24.5	24.1		ng/L		99	51 - 126	8	30
NEtFOSAA			25.6	30.8		ng/L		121	54 - 134	7	30
NMeFOSAA			25.6	30.1		ng/L		118	58 - 143	7	30
10:2 FTS			24.7	24.2		ng/L		98	44 - 141	4	30
Perfluoropentanesulfonic acid			24.0	30.6		ng/L		128	71 - 136	8	30
Perfluoroheptanesulfonic acid			24.4	27.8		ng/L		114	67 - 135	2	30
Perfluorononanesulfonic acid			24.6	33.9	*	ng/L		138	67 - 137	11	30
Perfluorodecanesulfonic acid			24.7	32.7		ng/L		133	61 - 134	9	30
Perfluorododecanesulfonic acid (PFDoS)			24.8	28.9		ng/L		117	54 - 136	6	30
Perfluorooctanesulfonamide			25.6	28.0		ng/L		109	55 - 130	3	30
Perfluorohexadecanoic acid			25.6	38.6	*	ng/L		151	52 - 149	10	30
Perfluorooctadecanoic acid			25.6	35.1		ng/L		137	32 - 167	18	30
Perfluorobutanoic acid			25.6	32.2		ng/L		126	62 - 156	1	30
Perfluoropentanoic acid			25.6	31.6		ng/L		124	72 - 139	1	30
NMeFOSE			25.6	27.0		ng/L		106	52 - 131	8	30
NMeFOSA			25.6	26.3		ng/L		103	49 - 141	15	30
NEtFOSE			25.6	24.6		ng/L		96	49 - 128	1	30
NEtFOSA			25.6	27.3		ng/L		107	50 - 136	2	30
HFPODA			25.6	24.7		ng/L		96	37 - 147	7	30
DONA			24.1	31.3		ng/L		130	49 - 158	6	30
9Cl-PF3ONS			23.9	27.6		ng/L		116	52 - 135	9	30
11Cl-PF3OUdS			24.1	28.1		ng/L		117	45 - 134	7	30
Perfluorododecanoic acid			25.6	31.0		ng/L		121	63 - 140	1	30
4:2 Fluorotelomer sulfonic acid			23.9	25.8		ng/L		108	59 - 130	1	30
Perfluoroundecanoic acid			25.6	31.8		ng/L		124	62 - 138	7	30
6:2 Fluorotelomer sulfonic acid			24.3	27.8		ng/L		115	57 - 137	2	30
8:2 Fluorotelomer sulfonic acid			24.5	26.6		ng/L		108	56 - 140	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*102*		*20 - 187*
M2-8:2 FTS	*107*		*34 - 182*
M2-6:2 FTS	*109*		*29 - 189*
13C5 PFHxA	*101*		*31 - 142*
13C4 PFHpA	*96*		*30 - 144*
13C8 PFOA	*102*		*49 - 127*
13C9 PFNA	*102*		*47 - 136*
13C6 PFDA	*91*		*47 - 128*
13C7 PFUnA	*95*		*40 - 135*
13C2-PFDoDA	*94*		*28 - 136*
13C2 PFTeDA	*85*		*10 - 144*
13C3 PFBS	*88*		*19 - 178*
13C3 PFHxS	*93*		*32 - 145*
13C8 PFOS	*89*		*49 - 126*
d3-NMeFOSAA	*108*		*32 - 151*
d5-NEtFOSAA	*104*		*37 - 164*
13C8 FOSA	*86*		*10 - 143*
13C4 PFBA	*95*		*41 - 132*
13C5 PFPeA	*99*		*33 - 155*

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

Lab Sample ID: LCSD 410-54916/3-A
Matrix: Water
Analysis Batch: 56250

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54916

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
d7-N-MeFOSE-M	*66*		*10 - 143*
d3-NMePFOSA	*27*		*10 - 107*
d9-N-EtFOSE-M	*64*		*10 - 142*
d5-NEtPFOSA	*22*		*10 - 108*
13C3 HFPO-DA	*101*		*20 - 153*

Lab Sample ID: MB 410-55638/1-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluoroheptanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorooctanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorononanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorodecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorotridecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorotetradecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorobutanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorohexanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorooctanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
NEtFOSAA	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
NMeFOSAA	ND		1000	300	ng/L		10/18/20 11:12	10/20/20 14:41	1
10:2 FTS	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluoropentanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluoroheptanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorononanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorodecanesulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorooctanesulfonamide	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorohexadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorooctadecanoic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorobutanoic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluoropentanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
NMeFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
NMeFOSA	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
NEtFOSE	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
NEtFOSA	ND		2500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1
HFPODA	ND		1500	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
DONA	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
9Cl-PF3ONS	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
11Cl-PF3OUdS	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluorododecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
4:2 Fluorotelomer sulfonic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
Perfluoroundecanoic acid	ND		1000	250	ng/L		10/18/20 11:12	10/20/20 14:41	1
6:2 Fluorotelomer sulfonic acid	ND		2500	1000	ng/L		10/18/20 11:12	10/20/20 14:41	1
8:2 Fluorotelomer sulfonic acid	ND		1500	500	ng/L		10/18/20 11:12	10/20/20 14:41	1

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

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	108		20 - 187	10/18/20 11:12	10/20/20 14:41	1
M2-8:2 FTS	117		34 - 182	10/18/20 11:12	10/20/20 14:41	1
M2-6:2 FTS	101		29 - 189	10/18/20 11:12	10/20/20 14:41	1
13C5 PFHxA	103		31 - 142	10/18/20 11:12	10/20/20 14:41	1
13C4 PFHpA	98		30 - 144	10/18/20 11:12	10/20/20 14:41	1
13C8 PFOA	96		49 - 127	10/18/20 11:12	10/20/20 14:41	1
13C9 PFNA	105		47 - 136	10/18/20 11:12	10/20/20 14:41	1
13C6 PFDA	104		47 - 128	10/18/20 11:12	10/20/20 14:41	1
13C7 PFUnA	100		40 - 135	10/18/20 11:12	10/20/20 14:41	1
13C2-PFDoDA	100		28 - 136	10/18/20 11:12	10/20/20 14:41	1
13C2 PFTeDA	98		10 - 144	10/18/20 11:12	10/20/20 14:41	1
13C3 PFBS	92		19 - 178	10/18/20 11:12	10/20/20 14:41	1
13C3 PFHxS	93		32 - 145	10/18/20 11:12	10/20/20 14:41	1
13C8 PFOS	99		49 - 126	10/18/20 11:12	10/20/20 14:41	1
d3-NMeFOSAA	101		32 - 151	10/18/20 11:12	10/20/20 14:41	1
d5-NEtFOSAA	91		37 - 164	10/18/20 11:12	10/20/20 14:41	1
13C8 FOSA	91		10 - 143	10/18/20 11:12	10/20/20 14:41	1
13C4 PFBA	98		41 - 132	10/18/20 11:12	10/20/20 14:41	1
13C5 PFPeA	99		33 - 155	10/18/20 11:12	10/20/20 14:41	1
d7-N-MeFOSE-M	90		10 - 143	10/18/20 11:12	10/20/20 14:41	1
d3-NMePFOSA	75		10 - 107	10/18/20 11:12	10/20/20 14:41	1
d9-N-EtFOSE-M	92		10 - 142	10/18/20 11:12	10/20/20 14:41	1
d5-NEtPFOSA	71		10 - 108	10/18/20 11:12	10/20/20 14:41	1
13C3 HFPO-DA	99		20 - 153	10/18/20 11:12	10/20/20 14:41	1

Lab Sample ID: LCS 410-55638/2-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	6400	7220		ng/L		113	66 - 137
Perfluoroheptanoic acid	6400	7010		ng/L		109	66 - 141
Perfluorooctanoic acid	6400	6990		ng/L		109	65 - 136
Perfluorononanoic acid	6400	6600		ng/L		103	65 - 140
Perfluorodecanoic acid	6400	7200		ng/L		112	63 - 137
Perfluorotridecanoic acid	6400	7400		ng/L		116	58 - 146
Perfluorotetradecanoic acid	6400	6940		ng/L		108	64 - 141
Perfluorobutanesulfonic acid	5660	5790		ng/L		102	65 - 132
Perfluorohexanesulfonic acid	6050	5740		ng/L		95	60 - 128
Perfluorooctanesulfonic acid	6120	5230		ng/L		85	51 - 126
NEtFOSAA	6400	6220		ng/L		97	54 - 134
NMeFOSAA	6400	7010		ng/L		109	58 - 143
10:2 FTS	6170	5090		ng/L		83	44 - 141
Perfluoropentanesulfonic acid	6000	5940		ng/L		99	71 - 136
Perfluoroheptanesulfonic acid	6090	5950		ng/L		98	67 - 135
Perfluorononanesulfonic acid	6140	5860		ng/L		95	67 - 137
Perfluorodecanesulfonic acid	6160	5870		ng/L		95	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	6200	5780		ng/L		93	54 - 136
Perfluorooctanesulfonamide	6400	6260		ng/L		98	55 - 130
Perfluorohexadecanoic acid	6400	7060		ng/L		110	52 - 149
Perfluorooctadecanoic acid	6400	6920		ng/L		108	32 - 167

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

Lab Sample ID: LCS 410-55638/2-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid	6400	6570		ng/L		103	62 - 156
Perfluoropentanoic acid	6400	6810		ng/L		106	72 - 139
NMeFOSE	6400	6140		ng/L		96	52 - 131
NMeFOSA	6400	6970		ng/L		109	49 - 141
NEtFOSE	6400	6120		ng/L		96	49 - 128
NEtFOSA	6400	5840		ng/L		91	50 - 136
HFPODA	6400	7410		ng/L		116	37 - 147
DONA	6030	5660		ng/L		94	49 - 158
9Cl-PF3ONS	5960	5750		ng/L		96	52 - 135
11Cl-PF3OUdS	6030	5740		ng/L		95	45 - 134
Perfluorododecanoic acid	6400	6870		ng/L		107	63 - 140
4:2 Fluorotelomer sulfonic acid	5980	5160		ng/L		86	59 - 130
Perfluoroundecanoic acid	6400	6890		ng/L		108	62 - 138
6:2 Fluorotelomer sulfonic acid	6070	6070		ng/L		100	57 - 137
8:2 Fluorotelomer sulfonic acid	6130	5720		ng/L		93	56 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*99*		*20 - 187*
M2-8:2 FTS	*98*		*34 - 182*
M2-6:2 FTS	*99*		*29 - 189*
13C5 PFHxA	*87*		*31 - 142*
13C4 PFHpA	*99*		*30 - 144*
13C8 PFOA	*93*		*49 - 127*
13C9 PFNA	*104*		*47 - 136*
13C6 PFDA	*89*		*47 - 128*
13C7 PFUnA	*87*		*40 - 135*
13C2-PFDoDA	*84*		*28 - 136*
13C2 PFTeDA	*88*		*10 - 144*
13C3 PFBS	*92*		*19 - 178*
13C3 PFHxS	*94*		*32 - 145*
13C8 PFOS	*103*		*49 - 126*
d3-NMeFOSAA	*89*		*32 - 151*
d5-NEtFOSAA	*86*		*37 - 164*
13C8 FOSA	*82*		*10 - 143*
13C4 PFBA	*93*		*41 - 132*
13C5 PFPeA	*98*		*33 - 155*
d7-N-MeFOSE-M	*73*		*10 - 143*
d3-NMePFOSA	*64*		*10 - 107*
d9-N-EtFOSE-M	*75*		*10 - 142*
d5-NEtPFOSA	*57*		*10 - 108*
13C3 HFPO-DA	*81*		*20 - 153*

Lab Sample ID: LCSD 410-55638/3-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55638

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid	6400	6660		ng/L		104	66 - 137	8	30
Perfluoroheptanoic acid	6400	7100		ng/L		111	66 - 141	1	30

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

Lab Sample ID: LCSD 410-55638/3-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55638

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid			6400	6630		ng/L		104	65 - 136	5	30
Perfluorononanoic acid			6400	6750		ng/L		105	65 - 140	2	30
Perfluorodecanoic acid			6400	6790		ng/L		106	63 - 137	6	30
Perfluorotridecanoic acid			6400	7130		ng/L		111	58 - 146	4	30
Perfluorotetradecanoic acid			6400	7310		ng/L		114	64 - 141	5	30
Perfluorobutanesulfonic acid			5660	5600		ng/L		99	65 - 132	3	30
Perfluorohexanesulfonic acid			6050	5750		ng/L		95	60 - 128	0	30
Perfluorooctanesulfonic acid			6120	5380		ng/L		88	51 - 126	3	30
NEtFOSAA			6400	6800		ng/L		106	54 - 134	9	30
NMeFOSAA			6400	6660		ng/L		104	58 - 143	5	30
10:2 FTS			6170	5690		ng/L		92	44 - 141	11	30
Perfluoropentanesulfonic acid			6000	6180		ng/L		103	71 - 136	4	30
Perfluoroheptanesulfonic acid			6090	6220		ng/L		102	67 - 135	4	30
Perfluorononanesulfonic acid			6140	6180		ng/L		101	67 - 137	5	30
Perfluorodecanesulfonic acid			6160	6170		ng/L		100	61 - 134	5	30
Perfluorododecanesulfonic acid (PFDoS)			6200	6130		ng/L		99	54 - 136	6	30
Perfluorooctanesulfonamide			6400	6230		ng/L		97	55 - 130	0	30
Perfluorohexadecanoic acid			6400	7540		ng/L		118	52 - 149	7	30
Perfluorooctadecanoic acid			6400	6610		ng/L		103	32 - 167	5	30
Perfluorobutanoic acid			6400	6770		ng/L		106	62 - 156	3	30
Perfluoropentanoic acid			6400	6710		ng/L		105	72 - 139	2	30
NMeFOSE			6400	6070		ng/L		95	52 - 131	1	30
NMeFOSA			6400	6710		ng/L		105	49 - 141	4	30
NEtFOSE			6400	6030		ng/L		94	49 - 128	1	30
NEtFOSA			6400	5900		ng/L		92	50 - 136	1	30
HFPODA			6400	5820		ng/L		91	37 - 147	24	30
DONA			6030	5850		ng/L		97	49 - 158	3	30
9Cl-PF3ONS			5960	5850		ng/L		98	52 - 135	2	30
11Cl-PF3OUdS			6030	5950		ng/L		99	45 - 134	4	30
Perfluorododecanoic acid			6400	6950		ng/L		109	63 - 140	1	30
4:2 Fluorotelomer sulfonic acid			5980	5110		ng/L		86	59 - 130	1	30
Perfluoroundecanoic acid			6400	6820		ng/L		107	62 - 138	1	30
6:2 Fluorotelomer sulfonic acid			6070	6060		ng/L		100	57 - 137	0	30
8:2 Fluorotelomer sulfonic acid			6130	5800		ng/L		95	56 - 140	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*117*		*20 - 187*
M2-8:2 FTS	*124*		*34 - 182*
M2-6:2 FTS	*113*		*29 - 189*
13C5 PFHxA	*104*		*31 - 142*
13C4 PFHpA	*102*		*30 - 144*
13C8 PFOA	*104*		*49 - 127*
13C9 PFNA	*112*		*47 - 136*
13C6 PFDA	*111*		*47 - 128*
13C7 PFUnA	*109*		*40 - 135*
13C2-PFDoDA	*113*		*28 - 136*
13C2 PFTeDA	*110*		*10 - 144*
13C3 PFBS	*107*		*19 - 178*

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

Lab Sample ID: LCSD 410-55638/3-B
Matrix: Water
Analysis Batch: 56267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55638

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C3 PFHxS	99		32 - 145
13C8 PFOS	109		49 - 126
d3-NMeFOSAA	116		32 - 151
d5-NEtFOSAA	98		37 - 164
13C8 FOSA	103		10 - 143
13C4 PFBA	108		41 - 132
13C5 PFPeA	112		33 - 155
d7-N-MeFOSE-M	102		10 - 143
d3-NMePFOSA	86		10 - 107
d9-N-EtFOSE-M	100		10 - 142
d5-NEtPFOSA	76		10 - 108
13C3 HFPO-DA	106		20 - 153

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

LCMS

Prep Batch: 54916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-17071-1	Field Blank #1	Total/NA	Water	537 IDA	
MB 410-54916/1-A	Method Blank	Total/NA	Water	537 IDA	
LCS 410-54916/2-A	Lab Control Sample	Total/NA	Water	537 IDA	
LCSD 410-54916/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	

Prep Batch: 55638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-17071-2	Anvil #1	Total/NA	Water	EPA 537 (Mod)	
410-17071-3	Anvil #2	Total/NA	Water	EPA 537 (Mod)	
MB 410-55638/1-B	Method Blank	Total/NA	Water	EPA 537 (Mod)	
LCS 410-55638/2-B	Lab Control Sample	Total/NA	Water	EPA 537 (Mod)	
LCSD 410-55638/3-B	Lab Control Sample Dup	Total/NA	Water	EPA 537 (Mod)	

Cleanup Batch: 55640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-17071-2	Anvil #1	Total/NA	Water	Extract Aliquot	55638
410-17071-3	Anvil #2	Total/NA	Water	Extract Aliquot	55638
MB 410-55638/1-B	Method Blank	Total/NA	Water	Extract Aliquot	55638
LCS 410-55638/2-B	Lab Control Sample	Total/NA	Water	Extract Aliquot	55638
LCSD 410-55638/3-B	Lab Control Sample Dup	Total/NA	Water	Extract Aliquot	55638

Analysis Batch: 56250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-17071-1	Field Blank #1	Total/NA	Water	537 IDA	54916
MB 410-54916/1-A	Method Blank	Total/NA	Water	537 IDA	54916
LCS 410-54916/2-A	Lab Control Sample	Total/NA	Water	537 IDA	54916
LCSD 410-54916/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	54916

Analysis Batch: 56267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-17071-2	Anvil #1	Total/NA	Water	537 IDA	55640
410-17071-3	Anvil #2	Total/NA	Water	537 IDA	55640
MB 410-55638/1-B	Method Blank	Total/NA	Water	537 IDA	55640
LCS 410-55638/2-B	Lab Control Sample	Total/NA	Water	537 IDA	55640
LCSD 410-55638/3-B	Lab Control Sample Dup	Total/NA	Water	537 IDA	55640

Lab Chronicle

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

Client Sample ID: Field Blank #1

Lab Sample ID: 410-17071-1

Date Collected: 10/13/20 09:00

Matrix: Water

Date Received: 10/13/20 17:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			54916	10/15/20 17:09	QLP7	ELLE
Total/NA	Analysis	537 IDA		1	56250	10/20/20 14:30	MT26	ELLE

Client Sample ID: Anvil #1

Lab Sample ID: 410-17071-2

Date Collected: 10/13/20 09:00

Matrix: Water

Date Received: 10/13/20 17:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 537 (Mod)			55638	10/18/20 11:12	Q5YX	ELLE
Total/NA	Cleanup	Extract Aliquot			55640	10/18/20 11:18	Q5YX	ELLE
Total/NA	Analysis	537 IDA		1	56267	10/20/20 15:11	OLN7	ELLE

Client Sample ID: Anvil #2

Lab Sample ID: 410-17071-3

Date Collected: 10/13/20 09:00

Matrix: Water

Date Received: 10/13/20 17:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	EPA 537 (Mod)			55638	10/18/20 11:12	Q5YX	ELLE
Total/NA	Cleanup	Extract Aliquot			55640	10/18/20 11:18	Q5YX	ELLE
Total/NA	Analysis	537 IDA		1	56267	10/20/20 15:20	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
Project/Site: PEER

Job ID: 410-17071-1

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

Accreditation/Certification Summary

Client: PEER
Project/Site: PEER

Job ID: 410-17071-1

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
Project/Site: PEER

Job ID: 410-17071-1

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
Project/Site: PEER

Job ID: 410-17071-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-17071-1	Field Blank #1	Water	10/13/20 09:00	10/13/20 17:03	
410-17071-2	Anvil #1	Water	10/13/20 09:00	10/13/20 17:03	
410-17071-3	Anvil #2	Water	10/13/20 09:00	10/13/20 17:03	

410-17071 Chain of Custody

Chain of Custody Record

eurofins Environment Testing America

Client Contact: Peter Jenkins	Sampler:	Lab PM: Izzo, Mary Kate	Carrier Tracking No(s):	COC No: 410-10352-3099.1
Company: PEER	Phone:	E-Mail: marykateizzo@eurofinsus.com		Page: Page 1 of 1
Address: 4507 Maple Ave.	Due Date Requested:			Job #:
City: Bethesda	TAT Requested (days):			
State, Zip: MD, 20814				
Phone: 202-265-7337(Tel)	PO #: Purchase Order not required			
Email: pjenkins@peer.org	WO #:			
Project Name:	Project #: 41001955			
Site:	SSOW#:			

Analysis Requested

Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFC_IDA - Standard 32, plus 4 replacements | Total Number of containers

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/MSD (Yes or No)	PFC_IDA - Standard 32, plus 4 replacements	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
Field Blank #1	10/13/20	9:00 am	G	Water					
Field Blank #1	10/13/20	9:00 am	G	Water					
				Water					
Anvil #1	10/13/20	9:00 am	G						
Anvil #1	10/13/20	9:00 am	C						
Anvil #2	10/13/20	9:00	Am C						
Anvil #2	10/13/20	9:00	Am C						

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:	Date/Time: 10-7-20 12:50	Company: FLLE	Received by: / Date/Time: 10/13/20 11:00 / Company: FLLE
Relinquished by:	Date/Time: 10-13-20 1:00	Company: PEER	Received by: / Date/Time: 10/13/20 1:00 / Company: FLLE
Relinquished by:	Date/Time: 10/13/20 16:15	Company: FLLE	Received by: / Date/Time: 10-13-20 1703 / Company: FLLE

Custody Seals Intact: ☐ Yes ☐ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.8°C

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PEER

Job Number: 410-17071-1

Login Number: 17071

List Source: Eurofins Lancaster Laboratories Env

List Number: 1

Creator: Sanchez, Melvin E

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.	False	Refer to Job Narrative for details.
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?	N/A	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	