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ANALYTICAL REPORT

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

Laboratory Job ID: 410-47218-1
Client Project/Site: CB PFAS Oyster

For:
PEER
8200 Bayside Rd.
Chesapeake, Maryland 20732

Attn: Holly Wahl

Authorized for release by:
8/4/2021 11:18:05 AM

Dana Kauffman, Project Manager
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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
8/4/2021 11:18:05 AM

Table of Contents

Definitions/Glossary

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
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

Job ID: 410-47218-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-47218-1

Receipt
The samples were received on 7/15/2021 9:16 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 3.3°C

PFAS
Method PFC_IDA: The recovery for the labeled isotope(s) in the following sample: Oyster knife rinse (410-47218-5) 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.

Method PFC_IDA: Target analyte(s) were detected in the method blank associated with the following sample: Oysters 2 (410-47218-2). Sufficient sample was not available to re-extract this sample.

Method PFC_IDA: The recovery for the labeled isotopes(s) in the following samples: Oysters 1 (410-47218-1) and Oysters 2 (410-47218-2) 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.The LCS/LCSD labeled isotope(s) recovery associated with samples: Oysters 1 (410-47218-1) and Oysters 2 (410-47218-2) is outside the QC acceptance limits. Since the recovery for target analytes is within the limits, 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: CB PFAS Oyster

Job ID: 410-47218-1

Client Sample ID: Oysters 1 — Lab Sample ID: 410-47218-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid	0.50	J	0.56	0.19	ng/g	1		537 IDA	Total/NA
Perfluorooctanesulfonamide	0.34	J	0.56	0.19	ng/g	1		537 IDA	Total/NA

Client Sample ID: Oysters 2 — Lab Sample ID: 410-47218-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid	0.18	J B	0.55	0.18	ng/g	1		537 IDA	Total/NA
Perfluorooctanesulfonic acid	0.47	J	0.55	0.18	ng/g	1		537 IDA	Total/NA
Perfluorooctanesulfonamide	0.41	J	0.55	0.18	ng/g	1		537 IDA	Total/NA

Client Sample ID: Field — Lab Sample ID: 410-47218-3

No Detections.

Client Sample ID: Trip — Lab Sample ID: 410-47218-4

No Detections.

Client Sample ID: Oyster knife rinse — Lab Sample ID: 410-47218-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Client Sample ID: Oysters 1

Date Collected: 07/14/21 10:07
Date Received: 07/15/21 09:16

Lab Sample ID: 410-47218-1

Matrix: Solid

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluoroheptanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorooctanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorononanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorodecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorotridecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorotetradecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorobutanesulfonic acid	ND		1.9	0.37	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorohexanesulfonic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorooctanesulfonic acid	**0.50**	**J**	0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
NEtFOSAA	ND		1.9	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
NMeFOSAA	ND		1.9	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
10:2 FTS	ND		1.9	0.56	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluoropentanesulfonic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluoroheptanesulfonic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorononanesulfonic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorodecanesulfonic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.9	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorooctanesulfonamide	**0.34**	**J**	0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorohexadecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorooctadecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorobutanoic acid	ND		1.9	0.74	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluoropentanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
NMeFOSE	ND		1.9	0.46	ng/g		07/21/21 06:48	07/29/21 04:44	1
NMeFOSA	ND		1.9	0.46	ng/g		07/21/21 06:48	07/29/21 04:44	1
NEtFOSE	ND		1.9	0.46	ng/g		07/21/21 06:48	07/29/21 04:44	1
NEtFOSA	ND		1.9	0.46	ng/g		07/21/21 06:48	07/29/21 04:44	1
HFPODA	ND		1.9	0.37	ng/g		07/21/21 06:48	07/29/21 04:44	1
DONA	ND		2.8	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
9Cl-PF3ONS	ND		1.9	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
11Cl-PF3OUdS	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluorododecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
4:2 Fluorotelomer sulfonic acid	ND		1.9	0.56	ng/g		07/21/21 06:48	07/29/21 04:44	1
Perfluoroundecanoic acid	ND		0.56	0.19	ng/g		07/21/21 06:48	07/29/21 04:44	1
6:2 Fluorotelomer sulfonic acid	ND		1.9	0.56	ng/g		07/21/21 06:48	07/29/21 04:44	1
8:2 Fluorotelomer sulfonic acid	ND		2.8	0.56	ng/g		07/21/21 06:48	07/29/21 04:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*141*		*10 - 169*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
M2-8:2 FTS	*193*	**5+*	*10 - 178*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
M2-6:2 FTS	*174*		*10 - 182*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C5 PFHxA	*61*		*11 - 138*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C4 PFHpA	*70*		*15 - 139*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C8 PFOA	*74*		*21 - 133*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C9 PFNA	*87*		*15 - 145*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C6 PFDA	*85*		*21 - 134*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C7 PFUnA	*84*		*15 - 138*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C2-PFDoDA	*75*		*28 - 126*	*07/21/21 06:48*	*07/29/21 04:44*	*1*
13C2 PFTeDA	*21*		*10 - 138*	*07/21/21 06:48*	*07/29/21 04:44*	*1*

Client Sample ID: Oysters 1

Lab Sample ID: 410-47218-1

Date Collected: 07/14/21 10:07
Matrix: Solid
Date Received: 07/15/21 09:16

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	73		23 - 130	07/21/21 06:48	07/29/21 04:44	1
13C3 PFHxS	60		24 - 136	07/21/21 06:48	07/29/21 04:44	1
13C8 PFOS	72		31 - 130	07/21/21 06:48	07/29/21 04:44	1
d3-NMeFOSAA	57		10 - 172	07/21/21 06:48	07/29/21 04:44	1
d5-NEtFOSAA	73		10 - 176	07/21/21 06:48	07/29/21 04:44	1
13C8 FOSA	80		25 - 135	07/21/21 06:48	07/29/21 04:44	1
13C4 PFBA	18		12 - 137	07/21/21 06:48	07/29/21 04:44	1
13C5 PFPeA	65		12 - 135	07/21/21 06:48	07/29/21 04:44	1
d7-N-MeFOSE-M	51		10 - 152	07/21/21 06:48	07/29/21 04:44	1
d3-NMePFOSA	49		10 - 148	07/21/21 06:48	07/29/21 04:44	1
d9-N-EtFOSE-M	14		10 - 157	07/21/21 06:48	07/29/21 04:44	1
d5-NEtPFOSA	30		10 - 151	07/21/21 06:48	07/29/21 04:44	1
13C3 HFPO-DA	46		10 - 152	07/21/21 06:48	07/29/21 04:44	1

Client Sample ID: Oysters 2

Lab Sample ID: 410-47218-2

Date Collected: 07/14/21 10:07
Matrix: Solid
Date Received: 07/15/21 09:16

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluoroheptanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorooctanoic acid	**0.18**	**J B**	0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorononanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorodecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorotridecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorotetradecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorobutanesulfonic acid	ND		1.8	0.37	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorohexanesulfonic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorooctanesulfonic acid	**0.47**	**J**	0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
NEtFOSAA	ND		1.8	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
NMeFOSAA	ND		1.8	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
10:2 FTS	ND		1.8	0.55	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluoropentanesulfonic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluoroheptanesulfonic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorononanesulfonic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorodecanesulfonic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorododecanesulfonic acid (PFDoS)	ND		1.8	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorooctanesulfonamide	**0.41**	**J**	0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorohexadecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorooctadecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorobutanoic acid	ND		1.8	0.73	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluoropentanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
NMeFOSE	ND		1.8	0.46	ng/g		07/21/21 06:48	07/29/21 04:55	1
NMeFOSA	ND		1.8	0.46	ng/g		07/21/21 06:48	07/29/21 04:55	1
NEtFOSE	ND		1.8	0.46	ng/g		07/21/21 06:48	07/29/21 04:55	1
NEtFOSA	ND		1.8	0.46	ng/g		07/21/21 06:48	07/29/21 04:55	1
HFPODA	ND		1.8	0.37	ng/g		07/21/21 06:48	07/29/21 04:55	1
DONA	ND		2.8	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1

Client Sample ID: Oysters 2

Lab Sample ID: 410-47218-2

Date Collected: 07/14/21 10:07

Matrix: Solid

Date Received: 07/15/21 09:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
9Cl-PF3ONS	ND		1.8	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
11Cl-PF3OUdS	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluorododecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
4:2 Fluorotelomer sulfonic acid	ND		1.8	0.55	ng/g		07/21/21 06:48	07/29/21 04:55	1
Perfluoroundecanoic acid	ND		0.55	0.18	ng/g		07/21/21 06:48	07/29/21 04:55	1
6:2 Fluorotelomer sulfonic acid	ND		1.8	0.55	ng/g		07/21/21 06:48	07/29/21 04:55	1
8:2 Fluorotelomer sulfonic acid	ND		2.8	0.55	ng/g		07/21/21 06:48	07/29/21 04:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*167*		*10 - 169*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
M2-8:2 FTS	*228*	**5+*	*10 - 178*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
M2-6:2 FTS	*223*	**5+*	*10 - 182*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C5 PFHxA	*72*		*11 - 138*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C4 PFHpA	*87*		*15 - 139*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C8 PFOA	*90*		*21 - 133*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C9 PFNA	*103*		*15 - 145*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C6 PFDA	*99*		*21 - 134*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C7 PFUnA	*86*		*15 - 138*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C2-PFDoDA	*86*		*28 - 126*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C2 PFTeDA	*20*		*10 - 138*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C3 PFBS	*84*		*23 - 130*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C3 PFHxS	*79*		*24 - 136*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C8 PFOS	*88*		*31 - 130*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d3-NMeFOSAA	*65*		*10 - 172*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d5-NEtFOSAA	*76*		*10 - 176*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C8 FOSA	*84*		*25 - 135*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C4 PFBA	*26*		*12 - 137*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C5 PFPeA	*79*		*12 - 135*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d7-N-MeFOSE-M	*53*		*10 - 152*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d3-NMePFOSA	*52*		*10 - 148*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d9-N-EtFOSE-M	*13*		*10 - 157*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
d5-NEtPFOSA	*32*		*10 - 151*	*07/21/21 06:48*	*07/29/21 04:55*	*1*
13C3 HFPO-DA	*58*		*10 - 152*	*07/21/21 06:48*	*07/29/21 04:55*	*1*

Client Sample ID: Field

Lab Sample ID: 410-47218-3

Date Collected: 07/14/21 10:35

Matrix: Water

Date Received: 07/15/21 09:16

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluoroheptanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorooctanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorononanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorodecanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorotridecanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorotetradecanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorobutanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorohexanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorooctanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
NEtFOSAA	ND		2.6	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1

Client Sample ID: Field

Date Collected: 07/14/21 10:35
Date Received: 07/15/21 09:16

Lab Sample ID: 410-47218-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSAA	ND		1.7	0.52	ng/L		07/16/21 08:02	07/19/21 22:05	1
10:2 FTS	ND		4.3	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluoropentanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluoroheptanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorononanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorodecanesulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorooctanesulfonamide	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorohexadecanoic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorooctadecanoic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorobutanoic acid	ND		4.3	1.7	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluoropentanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
NMeFOSE	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
NMeFOSA	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
NEtFOSE	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
NEtFOSA	ND		4.3	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1
HFPODA	ND		2.6	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
DONA	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
9Cl-PF3ONS	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
11Cl-PF3OUdS	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluorododecanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
4:2 Fluorotelomer sulfonic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
Perfluoroundecanoic acid	ND		1.7	0.43	ng/L		07/16/21 08:02	07/19/21 22:05	1
6:2 Fluorotelomer sulfonic acid	ND		4.3	1.7	ng/L		07/16/21 08:02	07/19/21 22:05	1
8:2 Fluorotelomer sulfonic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*127*		*20 - 187*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
M2-8:2 FTS	*123*		*34 - 182*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
M2-6:2 FTS	*123*		*29 - 189*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C5 PFHxA	*119*		*31 - 142*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C4 PFHpA	*113*		*30 - 144*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C8 PFOA	*114*		*49 - 127*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C9 PFNA	*107*		*47 - 136*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C6 PFDA	*114*		*47 - 128*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C7 PFUnA	*115*		*40 - 135*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C2-PFDoDA	*108*		*28 - 136*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C2 PFTeDA	*104*		*10 - 144*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C3 PFBS	*110*		*19 - 178*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C3 PFHxS	*111*		*32 - 145*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C8 PFOS	*107*		*49 - 126*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
d3-NMeFOSAA	*102*		*32 - 151*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
d5-NEtFOSAA	*112*		*37 - 164*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C8 FOSA	*96*		*10 - 143*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C4 PFBA	*112*		*41 - 132*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
13C5 PFPeA	*111*		*33 - 155*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
d7-N-MeFOSE-M	*88*		*10 - 143*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
d3-NMePFOSA	*50*		*10 - 107*	*07/16/21 08:02*	*07/19/21 22:05*	*1*
d9-N-EtFOSE-M	*84*		*10 - 142*	*07/16/21 08:02*	*07/19/21 22:05*	*1*

Client Sample ID: Field

Lab Sample ID: 410-47218-3

Date Collected: 07/14/21 10:35
Matrix: Water
Date Received: 07/15/21 09:16

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtPFOSA	53		10 - 108	07/16/21 08:02	07/19/21 22:05	1
13C3 HFPO-DA	114		20 - 153	07/16/21 08:02	07/19/21 22:05	1

Client Sample ID: Trip

Lab Sample ID: 410-47218-4

Date Collected: 07/14/21 09:08
Matrix: Water
Date Received: 07/15/21 09:16

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluoroheptanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorooctanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorononanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorodecanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorotridecanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorotetradecanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorobutanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorohexanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorooctanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
NEtFOSAA	ND		2.9	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
NMeFOSAA	ND		2.0	0.59	ng/L		07/16/21 08:02	07/19/21 22:16	1
10:2 FTS	ND		4.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluoropentanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluoroheptanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorononanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorodecanesulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.9	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorooctanesulfonamide	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorohexadecanoic acid	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorooctadecanoic acid	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorobutanoic acid	ND		4.9	2.0	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluoropentanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
NMeFOSE	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
NMeFOSA	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
NEtFOSE	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
NEtFOSA	ND		4.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1
HFPODA	ND		2.9	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
DONA	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
9Cl-PF3ONS	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
11Cl-PF3OUdS	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluorododecanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
Perfluoroundecanoic acid	ND		2.0	0.49	ng/L		07/16/21 08:02	07/19/21 22:16	1
6:2 Fluorotelomer sulfonic acid	ND		4.9	2.0	ng/L		07/16/21 08:02	07/19/21 22:16	1
8:2 Fluorotelomer sulfonic acid	ND		2.9	0.98	ng/L		07/16/21 08:02	07/19/21 22:16	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	131		20 - 187	07/16/21 08:02	07/19/21 22:16	1
M2-8:2 FTS	114		34 - 182	07/16/21 08:02	07/19/21 22:16	1
M2-6:2 FTS	131		29 - 189	07/16/21 08:02	07/19/21 22:16	1

Client Sample ID: Trip

Lab Sample ID: 410-47218-4

Date Collected: 07/14/21 09:08

Matrix: Water

Date Received: 07/15/21 09:16

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFHxA	118		31 - 142	07/16/21 08:02	07/19/21 22:16	1
13C4 PFHpA	119		30 - 144	07/16/21 08:02	07/19/21 22:16	1
13C8 PFOA	116		49 - 127	07/16/21 08:02	07/19/21 22:16	1
13C9 PFNA	117		47 - 136	07/16/21 08:02	07/19/21 22:16	1
13C6 PFDA	117		47 - 128	07/16/21 08:02	07/19/21 22:16	1
13C7 PFUnA	117		40 - 135	07/16/21 08:02	07/19/21 22:16	1
13C2-PFDoDA	114		28 - 136	07/16/21 08:02	07/19/21 22:16	1
13C2 PFTeDA	104		10 - 144	07/16/21 08:02	07/19/21 22:16	1
13C3 PFBS	115		19 - 178	07/16/21 08:02	07/19/21 22:16	1
13C3 PFHxS	117		32 - 145	07/16/21 08:02	07/19/21 22:16	1
13C8 PFOS	118		49 - 126	07/16/21 08:02	07/19/21 22:16	1
d3-NMeFOSAA	105		32 - 151	07/16/21 08:02	07/19/21 22:16	1
d5-NEtFOSAA	105		37 - 164	07/16/21 08:02	07/19/21 22:16	1
13C8 FOSA	97		10 - 143	07/16/21 08:02	07/19/21 22:16	1
13C4 PFBA	117		41 - 132	07/16/21 08:02	07/19/21 22:16	1
13C5 PFPeA	114		33 - 155	07/16/21 08:02	07/19/21 22:16	1
d7-N-MeFOSE-M	90		10 - 143	07/16/21 08:02	07/19/21 22:16	1
d3-NMePFOSA	50		10 - 107	07/16/21 08:02	07/19/21 22:16	1
d9-N-EtFOSE-M	90		10 - 142	07/16/21 08:02	07/19/21 22:16	1
d5-NEtPFOSA	53		10 - 108	07/16/21 08:02	07/19/21 22:16	1
13C3 HFPO-DA	105		20 - 153	07/16/21 08:02	07/19/21 22:16	1

Client Sample ID: Oyster knife rinse

Lab Sample ID: 410-47218-5

Date Collected: 07/14/21 11:15

Matrix: Water

Date Received: 07/15/21 09:16

Method: 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluoroheptanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorooctanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorononanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorodecanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorotridecanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorotetradecanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorobutanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorohexanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorooctanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
NEtFOSAA	ND		2.6	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
NMeFOSAA	ND		1.7	0.52	ng/L		07/16/21 08:02	07/19/21 22:27	1
10:2 FTS	ND		4.4	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluoropentanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluoroheptanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorononanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorodecanesulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorooctanesulfonamide	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorohexadecanoic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorooctadecanoic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1

Client Sample Results

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Client Sample ID: Oyster knife rinse

Lab Sample ID: 410-47218-5

Date Collected: 07/14/21 11:15
Matrix: Water
Date Received: 07/15/21 09:16

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	ND		4.4	1.7	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluoropentanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
NMeFOSE	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
NMeFOSA	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
NEtFOSE	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
NEtFOSA	ND		4.4	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1
HFPODA	ND		2.6	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
DONA	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
9Cl-PF3ONS	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
11Cl-PF3OUdS	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluorododecanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
4:2 Fluorotelomer sulfonic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
Perfluoroundecanoic acid	ND		1.7	0.44	ng/L		07/16/21 08:02	07/19/21 22:27	1
6:2 Fluorotelomer sulfonic acid	ND		4.4	1.7	ng/L		07/16/21 08:02	07/19/21 22:27	1
8:2 Fluorotelomer sulfonic acid	ND		2.6	0.87	ng/L		07/16/21 08:02	07/19/21 22:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*145*		*20 - 187*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
M2-8:2 FTS	*125*		*34 - 182*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
M2-6:2 FTS	*144*		*29 - 189*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C5 PFHxA	*133*		*31 - 142*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C4 PFHpA	*130*		*30 - 144*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C8 PFOA	*132*	**5+*	*49 - 127*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C9 PFNA	*137*	**5+*	*47 - 136*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C6 PFDA	*126*		*47 - 128*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C7 PFUnA	*125*		*40 - 135*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C2-PFDoDA	*116*		*28 - 136*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C2 PFTeDA	*111*		*10 - 144*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C3 PFBS	*131*		*19 - 178*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C3 PFHxS	*128*		*32 - 145*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C8 PFOS	*127*	**5+*	*49 - 126*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d3-NMeFOSAA	*110*		*32 - 151*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d5-NEtFOSAA	*122*		*37 - 164*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C8 FOSA	*101*		*10 - 143*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C4 PFBA	*130*		*41 - 132*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C5 PFPeA	*129*		*33 - 155*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d7-N-MeFOSE-M	*102*		*10 - 143*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d3-NMePFOSA	*69*		*10 - 107*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d9-N-EtFOSE-M	*99*		*10 - 142*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
d5-NEtPFOSA	*75*		*10 - 108*	*07/16/21 08:02*	*07/19/21 22:27*	*1*
13C3 HFPO-DA	*121*		*20 - 153*	*07/16/21 08:02*	*07/19/21 22:27*	*1*

Isotope Dilution Summary

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Method: 537 IDA - EPA 537 Isotope Dilution

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		M242FTS	M282FTS	M262FTS	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA
Lab Sample ID	Client Sample ID	(10-169)	(10-178)	(10-182)	(11-138)	(15-139)	(21-133)	(15-145)	(21-134)
410-47218-1	Oysters 1	141	193 *5+	174	61	70	74	87	85
410-47218-2	Oysters 2	167	228 *5+	223 *5+	72	87	90	103	99
LCS 410-150866/2-B	Lab Control Sample	138	147	156	71	80	81	100	89
LCSD 410-150866/3-B	Lab Control Sample Dup	183 *5+	204 *5+	219 *5+	94	106	101	125	114
MB 410-150866/1-B	Method Blank	142	145	166	76	84	84	101	93

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		13C7PUA	PFDoDA	PFTDA	C3PFBS	C3PFHS	C8PFOS	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(15-138)	(28-126)	(10-138)	(23-130)	(24-136)	(31-130)	(10-172)	(10-176)
410-47218-1	Oysters 1	84	75	21	73	60	72	57	73
410-47218-2	Oysters 2	86	86	20	84	79	88	65	76
LCS 410-150866/2-B	Lab Control Sample	99	92	79	83	70	84	84	131
LCSD 410-150866/3-B	Lab Control Sample Dup	122	120	101	105	94	103	112	176
MB 410-150866/1-B	Method Blank	104	92	84	89	75	89	81	123

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFOSA	PFBA	PFPeA	NMFM	d3NMFSA	NEFM	d5NPFSA	HFPODA
Lab Sample ID	Client Sample ID	(25-135)	(12-137)	(12-135)	(10-152)	(10-148)	(10-157)	(10-151)	(10-152)
410-47218-1	Oysters 1	80	18	65	51	49	14	30	46
410-47218-2	Oysters 2	84	26	79	53	52	13	32	58
LCS 410-150866/2-B	Lab Control Sample	98	53	87	56	74	52	84	59
LCSD 410-150866/3-B	Lab Control Sample Dup	122	71	109	73	88	65	102	81
MB 410-150866/1-B	Method Blank	88	61	91	66	78	61	91	79

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
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

Isotope Dilution Summary

Client: PEER
Job ID: 410-47218-1
Project/Site: CB PFAS Oyster

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)
410-47218-3	Field	127	123	123	119	113	114	107	114
410-47218-4	Trip	131	114	131	118	119	116	117	117
410-47218-5	Oyster knife rinse	145	125	144	133	130	132 *5+	137 *5+	126
LCS 410-149294/2-A	Lab Control Sample	129	121	123	118	119	114	114	115
LCSD 410-149294/3-A	Lab Control Sample Dup	125	122	131	119	118	119	120	118
MB 410-149294/1-A	Method Blank	124	110	126	114	118	117	110	112

		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)
410-47218-3	Field	115	108	104	110	111	107	102	112
410-47218-4	Trip	117	114	104	115	117	118	105	105
410-47218-5	Oyster knife rinse	125	116	111	131	128	127 *5+	110	122
LCS 410-149294/2-A	Lab Control Sample	112	109	108	115	116	112	104	108
LCSD 410-149294/3-A	Lab Control Sample Dup	121	115	113	120	119	117	111	115
MB 410-149294/1-A	Method Blank	112	107	101	114	114	110	101	104

		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)
410-47218-3	Field	96	112	111	88	50	84	53	114
410-47218-4	Trip	97	117	114	90	50	90	53	105
410-47218-5	Oyster knife rinse	101	130	129	102	69	99	75	121
LCS 410-149294/2-A	Lab Control Sample	96	116	117	92	47	91	49	117
LCSD 410-149294/3-A	Lab Control Sample Dup	102	120	120	101	57	98	57	120
MB 410-149294/1-A	Method Blank	94	114	114	90	59	87	59	130

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
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 410-149294/1-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
NEtFOSAA	ND		3.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
NMeFOSAA	ND		2.0	0.60	ng/L		07/16/21 08:02	07/19/21 19:19	1
10:2 FTS	ND		5.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorononanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorohexadecanoic acid	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorooctadecanoic acid	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
NMeFOSE	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
NMeFOSA	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
NEtFOSE	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
NEtFOSA	ND		5.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
HFPODA	ND		3.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
DONA	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
9Cl-PF3ONS	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
11Cl-PF3OUdS	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		07/16/21 08:02	07/19/21 19:19	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		07/16/21 08:02	07/19/21 19:19	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		07/16/21 08:02	07/19/21 19:19	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*124*		*20 - 187*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
M2-8:2 FTS	*110*		*34 - 182*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
M2-6:2 FTS	*126*		*29 - 189*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C5 PFHxA	*114*		*31 - 142*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C4 PFHpA	*118*		*30 - 144*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C8 PFOA	*117*		*49 - 127*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C9 PFNA	*110*		*47 - 136*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C6 PFDA	*112*		*47 - 128*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C7 PFUnA	*112*		*40 - 135*	*07/16/21 08:02*	*07/19/21 19:19*	*1*
13C2-PFDoDA	*107*		*28 - 136*	*07/16/21 08:02*	*07/19/21 19:19*	*1*

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

Lab Sample ID: MB 410-149294/1-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149294

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	101		10 - 144	07/16/21 08:02	07/19/21 19:19	1
13C3 PFBS	114		19 - 178	07/16/21 08:02	07/19/21 19:19	1
13C3 PFHxS	114		32 - 145	07/16/21 08:02	07/19/21 19:19	1
13C8 PFOS	110		49 - 126	07/16/21 08:02	07/19/21 19:19	1
d3-NMeFOSAA	101		32 - 151	07/16/21 08:02	07/19/21 19:19	1
d5-NEtFOSAA	104		37 - 164	07/16/21 08:02	07/19/21 19:19	1
13C8 FOSA	94		10 - 143	07/16/21 08:02	07/19/21 19:19	1
13C4 PFBA	114		41 - 132	07/16/21 08:02	07/19/21 19:19	1
13C5 PFPeA	114		33 - 155	07/16/21 08:02	07/19/21 19:19	1
d7-N-MeFOSE-M	90		10 - 143	07/16/21 08:02	07/19/21 19:19	1
d3-NMePFOSA	59		10 - 107	07/16/21 08:02	07/19/21 19:19	1
d9-N-EtFOSE-M	87		10 - 142	07/16/21 08:02	07/19/21 19:19	1
d5-NEtPFOSA	59		10 - 108	07/16/21 08:02	07/19/21 19:19	1
13C3 HFPO-DA	130		20 - 153	07/16/21 08:02	07/19/21 19:19	1

Lab Sample ID: LCS 410-149294/2-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.6	21.8		ng/L		85	66 - 137
Perfluoroheptanoic acid	25.6	21.3		ng/L		83	66 - 141
Perfluorooctanoic acid	25.6	21.6		ng/L		84	65 - 136
Perfluorononanoic acid	25.6	22.3		ng/L		87	65 - 140
Perfluorodecanoic acid	25.6	22.0		ng/L		86	63 - 137
Perfluorotridecanoic acid	25.6	21.2		ng/L		83	58 - 146
Perfluorotetradecanoic acid	25.6	22.5		ng/L		88	64 - 141
Perfluorobutanesulfonic acid	22.7	19.1		ng/L		84	65 - 132
Perfluorohexanesulfonic acid	23.3	19.8		ng/L		85	60 - 128
Perfluorooctanesulfonic acid	23.7	20.6		ng/L		87	51 - 126
NEtFOSAA	25.6	20.3		ng/L		79	54 - 134
NMeFOSAA	25.6	22.5		ng/L		88	58 - 143
10:2 FTS	24.7	18.4		ng/L		74	44 - 141
Perfluoropentanesulfonic acid	24.0	21.3		ng/L		89	71 - 136
Perfluoroheptanesulfonic acid	24.4	20.1		ng/L		82	67 - 135
Perfluorononanesulfonic acid	24.6	21.5		ng/L		88	67 - 137
Perfluorodecanesulfonic acid	24.7	19.8		ng/L		80	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	24.8	19.9		ng/L		80	54 - 136
Perfluorooctanesulfonamide	25.6	23.4		ng/L		91	55 - 130
Perfluorohexadecanoic acid	25.6	22.6		ng/L		88	52 - 149
Perfluorooctadecanoic acid	25.6	22.4		ng/L		87	32 - 167
Perfluorobutanoic acid	25.6	21.1		ng/L		82	62 - 156
Perfluoropentanoic acid	25.6	21.9		ng/L		86	72 - 139
NMeFOSE	25.6	21.4		ng/L		84	52 - 131
NMeFOSA	25.6	22.4		ng/L		87	49 - 141
NEtFOSE	25.6	21.9		ng/L		85	49 - 128
NEtFOSA	25.6	20.4		ng/L		80	50 - 136
HFPODA	25.6	20.9		ng/L		81	37 - 147

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

Lab Sample ID: LCS 410-149294/2-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
DONA	24.2	19.2		ng/L		79	49 - 158
9Cl-PF3ONS	23.8	20.2		ng/L		85	52 - 135
11Cl-PF3OUdS	23.8	19.4		ng/L		82	45 - 134
Perfluorododecanoic acid	25.6	23.0		ng/L		90	63 - 140
4:2 Fluorotelomer sulfonic acid	23.9	18.7		ng/L		78	59 - 130
Perfluoroundecanoic acid	25.6	21.8		ng/L		85	62 - 138
6:2 Fluorotelomer sulfonic acid	24.3	20.6		ng/L		85	57 - 137
8:2 Fluorotelomer sulfonic acid	24.5	21.0		ng/L		86	56 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*129*		*20 - 187*
M2-8:2 FTS	*121*		*34 - 182*
M2-6:2 FTS	*123*		*29 - 189*
13C5 PFHxA	*118*		*31 - 142*
13C4 PFHpA	*119*		*30 - 144*
13C8 PFOA	*114*		*49 - 127*
13C9 PFNA	*114*		*47 - 136*
13C6 PFDA	*115*		*47 - 128*
13C7 PFUnA	*112*		*40 - 135*
13C2-PFDoDA	*109*		*28 - 136*
13C2 PFTeDA	*108*		*10 - 144*
13C3 PFBS	*115*		*19 - 178*
13C3 PFHxS	*116*		*32 - 145*
13C8 PFOS	*112*		*49 - 126*
d3-NMeFOSAA	*104*		*32 - 151*
d5-NEtFOSAA	*108*		*37 - 164*
13C8 FOSA	*96*		*10 - 143*
13C4 PFBA	*116*		*41 - 132*
13C5 PFPeA	*117*		*33 - 155*
d7-N-MeFOSE-M	*92*		*10 - 143*
d3-NMePFOSA	*47*		*10 - 107*
d9-N-EtFOSE-M	*91*		*10 - 142*
d5-NEtPFOSA	*49*		*10 - 108*
13C3 HFPO-DA	*117*		*20 - 153*

Lab Sample ID: LCSD 410-149294/3-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 149294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid	25.6	21.1		ng/L		82	66 - 137	3	30
Perfluoroheptanoic acid	25.6	21.4		ng/L		83	66 - 141	0	30
Perfluorooctanoic acid	25.6	20.5		ng/L		80	65 - 136	5	30
Perfluorononanoic acid	25.6	21.3		ng/L		83	65 - 140	5	30
Perfluorodecanoic acid	25.6	21.5		ng/L		84	63 - 137	2	30
Perfluorotridecanoic acid	25.6	21.3		ng/L		83	58 - 146	1	30
Perfluorotetradecanoic acid	25.6	22.1		ng/L		86	64 - 141	2	30
Perfluorobutanesulfonic acid	22.7	18.5		ng/L		81	65 - 132	3	30
Perfluorohexanesulfonic acid	23.3	19.1		ng/L		82	60 - 128	3	30

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

Lab Sample ID: LCSD 410-149294/3-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 149294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid	23.7	20.4		ng/L		86	51 - 126	1	30
NEtFOSAA	25.6	20.8		ng/L		81	54 - 134	3	30
NMeFOSAA	25.6	22.1		ng/L		87	58 - 143	2	30
10:2 FTS	24.7	19.1		ng/L		77	44 - 141	4	30
Perfluoropentanesulfonic acid	24.0	20.6		ng/L		86	71 - 136	3	30
Perfluoroheptanesulfonic acid	24.4	19.1		ng/L		78	67 - 135	5	30
Perfluorononanesulfonic acid	24.6	21.0		ng/L		86	67 - 137	2	30
Perfluorodecanesulfonic acid	24.7	19.8		ng/L		80	61 - 134	0	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	19.3		ng/L		78	54 - 136	3	30
Perfluorooctanesulfonamide	25.6	22.7		ng/L		89	55 - 130	3	30
Perfluorohexadecanoic acid	25.6	22.1		ng/L		86	52 - 149	2	30
Perfluorooctadecanoic acid	25.6	21.4		ng/L		84	32 - 167	4	30
Perfluorobutanoic acid	25.6	21.0		ng/L		82	62 - 156	1	30
Perfluoropentanoic acid	25.6	21.7		ng/L		85	72 - 139	1	30
NMeFOSE	25.6	21.2		ng/L		83	52 - 131	1	30
NMeFOSA	25.6	22.0		ng/L		86	49 - 141	2	30
NEtFOSE	25.6	21.4		ng/L		84	49 - 128	2	30
NEtFOSA	25.6	22.1		ng/L		86	50 - 136	8	30
HFPODA	25.6	18.7		ng/L		73	37 - 147	11	30
DONA	24.2	19.5		ng/L		81	49 - 158	2	30
9Cl-PF3ONS	23.8	19.3		ng/L		81	52 - 135	4	30
11Cl-PF3OUdS	23.8	19.3		ng/L		81	45 - 134	1	30
Perfluorododecanoic acid	25.6	22.0		ng/L		86	63 - 140	4	30
4:2 Fluorotelomer sulfonic acid	23.9	20.2		ng/L		84	59 - 130	8	30
Perfluoroundecanoic acid	25.6	21.4		ng/L		84	62 - 138	2	30
6:2 Fluorotelomer sulfonic acid	24.3	18.8		ng/L		77	57 - 137	9	30
8:2 Fluorotelomer sulfonic acid	24.5	21.2		ng/L		87	56 - 140	1	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*125*		*20 - 187*
M2-8:2 FTS	*122*		*34 - 182*
M2-6:2 FTS	*131*		*29 - 189*
13C5 PFHxA	*119*		*31 - 142*
13C4 PFHpA	*118*		*30 - 144*
13C8 PFOA	*119*		*49 - 127*
13C9 PFNA	*120*		*47 - 136*
13C6 PFDA	*118*		*47 - 128*
13C7 PFUnA	*121*		*40 - 135*
13C2-PFDoDA	*115*		*28 - 136*
13C2 PFTeDA	*113*		*10 - 144*
13C3 PFBS	*120*		*19 - 178*
13C3 PFHxS	*119*		*32 - 145*
13C8 PFOS	*117*		*49 - 126*
d3-NMeFOSAA	*111*		*32 - 151*
d5-NEtFOSAA	*115*		*37 - 164*
13C8 FOSA	*102*		*10 - 143*
13C4 PFBA	*120*		*41 - 132*
13C5 PFPeA	*120*		*33 - 155*

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

Lab Sample ID: LCSD 410-149294/3-A
Matrix: Water
Analysis Batch: 150156

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 149294

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
d7-N-MeFOSE-M	*101*		*10 - 143*
d3-NMePFOSA	*57*		*10 - 107*
d9-N-EtFOSE-M	*98*		*10 - 142*
d5-NEtPFOSA	*57*		*10 - 108*
13C3 HFPO-DA	*120*		*20 - 153*

Lab Sample ID: MB 410-150866/1-B
Matrix: Solid
Analysis Batch: 155683

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 150866

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	0.347	J	0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluoroheptanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorooctanoic acid	0.380	J	0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorononanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorodecanoic acid	0.310	J	0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorotridecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorotetradecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorobutanesulfonic acid	ND		2.0	0.40	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorohexanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorooctanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
NEtFOSAA	ND		2.0	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
NMeFOSAA	ND		2.0	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
10:2 FTS	ND		2.0	0.60	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluoropentanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluoroheptanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorononanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorodecanesulfonic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.0	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorooctanesulfonamide	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorohexadecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorooctadecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorobutanoic acid	ND		2.0	0.80	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluoropentanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
NMeFOSE	ND		2.0	0.50	ng/g		07/21/21 06:48	08/03/21 09:16	1
NMeFOSA	ND		2.0	0.50	ng/g		07/21/21 06:48	08/03/21 09:16	1
NEtFOSE	ND		2.0	0.50	ng/g		07/21/21 06:48	08/03/21 09:16	1
NEtFOSA	ND		2.0	0.50	ng/g		07/21/21 06:48	08/03/21 09:16	1
HFPODA	ND		2.0	0.40	ng/g		07/21/21 06:48	08/03/21 09:16	1
DONA	ND		3.0	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
9Cl-PF3ONS	ND		2.0	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
11Cl-PF3OUdS	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluorododecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.60	ng/g		07/21/21 06:48	08/03/21 09:16	1
Perfluoroundecanoic acid	ND		0.60	0.20	ng/g		07/21/21 06:48	08/03/21 09:16	1
6:2 Fluorotelomer sulfonic acid	ND		2.0	0.60	ng/g		07/21/21 06:48	08/03/21 09:16	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	0.60	ng/g		07/21/21 06:48	08/03/21 09:16	1

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

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	142		10 - 169	07/21/21 06:48	08/03/21 09:16	1
M2-8:2 FTS	145		10 - 178	07/21/21 06:48	08/03/21 09:16	1
M2-6:2 FTS	166		10 - 182	07/21/21 06:48	08/03/21 09:16	1
13C5 PFHxA	76		11 - 138	07/21/21 06:48	08/03/21 09:16	1
13C4 PFHpA	84		15 - 139	07/21/21 06:48	08/03/21 09:16	1
13C8 PFOA	84		21 - 133	07/21/21 06:48	08/03/21 09:16	1
13C9 PFNA	101		15 - 145	07/21/21 06:48	08/03/21 09:16	1
13C6 PFDA	93		21 - 134	07/21/21 06:48	08/03/21 09:16	1
13C7 PFUnA	104		15 - 138	07/21/21 06:48	08/03/21 09:16	1
13C2-PFDoDA	92		28 - 126	07/21/21 06:48	08/03/21 09:16	1
13C2 PFTeDA	84		10 - 138	07/21/21 06:48	08/03/21 09:16	1
13C3 PFBS	89		23 - 130	07/21/21 06:48	08/03/21 09:16	1
13C3 PFHxS	75		24 - 136	07/21/21 06:48	08/03/21 09:16	1
13C8 PFOS	89		31 - 130	07/21/21 06:48	08/03/21 09:16	1
d3-NMeFOSAA	81		10 - 172	07/21/21 06:48	08/03/21 09:16	1
d5-NEtFOSAA	123		10 - 176	07/21/21 06:48	08/03/21 09:16	1
13C8 FOSA	88		25 - 135	07/21/21 06:48	08/03/21 09:16	1
13C4 PFBA	61		12 - 137	07/21/21 06:48	08/03/21 09:16	1
13C5 PFPeA	91		12 - 135	07/21/21 06:48	08/03/21 09:16	1
d7-N-MeFOSE-M	66		10 - 152	07/21/21 06:48	08/03/21 09:16	1
d3-NMePFOSA	78		10 - 148	07/21/21 06:48	08/03/21 09:16	1
d9-N-EtFOSE-M	61		10 - 157	07/21/21 06:48	08/03/21 09:16	1
d5-NEtPFOSA	91		10 - 151	07/21/21 06:48	08/03/21 09:16	1
13C3 HFPO-DA	79		10 - 152	07/21/21 06:48	08/03/21 09:16	1

Lab Sample ID: LCS 410-150866/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 153760 — **Prep Batch: 150866**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid	25.0	27.6		ng/g		110	61 - 147
Perfluoroheptanoic acid	25.0	26.1		ng/g		104	61 - 151
Perfluorooctanoic acid	25.0	29.4		ng/g		117	62 - 144
Perfluorononanoic acid	25.0	28.0		ng/g		112	62 - 148
Perfluorodecanoic acid	25.0	26.3		ng/g		105	62 - 142
Perfluorotridecanoic acid	25.0	22.2		ng/g		89	57 - 152
Perfluorotetradecanoic acid	25.0	26.3		ng/g		105	60 - 147
Perfluorobutanesulfonic acid	22.1	22.5		ng/g		102	62 - 137
Perfluorohexanesulfonic acid	22.8	24.8		ng/g		109	57 - 135
Perfluorooctanesulfonic acid	23.1	22.9		ng/g		99	48 - 134
NEtFOSAA	25.0	22.0		ng/g		88	50 - 140
NMeFOSAA	25.0	25.0		ng/g		100	53 - 149
10:2 FTS	24.1	19.5		ng/g		81	42 - 142
Perfluoropentanesulfonic acid	23.5	25.9		ng/g		110	65 - 145
Perfluoroheptanesulfonic acid	23.8	27.4		ng/g		115	67 - 138
Perfluorononanesulfonic acid	24.0	26.4		ng/g		110	63 - 143
Perfluorodecanesulfonic acid	24.1	23.7		ng/g		98	60 - 142
Perfluorododecanesulfonic acid (PFDoS)	24.2	22.8		ng/g		94	52 - 145
Perfluorooctanesulfonamide	25.0	25.6		ng/g		102	52 - 132
Perfluorohexadecanoic acid	25.0	22.2		ng/g		89	44 - 161
Perfluorooctadecanoic acid	25.0	20.6		ng/g		82	16 - 175

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

Lab Sample ID: LCS 410-150866/2-B
Matrix: Solid
Analysis Batch: 153760

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 150866

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid	25.0	26.5		ng/g		106	50 - 185
Perfluoropentanoic acid	25.0	25.4		ng/g		102	69 - 144
NMeFOSE	25.0	23.6		ng/g		95	47 - 138
NMeFOSA	25.0	26.2		ng/g		105	43 - 134
NEtFOSE	25.0	23.4		ng/g		94	46 - 134
NEtFOSA	25.0	22.7		ng/g		91	48 - 130
HFPODA	25.0	30.4		ng/g		121	29 - 162
DONA	23.6	23.7		ng/g		100	48 - 155
9Cl-PF3ONS	23.3	24.9		ng/g		107	48 - 146
11Cl-PF3OUdS	23.3	21.3		ng/g		92	45 - 145
Perfluorododecanoic acid	25.0	24.0		ng/g		96	60 - 147
4:2 Fluorotelomer sulfonic acid	23.4	21.7		ng/g		93	55 - 132
Perfluoroundecanoic acid	25.0	26.5		ng/g		106	62 - 144
6:2 Fluorotelomer sulfonic acid	23.7	22.6		ng/g		95	53 - 137
8:2 Fluorotelomer sulfonic acid	24.0	24.3		ng/g		101	50 - 147

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*138*		*10 - 169*
M2-8:2 FTS	*147*		*10 - 178*
M2-6:2 FTS	*156*		*10 - 182*
13C5 PFHxA	*71*		*11 - 138*
13C4 PFHpA	*80*		*15 - 139*
13C8 PFOA	*81*		*21 - 133*
13C9 PFNA	*100*		*15 - 145*
13C6 PFDA	*89*		*21 - 134*
13C7 PFUnA	*99*		*15 - 138*
13C2-PFDoDA	*92*		*28 - 126*
13C2 PFTeDA	*79*		*10 - 138*
13C3 PFBS	*83*		*23 - 130*
13C3 PFHxS	*70*		*24 - 136*
13C8 PFOS	*84*		*31 - 130*
d3-NMeFOSAA	*84*		*10 - 172*
d5-NEtFOSAA	*131*		*10 - 176*
13C8 FOSA	*98*		*25 - 135*
13C4 PFBA	*53*		*12 - 137*
13C5 PFPeA	*87*		*12 - 135*
d7-N-MeFOSE-M	*56*		*10 - 152*
d3-NMePFOSA	*74*		*10 - 148*
d9-N-EtFOSE-M	*52*		*10 - 157*
d5-NEtPFOSA	*84*		*10 - 151*
13C3 HFPO-DA	*59*		*10 - 152*

Lab Sample ID: LCSD 410-150866/3-B
Matrix: Solid
Analysis Batch: 153760

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 150866

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid	25.0	27.7		ng/g		111	61 - 147	0	30
Perfluoroheptanoic acid	25.0	25.9		ng/g		103	61 - 151	1	30

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

Lab Sample ID: LCSD 410-150866/3-B
Matrix: Solid
Analysis Batch: 153760

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 150866

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanoic acid	25.0	31.2		ng/g		125	62 - 144	6	30
Perfluorononanoic acid	25.0	28.3		ng/g		113	62 - 148	1	30
Perfluorodecanoic acid	25.0	26.8		ng/g		107	62 - 142	2	30
Perfluorotridecanoic acid	25.0	22.0		ng/g		88	57 - 152	1	30
Perfluorotetradecanoic acid	25.0	26.1		ng/g		104	60 - 147	1	30
Perfluorobutanesulfonic acid	22.1	23.5		ng/g		106	62 - 137	4	30
Perfluorohexanesulfonic acid	22.8	25.1		ng/g		110	57 - 135	1	30
Perfluorooctanesulfonic acid	23.1	23.4		ng/g		101	48 - 134	2	30
NEtFOSAA	25.0	23.8		ng/g		95	50 - 140	8	30
NMeFOSAA	25.0	23.6		ng/g		95	53 - 149	6	30
10:2 FTS	24.1	18.5		ng/g		77	42 - 142	5	30
Perfluoropentanesulfonic acid	23.5	27.3		ng/g		116	65 - 145	5	30
Perfluoroheptanesulfonic acid	23.8	25.8		ng/g		109	67 - 138	6	30
Perfluorononanesulfonic acid	24.0	26.0		ng/g		108	63 - 143	2	30
Perfluorodecanesulfonic acid	24.1	24.9		ng/g		103	60 - 142	5	30
Perfluorododecanesulfonic acid (PFDoS)	24.2	23.9		ng/g		99	52 - 145	5	30
Perfluorooctanesulfonamide	25.0	25.4		ng/g		102	52 - 132	1	30
Perfluorohexadecanoic acid	25.0	22.9		ng/g		92	44 - 161	3	30
Perfluorooctadecanoic acid	25.0	22.1		ng/g		88	16 - 175	7	30
Perfluorobutanoic acid	25.0	27.5		ng/g		110	50 - 185	4	30
Perfluoropentanoic acid	25.0	26.8		ng/g		107	69 - 144	5	30
NMeFOSE	25.0	23.4		ng/g		94	47 - 138	1	30
NMeFOSA	25.0	26.5		ng/g		106	43 - 134	1	30
NEtFOSE	25.0	23.4		ng/g		94	46 - 134	0	30
NEtFOSA	25.0	23.4		ng/g		94	48 - 130	3	30
HFPODA	25.0	28.7		ng/g		115	29 - 162	6	30
DONA	23.6	22.7		ng/g		96	48 - 155	4	30
9Cl-PF3ONS	23.3	25.2		ng/g		109	48 - 146	1	30
11Cl-PF3OUdS	23.3	23.3		ng/g		100	45 - 145	9	30
Perfluorododecanoic acid	25.0	24.2		ng/g		97	60 - 147	1	30
4:2 Fluorotelomer sulfonic acid	23.4	21.9		ng/g		94	55 - 132	1	30
Perfluoroundecanoic acid	25.0	28.4		ng/g		114	62 - 144	7	30
6:2 Fluorotelomer sulfonic acid	23.7	22.2		ng/g		94	53 - 137	1	30
8:2 Fluorotelomer sulfonic acid	24.0	23.6		ng/g		99	50 - 147	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*183*	**5+*	*10 - 169*
M2-8:2 FTS	*204*	**5+*	*10 - 178*
M2-6:2 FTS	*219*	**5+*	*10 - 182*
13C5 PFHxA	*94*		*11 - 138*
13C4 PFHpA	*106*		*15 - 139*
13C8 PFOA	*101*		*21 - 133*
13C9 PFNA	*125*		*15 - 145*
13C6 PFDA	*114*		*21 - 134*
13C7 PFUnA	*122*		*15 - 138*
13C2-PFDoDA	*120*		*28 - 126*
13C2 PFTeDA	*101*		*10 - 138*
13C3 PFBS	*105*		*23 - 130*

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

Lab Sample ID: LCSD 410-150866/3-B
Matrix: Solid
Analysis Batch: 153760

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 150866

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C3 PFHxS	94		24 - 136
13C8 PFOS	103		31 - 130
d3-NMeFOSAA	112		10 - 172
d5-NEtFOSAA	176		10 - 176
13C8 FOSA	122		25 - 135
13C4 PFBA	71		12 - 137
13C5 PFPeA	109		12 - 135
d7-N-MeFOSE-M	73		10 - 152
d3-NMePFOSA	88		10 - 148
d9-N-EtFOSE-M	65		10 - 157
d5-NEtPFOSA	102		10 - 151
13C3 HFPO-DA	81		10 - 152

QC Association Summary

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

LCMS

Prep Batch: 149294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-47218-3	Field	Total/NA	Water	537 IDA	
410-47218-4	Trip	Total/NA	Water	537 IDA	
410-47218-5	Oyster knife rinse	Total/NA	Water	537 IDA	
MB 410-149294/1-A	Method Blank	Total/NA	Water	537 IDA	
LCS 410-149294/2-A	Lab Control Sample	Total/NA	Water	537 IDA	
LCSD 410-149294/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	

Analysis Batch: 150156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-47218-3	Field	Total/NA	Water	537 IDA	149294
410-47218-4	Trip	Total/NA	Water	537 IDA	149294
410-47218-5	Oyster knife rinse	Total/NA	Water	537 IDA	149294
MB 410-149294/1-A	Method Blank	Total/NA	Water	537 IDA	149294
LCS 410-149294/2-A	Lab Control Sample	Total/NA	Water	537 IDA	149294
LCSD 410-149294/3-A	Lab Control Sample Dup	Total/NA	Water	537 IDA	149294

Prep Batch: 150866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-47218-1	Oysters 1	Total/NA	Solid	537 (mod)	
410-47218-2	Oysters 2	Total/NA	Solid	537 (mod)	
MB 410-150866/1-B	Method Blank	Total/NA	Solid	537 (mod)	
LCS 410-150866/2-B	Lab Control Sample	Total/NA	Solid	537 (mod)	
LCSD 410-150866/3-B	Lab Control Sample Dup	Total/NA	Solid	537 (mod)	

Cleanup Batch: 152068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-47218-1	Oysters 1	Total/NA	Solid	Extract Aliquot	150866
410-47218-2	Oysters 2	Total/NA	Solid	Extract Aliquot	150866
MB 410-150866/1-B	Method Blank	Total/NA	Solid	Extract Aliquot	150866
LCS 410-150866/2-B	Lab Control Sample	Total/NA	Solid	Extract Aliquot	150866
LCSD 410-150866/3-B	Lab Control Sample Dup	Total/NA	Solid	Extract Aliquot	150866

Analysis Batch: 153760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-47218-1	Oysters 1	Total/NA	Solid	537 IDA	152068
410-47218-2	Oysters 2	Total/NA	Solid	537 IDA	152068
LCS 410-150866/2-B	Lab Control Sample	Total/NA	Solid	537 IDA	152068
LCSD 410-150866/3-B	Lab Control Sample Dup	Total/NA	Solid	537 IDA	152068

Analysis Batch: 155683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-150866/1-B	Method Blank	Total/NA	Solid	537 IDA	152068

Lab Chronicle

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Client Sample ID: Oysters 1

Lab Sample ID: 410-47218-1

Date Collected: 07/14/21 10:07
Matrix: Solid
Date Received: 07/15/21 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 (mod)			150866	07/21/21 06:48	X4HV	ELLE
Total/NA	Cleanup	Extract Aliquot			152068	07/23/21 09:38	S7AC	ELLE
Total/NA	Analysis	537 IDA		1	153760	07/29/21 04:44	QD9Y	ELLE

Client Sample ID: Oysters 2

Lab Sample ID: 410-47218-2

Date Collected: 07/14/21 10:07
Matrix: Solid
Date Received: 07/15/21 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 (mod)			150866	07/21/21 06:48	X4HV	ELLE
Total/NA	Cleanup	Extract Aliquot			152068	07/23/21 09:38	S7AC	ELLE
Total/NA	Analysis	537 IDA		1	153760	07/29/21 04:55	QD9Y	ELLE

Client Sample ID: Field

Lab Sample ID: 410-47218-3

Date Collected: 07/14/21 10:35
Matrix: Water
Date Received: 07/15/21 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			149294	07/16/21 08:02	S7AC	ELLE
Total/NA	Analysis	537 IDA		1	150156	07/19/21 22:05	UUV6	ELLE

Client Sample ID: Trip

Lab Sample ID: 410-47218-4

Date Collected: 07/14/21 09:08
Matrix: Water
Date Received: 07/15/21 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			149294	07/16/21 08:02	S7AC	ELLE
Total/NA	Analysis	537 IDA		1	150156	07/19/21 22:16	UUV6	ELLE

Client Sample ID: Oyster knife rinse

Lab Sample ID: 410-47218-5

Date Collected: 07/14/21 11:15
Matrix: Water
Date Received: 07/15/21 09:16

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537 IDA			149294	07/16/21 08:02	S7AC	ELLE
Total/NA	Analysis	537 IDA		1	150156	07/19/21 22:27	UUV6	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: CB PFAS Oyster

Job ID: 410-47218-1

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	06-30-22

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

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	06-30-22

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

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 (mod)	Solid	10:2 FTS
537 IDA	537 (mod)	Solid	11Cl-PF3OUdS
537 IDA	537 (mod)	Solid	4:2 Fluorotelomer sulfonic acid
537 IDA	537 (mod)	Solid	6:2 Fluorotelomer sulfonic acid
537 IDA	537 (mod)	Solid	8:2 Fluorotelomer sulfonic acid
537 IDA	537 (mod)	Solid	9Cl-PF3ONS
537 IDA	537 (mod)	Solid	DONA
537 IDA	537 (mod)	Solid	HFPODA
537 IDA	537 (mod)	Solid	NEtFOSA
537 IDA	537 (mod)	Solid	NEtFOSAA
537 IDA	537 (mod)	Solid	NEtFOSE
537 IDA	537 (mod)	Solid	NMeFOSA
537 IDA	537 (mod)	Solid	NMeFOSAA
537 IDA	537 (mod)	Solid	NMeFOSE
537 IDA	537 (mod)	Solid	Perfluorobutanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluorobutanoic acid
537 IDA	537 (mod)	Solid	Perfluorodecanesulfonic acid
537 IDA	537 (mod)	Solid	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	04-01-22

537 IDA	537 (mod)	Solid	Perfluorododecanesulfonic acid (PFDoS)
537 IDA	537 (mod)	Solid	Perfluorododecanoic acid
537 IDA	537 (mod)	Solid	Perfluoroheptanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluoroheptanoic acid
537 IDA	537 (mod)	Solid	Perfluorohexadecanoic acid
537 IDA	537 (mod)	Solid	Perfluorohexanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluorohexanoic acid
537 IDA	537 (mod)	Solid	Perfluorononanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluorononanoic acid
537 IDA	537 (mod)	Solid	Perfluorooctadecanoic acid
537 IDA	537 (mod)	Solid	Perfluorooctanesulfonamide
537 IDA	537 (mod)	Solid	Perfluorooctanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluorooctanoic acid
537 IDA	537 (mod)	Solid	Perfluoropentanesulfonic acid
537 IDA	537 (mod)	Solid	Perfluoropentanoic acid
537 IDA	537 (mod)	Solid	Perfluorotetradecanoic acid
537 IDA	537 (mod)	Solid	Perfluorotridecanoic acid
537 IDA	537 (mod)	Solid	Perfluoroundecanoic acid
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

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	04-01-22

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

Method Summary

Client: PEER
Project/Site: CB PFAS Oyster

Job ID: 410-47218-1

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
537 (mod)	EPA 537 Isotope Dilution	EPA	ELLE
537 IDA	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: CB PFAS Oyster

Job ID: 410-47218-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-47218-1	Oysters 1	Solid	07/14/21 10:07	07/15/21 09:16
410-47218-2	Oysters 2	Solid	07/14/21 10:07	07/15/21 09:16
410-47218-3	Field	Water	07/14/21 10:35	07/15/21 09:16
410-47218-4	Trip	Water	07/14/21 09:08	07/15/21 09:16
410-47218-5	Oyster knife rinse	Water	07/14/21 11:15	07/15/21 09:16

410-47218 Chain of Custody

Env, LLC

Chain of Custody Record

eurofins

Sampler: Jay Berry	Lab PM: Kauffman, Dana	Carrier Tracking No(s):	COC No: 410-25330-7480.1
Phone: 443-624-8312	E-Mail: Dana.Kauffman@eurofinset.com	State of Origin: MD	Page: Page 1 of 1

Company: Town of Chesapeake Beach
Address: 8200 Bayside Road
City: Chesapeake Beach
State, Zip: MD. 20732
Phone: 410-257-2230
Email: hwahl@chesapeakebeachmd.gov
Project Name: CB PFAS Oyster
Site: Oyster Reef Chesapeake Bay

PWSID:
Due Date Requested:
TAT Requested (days):
Compliance Project: Δ Yes Δ No
PO #: Purchase Order not required
WO #:
Project #: 41001955
SSOW#:

hwahl@chesapeakebeachmd.gov
Site: GPS 38.42.084 76.30.601

Analysis Requested

Preservation Codes:
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)
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	PFAS	Total Number of containers	Special Instructions/Note:
Oysters 1	7/14/2021	10:07	G	BT				X		
Oysters 2	7/14/2021	10:07	G	BT						
Field	7/14/2021	10:35	G	W						
Trip	7/14/2021	09:08	G	W						
Oyster knife rinse	7/14/2021	11:15	G	W						
Temperature	7/14/2021	12:40	G	W						

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: Fedx Express

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	5-21-21 12:00	ELLE			
[signature]	6/14 14:2				
			[signature]	7/15/21 9:16	ELLE

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

Cooler Temperature(s) °C and Other Remarks: 3.3

8/4/2021

Env, LLC

410-47218-01 Chain of Custody

Chain of Custody Record

eurofins

Sampler: Jay Berry	Lab PM: Kauffman, Dana	Carrier Tracking No(s):	COC No: 410-25330-7480.1
Phone: 443-624-8312	E-Mail: Dana.Kauffman@eurofinset.com	State of Origin: MD	Page: Page 1 of 1

Holly Wahl

Company: Town of Chesapeake Beach

Address: 8200 Bayside Road

City: Chesapeake Beach

State, Zip: MD. 20732

Phone: 410-257-2230

Email: hwahl@chesapeakebeachmd.gov

Project Name: CB PFAS Oyster

Site: Oyster Reef Chesapeake Bay

PWSID:

Due Date Requested:

TAT Requested (days):

Compliance Project: Δ Yes Δ No

PO #: Purchase Order not required

WO #:

Project #: 41001955

SSOW#:

hwahl@chesapeakebeachmd.gov
Site=GPS 3842.084 7630.601

Analysis Requested

Job #:

Preservation Codes:

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)

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	PFAS		
Oysters 1	7/14/2021	10:07	G	BT				X		
Oysters 2	7/14/2021	10:07	G	BT						
Field	7/14/2021	10:35	G	W						
Trip	7/14/2021	09:08	G	W						
Oyster knife rinse	7/14/2021	11:15	G	W						
Temperature	7/14/2021	12:40	G	W						

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: Fedx Express

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	5-21-21 12:00	ELLE			
[signature]	6/14 14:2				
			[signature]	7/15/21 9:16	ELLE

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

Cooler Temperature(s) °C and Other Remarks: 3.3

TL

8/4/2021

Eurofins Lancaster Laboratories Env, LLC

Please send Lab Results To:

410-47218-02 Chain of Custody

Holly Wahl
Town of Chesapeake Beach
8200 Bayside Rd.
Chesapeake Beach, MD 20732

E-mail: hwahl@chesapeakebeachmd.gov

Phone: 410-257-2230

Login Sample Receipt Checklist

Client: PEER

Job Number: 410-47218-1

Login Number: 47218

List Source: Eurofins Lancaster Laboratories Env, LLC

List Number: 1

Creator: Lugardo, Tamara

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	