

 **ANALYTICAL REPORT****PREPARED FOR**

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Generated 1/16/2023 6:08:22 AM

JOB DESCRIPTION

PFAS in Biosolids

JOB NUMBER

410-103813-1

Job Notes

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
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Compliance Statement

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.

This report shall not be reproduced except in full, without the written approval of the laboratory.

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Definitions/Glossary

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
cn	Refer to Case Narrative for further detail
H	Sample was prepped or analyzed beyond the specified holding time
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Job ID: 410-103813-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-103813-1

Receipt

The sample was received on 10/31/2022 8:40 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 8.7°C

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: Bloom Fertilizer #1/#2 (410-103813-1). This does not meet regulatory requirements. The client was contacted regarding this issue, and the laboratory was instructed to proceed with analysis.

Temp is within required range for PFAS, under 10C.

The Field Sampler was not listed on the Chain of Custody.

PFAS

Method PFC_IDA: The recovery for the labeled isotope: M2-4:2 FTS in the following sample: Bloom Fertilizer #1/#2 (410-103813-1) 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. Due to a laboratory error the hold time was not met for the following sample: Bloom Fertilizer #1/#2 (410-103813-1).

Method PFC_IDA: The recovery for the target analytes: PEPA, PS Acid, Hydro-EVE Acid, 7:3 FTCA and MTP in the laboratory control spike sample associated with the following sample: Bloom Fertilizer #1/#2 (410-103813-1) is outside the QC acceptance limits. The window should be considered advisory therefore the data is reported.

Method PFC_IDA: The recovery for the labeled isotope(s) 13C2-2-Perfluorooctylethanoic acid in the method blank for the following sample: Bloom Fertilizer #1/#2 (410-103813-1) is outside the QC acceptance limits. Since the recovery is high and the native analyte is not detected in the method blank, the data is reported.

Method PFC_IDA: The LCS labeled isotope(s) 13C2-2-Perfluorodecylethanoic acid recovery associated with sample: Bloom Fertilizer #1/#2 (410-103813-1) is outside the QC acceptance limits. Since the recovery for target analytes is within the limits, the data is reported.

Method PFC_IDA: The recovery for target analyte 10:2 FTS is outside the QC acceptance limits in the closing continuing calibration verification standard. Sufficient sample was not available to re-vial and re-inject this sample.

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

General Chemistry

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: PFAS in Biosolids

Job ID: 410-103813-1

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
10:2 FTS	1.1	J H cn	1.4	0.42	ng/g	1		*	537 IDA	Total/NA
HFPODA	1.6	H	1.4	1.4	ng/g	1		*	537 IDA	Total/NA
Perfluorooctadecanoic acid	0.32	J H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
NETFOSE	3.5	H	1.4	0.35	ng/g	1		*	537 IDA	Total/NA
Perfluorooctanesulfonic acid	26	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluoroundecanoic acid	4.0	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
NMeFOSAA	8.5	H	1.4	0.14	ng/g	1		*	537 IDA	Total/NA
R-EVE	0.19	J H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
PEPA	0.28	J H *- cn	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluoropentanoic acid	8.3	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluoropentanesulfonic acid	0.16	J H I	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
6:2 Fluorotelomer sulfonic acid	4.2	H	1.4	0.42	ng/g	1		*	537 IDA	Total/NA
8:2 FTCA	0.18	J H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
NETFOSAA	2.8	H	1.4	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorohexanoic acid	65	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorododecanoic acid	3.7	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorooctanoic acid	21	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorodecanoic acid	11	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorodecanesulfonic acid	1.7	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorohexanesulfonic acid	1.2	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorobutanoic acid	10	H	1.4	0.56	ng/g	1		*	537 IDA	Total/NA
Perfluorobutanesulfonic acid	30	H	1.4	0.28	ng/g	1		*	537 IDA	Total/NA
Perfluoroheptanoic acid	4.1	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluoroheptanesulfonic acid	0.28	J H I	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorononanoic acid	6.4	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorotetradecanoic acid	1.3	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
8:2 Fluorotelomer sulfonic acid	2.7	H	2.1	0.42	ng/g	1		*	537 IDA	Total/NA
PPF Acid	8.2	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorohexadecanoic acid	0.42	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
8:2 FTUCA	0.56	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
6:2 FTUCA	0.33	J H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
10:2 FTUCA	0.80	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorotridecanoic acid	1.0	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorooctanesulfonamide	0.78	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
Perfluorododecanesulfonic acid	0.17	J H	1.4	0.14	ng/g	1		*	537 IDA	Total/NA
7:3 FTCA	2.7	H *- cn	0.42	0.14	ng/g	1		*	537 IDA	Total/NA
5:3 FTCA	23	H	0.42	0.14	ng/g	1		*	537 IDA	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Date Collected: 10/29/22 09:30

Matrix: Solid

Date Received: 10/31/22 08:40

Percent Solids: 70.8

Method: EPA 537 IDA - EPA 537 Isotope Dilution

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NVHOS	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
10:2 FTS	1.1	J H cn	1.4	0.42	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PMPA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
HFPODA	1.6	H	1.4	1.4	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFECA B	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorooctadecanoic acid	0.32	J H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NEtFOSE	3.5	H	1.4	0.35	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorooctanesulfonic acid	26	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoroundecanoic acid	4.0	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NMeFOSAA	8.5	H	1.4	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
R-PSDA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Hydrolyzed PSDA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
R-PSDCA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
R-EVE	0.19	J H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NMeFOSE	<0.35	H	1.4	0.35	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PEPA	0.28	J H *- cn	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoropentanoic acid	8.3	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoropentanesulfonic acid	0.16	J H I	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
6:2 Fluorotelomer sulfonic acid	4.2	H	1.4	0.42	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
8:2 FTCA	0.18	J H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PS Acid	<0.14	H *- cn	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NEtFOSAA	2.8	H	1.4	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorohexanoic acid	65	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorododecanoic acid	3.7	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NMeFOSA	<0.35	H	1.4	0.35	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorooctanoic acid	21	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorodecanoic acid	11	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorodecanesulfonic acid	1.7	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorohexanesulfonic acid	1.2	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
3:3 FTCA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorobutanoic acid	10	H	1.4	0.56	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorobutanesulfonic acid	30	H	1.4	0.28	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoroheptanoic acid	4.1	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoroheptanesulfonic acid	0.28	J H I	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorononanoic acid	6.4	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorotetradecanoic acid	1.3	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFECA F	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
8:2 Fluorotelomer sulfonic acid	2.7	H	2.1	0.42	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFO2HxA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFO3OA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFO4DA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
TAF	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
NEtFOSA	<0.35	H	1.4	0.35	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PPF Acid	8.2	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluoropropanesulfonic acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
6:2 FTCA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1

Client Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Date Collected: 10/29/22 09:30

Matrix: Solid

Date Received: 10/31/22 08:40

Percent Solids: 70.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
10:2 FTCA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFMOAA	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorohexadecanoic acid	0.42	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorononanesulfonic acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
EVE Acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
8:2 FTUCA	0.56	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
6:2 FTUCA	0.33	J H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
10:2 FTUCA	0.80	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorotridecanoic acid	1.0	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Hydro-PS Acid	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorooctanesulfonamide	0.78	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
9Cl-PF3ONS	<0.14	H	1.4	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
4:2 Fluorotelomer sulfonic acid	<0.42	H	1.4	0.42	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
11Cl-PF3OUdS	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Hydro-EVE Acid	<0.14	H * - cn	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
Perfluorododecanesulfonic acid	0.17	J H	1.4	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFECA G	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
7:3 FTCA	2.7	H * - cn	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
PFECA A	<0.14	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
5:3 FTCA	23	H	0.42	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.14	H	2.1	0.14	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
MTP	<0.21	*+ H cn	0.42	0.21	ng/g	☼	11/23/22 19:49	12/23/22 10:36	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
d5-NEtFOSAA	115		10 - 193				11/23/22 19:49	12/23/22 10:36	1
d3-NMeFOSAA	85		10 - 178				11/23/22 19:49	12/23/22 10:36	1
13C3 HFPO-DA	68		10 - 169				11/23/22 19:49	12/23/22 10:36	1
d7-N-MeFOSE-M	74		10 - 179				11/23/22 19:49	12/23/22 10:36	1
d9-N-EtFOSE-M	56		10 - 185				11/23/22 19:49	12/23/22 10:36	1
M2-6:2 FTS	193		10 - 200				11/23/22 19:49	12/23/22 10:36	1
M2-8:2 FTS	193		15 - 200				11/23/22 19:49	12/23/22 10:36	1
13C3 PFBS	104		27 - 179				11/23/22 19:49	12/23/22 10:36	1
M2-4:2 FTS	258	*5+ cn	10 - 200				11/23/22 19:49	12/23/22 10:36	1
13C5 PFHxA	75		10 - 174				11/23/22 19:49	12/23/22 10:36	1
13C9 PFNA	131		26 - 165				11/23/22 19:49	12/23/22 10:36	1
13C6 PFDA	97		26 - 161				11/23/22 19:49	12/23/22 10:36	1
13C7 PFUnA	96		12 - 173				11/23/22 19:49	12/23/22 10:36	1
13C3 PFHxS	83		24 - 171				11/23/22 19:49	12/23/22 10:36	1
13C2-PFDoDA	62		11 - 166				11/23/22 19:49	12/23/22 10:36	1
d5-NEtPFOSA	29		10 - 180				11/23/22 19:49	12/23/22 10:36	1
d3-NMePFOSA	57		10 - 175				11/23/22 19:49	12/23/22 10:36	1
13C2-2-Perfluorohexylethanoic acid	133		10 - 200				11/23/22 19:49	12/23/22 10:36	1
13C2-2-Perfluorooctylethanoic acid	199	cn	10 - 200				11/23/22 19:49	12/23/22 10:36	1
13C2-2-Perfluorodecylethanoic acid	153	cn	10 - 200				11/23/22 19:49	12/23/22 10:36	1
13C2-2H-Perfluoro-2-octenoic acid	63		10 - 164				11/23/22 19:49	12/23/22 10:36	1
13C2-2H-Perfluoro-2-decenoic acid	75		10 - 162				11/23/22 19:49	12/23/22 10:36	1
13C2-2H-Perfluoro-2-dodecenoic acid	63		10 - 161				11/23/22 19:49	12/23/22 10:36	1
13C4 PFBA	101		28 - 153				11/23/22 19:49	12/23/22 10:36	1
13C5 PFPeA	100		24 - 161				11/23/22 19:49	12/23/22 10:36	1

Client Sample Results

Client: PEER
 Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Date Collected: 10/29/22 09:30

Matrix: Solid

Date Received: 10/31/22 08:40

Percent Solids: 70.8

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFHpA	85		10 - 178	11/23/22 19:49	12/23/22 10:36	1
13C8 PFOA	81		26 - 159	11/23/22 19:49	12/23/22 10:36	1
13C8 PFOS	105		41 - 154	11/23/22 19:49	12/23/22 10:36	1
13C8 FOSA	72		14 - 163	11/23/22 19:49	12/23/22 10:36	1
13C2 PFTeDA	59		10 - 169	11/23/22 19:49	12/23/22 10:36	1

General Chemistry

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Percent Moisture (EPA Moisture)	29.2		1.0	1.0	%			11/02/22 12:40	1



Isotope Dilution Summary

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Method: 537 IDA - EPA 537 Isotope Dilution

Matrix: Solid

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d5NEFOS (10-193)	d3NMFOS (10-178)	HFPODA (10-169)	NMFM (10-179)	NEFM (10-185)	M262FTS (10-200)	M282FTS (15-200)	C3PFBS (27-179)
410-103813-1	Bloom Fertilizer #1/#2	115	85	68	74	56	193	193	104
LCS 410-320797/2-B	Lab Control Sample	105	98	84	55	52	82	87	76
LCSD 410-320797/3-B	Lab Control Sample Dup	106	100	85	56	53	79	76	77
MB 410-320797/1-B	Method Blank	114	99	88	55	56	96	95	78

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (10-200)	13C5PHA (10-174)	C9PFNA (26-165)	C6PFDA (26-161)	13C7PUA (12-173)	C3PFHS (24-171)	PFDODA (11-166)	d5NPFSA (10-180)
410-103813-1	Bloom Fertilizer #1/#2	258 *5+ cn	75	131	97	96	83	62	29
LCS 410-320797/2-B	Lab Control Sample	74	83	107	87	86	74	85	33
LCSD 410-320797/3-B	Lab Control Sample Dup	77	83	106	84	91	78	93	35
MB 410-320797/1-B	Method Blank	84	101	112	93	94	89	90	39

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	d3NMFSA (10-175)	MFHEA (10-200)	MFOEA (10-200)	MFDEA (10-200)	MFHUEA (10-164)	MFOUEA (10-162)	MFDUEA (10-161)	PFBA (28-153)
410-103813-1	Bloom Fertilizer #1/#2	57	133	199 cn	153 cn	63	75	63	101
LCS 410-320797/2-B	Lab Control Sample	42	171	170	201 *5+	67	69	71	91
LCSD 410-320797/3-B	Lab Control Sample Dup	45	169	177	180	69	69	73	91
MB 410-320797/1-B	Method Blank	42	200	218 *5+	198	77	83	76	94

		Percent Isotope Dilution Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	PFPeA (24-161)	C4PFHA (10-178)	C8PFOA (26-159)	C8PFOS (41-154)	PFOSA (14-163)	PFTDA (10-169)
410-103813-1	Bloom Fertilizer #1/#2	100	85	81	105	72	59
LCS 410-320797/2-B	Lab Control Sample	93	81	85	95	94	83
LCSD 410-320797/3-B	Lab Control Sample Dup	94	81	83	93	96	84
MB 410-320797/1-B	Method Blank	94	97	98	101	99	84

Surrogate Legend

- d5NEFOS = d5-NEtFOSAA
- d3NMFOS = d3-NMeFOSAA
- HFPODA = 13C3 HFPO-DA
- NMFM = d7-N-MeFOSE-M
- NEFM = d9-N-EtFOSE-M
- M262FTS = M2-6:2 FTS
- M282FTS = M2-8:2 FTS
- C3PFBS = 13C3 PFBS
- M242FTS = M2-4:2 FTS
- 13C5PHA = 13C5 PFHxA
- C9PFNA = 13C9 PFNA
- C6PFDA = 13C6 PFDA
- 13C7PUA = 13C7 PFUnA
- C3PFHS = 13C3 PFHxS
- PFDODA = 13C2-PFDODA
- d5NPFSA = d5-NEtPFOSA
- d3NMFSA = d3-NMePFOSA
- MFHEA = 13C2-2-Perfluorohexylethanoic acid
- MFOEA = 13C2-2-Perfluorooctylethanoic acid
- MFDEA = 13C2-2-Perfluorodecylethanoic acid
- MFHUEA = 13C2-2H-Perfluoro-2-octenoic acid

Isotope Dilution Summary

Client: PEER

Job ID: 410-103813-1

Project/Site: PFAS in Biosolids

MFOUEA = 13C2-2H-Perfluoro-2-decenoic acid
MFDUEA = 13C2-2H-Perfluoro-2-dodecenoic acid
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C8PFOS = 13C8 PFOS
PFOSA = 13C8 FOSA
PFTDA = 13C2 PFTeDA

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

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Method: 537 IDA - EPA 537 Isotope Dilution

Lab Sample ID: MB 410-320797/1-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320797

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
NVHOS	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoro (2-ethoxyethane) sulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
10:2 FTS	<0.30		1.0	0.30	ng/g		11/23/22 19:49	12/23/22 10:02	1
PMPA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
HFPODA	<1.0		1.0	1.0	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoro-4-ethylcyclohexanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFECA B	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorooctadecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NEtFOSE	<0.25		1.0	0.25	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorooctanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoroundecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NMeFOSAA	<0.10		1.0	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
R-PSDA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Hydrolyzed PSDA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
R-PSDCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
R-EVE	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NMeFOSE	<0.25		1.0	0.25	ng/g		11/23/22 19:49	12/23/22 10:02	1
PEPA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoropentanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoropentanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
6:2 Fluorotelomer sulfonic acid	<0.30		1.0	0.30	ng/g		11/23/22 19:49	12/23/22 10:02	1
8:2 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PS Acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NEtFOSAA	<0.10		1.0	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorohexanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorododecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NMeFOSA	<0.25		1.0	0.25	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorooctanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorodecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorodecanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorohexanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
3:3 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorobutanoic acid	<0.40		1.0	0.40	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorobutanesulfonic acid	<0.20		1.0	0.20	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoroheptanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoroheptanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorononanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorotetradecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFECA F	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
8:2 Fluorotelomer sulfonic acid	<0.30		1.5	0.30	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFO2HxA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFO3OA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFO4DA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
TAF	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
NEtFOSA	<0.25		1.0	0.25	ng/g		11/23/22 19:49	12/23/22 10:02	1
PPF Acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluoropropanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: MB 410-320797/1-B

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 329876

Prep Batch: 320797

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
6:2 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
10:2 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFMOAA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorohexadecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorononanesulfonic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
EVE Acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
8:2 FTUCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
6:2 FTUCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
10:2 FTUCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorotridecanoic acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Hydro-PS Acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorooctanesulfonamide	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
9Cl-PF3ONS	<0.10		1.0	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
4:2 Fluorotelomer sulfonic acid	<0.30		1.0	0.30	ng/g		11/23/22 19:49	12/23/22 10:02	1
11Cl-PF3OUdS	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Hydro-EVE Acid	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
Perfluorododecanesulfonic acid	<0.10		1.0	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFECA G	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
7:3 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
PFECA A	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
5:3 FTCA	<0.10		0.30	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.10		1.5	0.10	ng/g		11/23/22 19:49	12/23/22 10:02	1
MTP	<0.15		0.30	0.15	ng/g		11/23/22 19:49	12/23/22 10:02	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	114		10 - 193	11/23/22 19:49	12/23/22 10:02	1
d3-NMeFOSAA	99		10 - 178	11/23/22 19:49	12/23/22 10:02	1
13C3 HFPO-DA	88		10 - 169	11/23/22 19:49	12/23/22 10:02	1
d7-N-MeFOSE-M	55		10 - 179	11/23/22 19:49	12/23/22 10:02	1
d9-N-EtFOSE-M	56		10 - 185	11/23/22 19:49	12/23/22 10:02	1
M2-6:2 FTS	96		10 - 200	11/23/22 19:49	12/23/22 10:02	1
M2-8:2 FTS	95		15 - 200	11/23/22 19:49	12/23/22 10:02	1
13C3 PFBS	78		27 - 179	11/23/22 19:49	12/23/22 10:02	1
M2-4:2 FTS	84		10 - 200	11/23/22 19:49	12/23/22 10:02	1
13C5 PFHxA	101		10 - 174	11/23/22 19:49	12/23/22 10:02	1
13C9 PFNA	112		26 - 165	11/23/22 19:49	12/23/22 10:02	1
13C6 PFDA	93		26 - 161	11/23/22 19:49	12/23/22 10:02	1
13C7 PFUnA	94		12 - 173	11/23/22 19:49	12/23/22 10:02	1
13C3 PFHxS	89		24 - 171	11/23/22 19:49	12/23/22 10:02	1
13C2-PFDoDA	90		11 - 166	11/23/22 19:49	12/23/22 10:02	1
d5-NEtPFOSA	39		10 - 180	11/23/22 19:49	12/23/22 10:02	1
d3-NMePFOSA	42		10 - 175	11/23/22 19:49	12/23/22 10:02	1
13C2-2-Perfluorohexylethanoic acid	200		10 - 200	11/23/22 19:49	12/23/22 10:02	1
13C2-2-Perfluorooctylethanoic acid	218	*5+	10 - 200	11/23/22 19:49	12/23/22 10:02	1
13C2-2-Perfluorodecylethanoic acid	198		10 - 200	11/23/22 19:49	12/23/22 10:02	1
13C2-2H-Perfluoro-2-octenoic acid	77		10 - 164	11/23/22 19:49	12/23/22 10:02	1
13C2-2H-Perfluoro-2-decenoic acid	83		10 - 162	11/23/22 19:49	12/23/22 10:02	1

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: MB 410-320797/1-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320797

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2-2H-Perfluoro-2-dodecenoic acid	76		10 - 161	11/23/22 19:49	12/23/22 10:02	1
13C4 PFBA	94		28 - 153	11/23/22 19:49	12/23/22 10:02	1
13C5 PFPeA	94		24 - 161	11/23/22 19:49	12/23/22 10:02	1
13C4 PFHpA	97		10 - 178	11/23/22 19:49	12/23/22 10:02	1
13C8 PFOA	98		26 - 159	11/23/22 19:49	12/23/22 10:02	1
13C8 PFOS	101		41 - 154	11/23/22 19:49	12/23/22 10:02	1
13C8 FOSA	99		14 - 163	11/23/22 19:49	12/23/22 10:02	1
13C2 PFTeDA	84		10 - 169	11/23/22 19:49	12/23/22 10:02	1

Lab Sample ID: LCS 410-320797/2-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
NVHOS	25.0	22.2		ng/g		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid	22.3	22.2		ng/g		100	70 - 130
10:2 FTS	24.1	22.4		ng/g		93	46 - 143
PMPA	25.0	20.1		ng/g		80	70 - 130
HFPODA	25.0	23.9		ng/g		96	49 - 135
Perfluoro-4-ethylcyclohexanesulfonic acid	23.1	20.5		ng/g		89	70 - 130
PFECA B	25.0	26.9		ng/g		108	70 - 130
Perfluorooctadecanoic acid	25.0	16.6		ng/g		66	16 - 160
NEtFOSE	25.0	22.2		ng/g		89	60 - 126
Perfluorooctanesulfonic acid	23.1	21.0		ng/g		91	61 - 126
Perfluoroundecanoic acid	25.0	23.1		ng/g		92	60 - 134
NMeFOSAA	25.0	23.6		ng/g		94	60 - 134
R-PSDA	25.0	28.4		ng/g		114	70 - 130
Hydrolyzed PSDA	25.0	28.8		ng/g		115	70 - 130
R-PSDCA	25.0	26.0		ng/g		104	70 - 130
R-EVE	25.0	20.5		ng/g		82	70 - 130
NMeFOSE	25.0	22.1		ng/g		88	60 - 130
PEPA	25.0	16.3	*	ng/g		65	70 - 130
Perfluoropentanoic acid	25.0	21.7		ng/g		87	58 - 134
Perfluoropentanesulfonic acid	23.5	24.1		ng/g		103	57 - 133
6:2 Fluorotelomer sulfonic acid	23.7	21.4		ng/g		90	59 - 135
8:2 FTCA	25.0	21.8		ng/g		87	70 - 130
PS Acid	25.0	19.0		ng/g		76	70 - 130
NEtFOSAA	25.0	22.9		ng/g		92	57 - 127
Perfluorohexanoic acid	25.0	24.7		ng/g		99	59 - 132
Perfluorododecanoic acid	25.0	23.3		ng/g		93	60 - 135
NMeFOSA	25.0	23.2		ng/g		93	60 - 129
Perfluorooctanoic acid	25.0	23.4		ng/g		93	59 - 131
Perfluorodecanoic acid	25.0	23.6		ng/g		94	56 - 133
Perfluorodecanesulfonic acid	24.1	21.4		ng/g		89	57 - 132
Perfluorohexanesulfonic acid	22.8	21.1		ng/g		93	59 - 129
3:3 FTCA	25.0	22.4		ng/g		90	70 - 130
Perfluorobutanoic acid	25.0	19.9		ng/g		79	60 - 128

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: LCS 410-320797/2-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320797

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Perfluorobutanesulfonic acid	22.1	21.4		ng/g		97	54 - 130
Perfluoroheptanoic acid	25.0	23.3		ng/g		93	59 - 137
Perfluoroheptanesulfonic acid	23.8	21.7		ng/g		91	59 - 132
Perfluorononanoic acid	25.0	22.8		ng/g		91	61 - 134
Perfluorotetradecanoic acid	25.0	23.6		ng/g		94	62 - 134
PFECA F	25.0	22.2		ng/g		89	70 - 130
8:2 Fluorotelomer sulfonic acid	24.0	22.9		ng/g		96	55 - 133
PFO2HxA	25.0	23.8		ng/g		95	70 - 130
PFO3OA	25.0	22.5		ng/g		90	70 - 130
PFO4DA	25.0	22.0		ng/g		88	70 - 130
TAF	25.0	25.3		ng/g		101	70 - 130
NEtFOSA	25.0	22.7		ng/g		91	60 - 123
PPF Acid	25.0	19.7		ng/g		79	70 - 130
Perfluoropropanesulfonic acid	22.9	18.7		ng/g		82	70 - 130
6:2 FTCA	25.0	21.2		ng/g		85	70 - 130
10:2 FTCA	25.0	17.8		ng/g		71	70 - 130
PFMOAA	25.0	24.1		ng/g		96	70 - 130
Perfluorohexadecanoic acid	25.0	18.0		ng/g		72	38 - 147
Perfluorononanesulfonic acid	24.0	21.0		ng/g		87	60 - 132
EVE Acid	25.0	23.9		ng/g		96	70 - 130
8:2 FTUCA	25.0	22.4		ng/g		90	70 - 130
6:2 FTUCA	25.0	23.4		ng/g		93	70 - 130
10:2 FTUCA	25.0	23.2		ng/g		93	70 - 130
Perfluorotridecanoic acid	25.0	23.4		ng/g		94	53 - 143
Hydro-PS Acid	25.0	20.0		ng/g		80	70 - 130
Perfluorooctanesulfonamide	25.0	22.4		ng/g		90	47 - 149
9Cl-PF3ONS	23.3	22.2		ng/g		95	62 - 130
4:2 Fluorotelomer sulfonic acid	23.4	22.6		ng/g		97	58 - 131
11Cl-PF3OUdS	23.3	22.8		ng/g		98	55 - 135
Hydro-EVE Acid	25.0	17.1	*	ng/g		68	70 - 130
Perfluorododecanesulfonic acid	24.2	21.3		ng/g		88	38 - 145
PFECA G	25.0	26.4		ng/g		106	70 - 130
7:3 FTCA	25.0	11.8	*	ng/g		47	70 - 130
PFECAA	25.0	29.4		ng/g		118	70 - 130
5:3 FTCA	25.0	23.4		ng/g		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	23.6	22.2		ng/g		94	57 - 137
MTP	25.0	32.4		ng/g		130	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	105		10 - 193
d3-NMeFOSAA	98		10 - 178
13C3 HFPO-DA	84		10 - 169
d7-N-MeFOSE-M	55		10 - 179
d9-N-EtFOSE-M	52		10 - 185
M2-6:2 FTS	82		10 - 200
M2-8:2 FTS	87		15 - 200
13C3 PFBS	76		27 - 179
M2-4:2 FTS	74		10 - 200

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: LCS 410-320797/2-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320797

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C5 PFHxA	83		10 - 174
13C9 PFNA	107		26 - 165
13C6 PFDA	87		26 - 161
13C7 PFUnA	86		12 - 173
13C3 PFHxS	74		24 - 171
13C2-PFDoDA	85		11 - 166
d5-NEtPFOSA	33		10 - 180
d3-NMePFOSA	42		10 - 175
13C2-2-Perfluorohexylethanoic acid	171		10 - 200
13C2-2-Perfluorooctylethanoic acid	170		10 - 200
13C2-2-Perfluorodecylethanoic acid	201	*5+	10 - 200
13C2-2H-Perfluoro-2-octenoic acid	67		10 - 164
13C2-2H-Perfluoro-2-decenoic acid	69		10 - 162
13C2-2H-Perfluoro-2-dodecenoic acid	71		10 - 161
13C4 PFBA	91		28 - 153
13C5 PFPeA	93		24 - 161
13C4 PFHpA	81		10 - 178
13C8 PFOA	85		26 - 159
13C8 PFOS	95		41 - 154
13C8 FOSA	94		14 - 163
13C2 PFTeDA	83		10 - 169

Lab Sample ID: LCSD 410-320797/3-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 320797

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
NVHOS	25.0	23.5		ng/g		94	70 - 130	6	30
Perfluoro (2-ethoxyethane) sulfonic acid	22.3	22.6		ng/g		102	70 - 130	2	30
10:2 FTS	24.1	27.8		ng/g		115	46 - 143	21	30
PMPA	25.0	20.9		ng/g		84	70 - 130	4	30
HFPODA	25.0	22.7		ng/g		91	49 - 135	5	30
Perfluoro-4-ethylcyclohexanesulfonic acid	23.1	20.5		ng/g		89	70 - 130	0	30
PFECA B	25.0	26.6		ng/g		106	70 - 130	1	30
Perfluorooctadecanoic acid	25.0	18.9		ng/g		75	16 - 160	13	30
NEtFOSE	25.0	22.4		ng/g		90	60 - 126	1	30
Perfluorooctanesulfonic acid	23.1	22.2		ng/g		96	61 - 126	6	30
Perfluoroundecanoic acid	25.0	22.9		ng/g		92	60 - 134	1	30
NMeFOSAA	25.0	23.5		ng/g		94	60 - 134	0	30
R-PSDA	25.0	29.4		ng/g		117	70 - 130	3	30
Hydrolyzed PSDA	25.0	29.6		ng/g		118	70 - 130	3	30
R-PSDCA	25.0	26.2		ng/g		105	70 - 130	1	30
R-EVE	25.0	21.1		ng/g		85	70 - 130	3	30

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: LCSD 410-320797/3-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 320797

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits	RPD	RPD	Limit
NMeFOSE	25.0	22.4		ng/g		90	60 - 130	1	30	
PEPA	25.0	17.2	*-	ng/g		69	70 - 130	5	30	
Perfluoropentanoic acid	25.0	22.3		ng/g		89	58 - 134	3	30	
Perfluoropentanesulfonic acid	23.5	24.5		ng/g		105	57 - 133	2	30	
6:2 Fluorotelomer sulfonic acid	23.7	23.3		ng/g		98	59 - 135	8	30	
8:2 FTCA	25.0	22.3		ng/g		89	70 - 130	2	30	
PS Acid	25.0	15.1	*-	ng/g		60	70 - 130	23	30	
NEtFOSAA	25.0	23.0		ng/g		92	57 - 127	0	30	
Perfluorohexanoic acid	25.0	25.1		ng/g		101	59 - 132	2	30	
Perfluorododecanoic acid	25.0	22.5		ng/g		90	60 - 135	4	30	
NMeFOSA	25.0	24.2		ng/g		97	60 - 129	4	30	
Perfluorooctanoic acid	25.0	25.5		ng/g		102	59 - 131	9	30	
Perfluorodecanoic acid	25.0	26.7		ng/g		107	56 - 133	12	30	
Perfluorodecanesulfonic acid	24.1	23.8		ng/g		99	57 - 132	10	30	
Perfluorohexanesulfonic acid	22.8	21.0		ng/g		92	59 - 129	1	30	
3:3 FTCA	25.0	23.4		ng/g		94	70 - 130	4	30	
Perfluorobutanoic acid	25.0	20.7		ng/g		83	60 - 128	4	30	
Perfluorobutanesulfonic acid	22.1	21.8		ng/g		98	54 - 130	2	30	
Perfluoroheptanoic acid	25.0	24.6		ng/g		98	59 - 137	5	30	
Perfluoroheptanesulfonic acid	23.8	21.5		ng/g		91	59 - 132	1	30	
Perfluorononanoic acid	25.0	23.7		ng/g		95	61 - 134	4	30	
Perfluorotetradecanoic acid	25.0	24.0		ng/g		96	62 - 134	2	30	
PFECA F	25.0	22.7		ng/g		91	70 - 130	2	30	
8:2 Fluorotelomer sulfonic acid	24.0	26.7		ng/g		111	55 - 133	15	30	
PFO2HxA	25.0	24.9		ng/g		100	70 - 130	5	30	
PFO3OA	25.0	23.3		ng/g		93	70 - 130	3	30	
PFO4DA	25.0	22.8		ng/g		91	70 - 130	4	30	
TAF	25.0	25.6		ng/g		102	70 - 130	1	30	
NEtFOSA	25.0	24.2		ng/g		97	60 - 123	6	30	
PPF Acid	25.0	20.5		ng/g		82	70 - 130	4	30	
Perfluoropropanesulfonic acid	22.9	20.0		ng/g		87	70 - 130	7	30	
6:2 FTCA	25.0	22.2		ng/g		89	70 - 130	5	30	
10:2 FTCA	25.0	20.5		ng/g		82	70 - 130	14	30	
PFMOAA	25.0	25.2		ng/g		101	70 - 130	4	30	
Perfluorohexadecanoic acid	25.0	19.4		ng/g		77	38 - 147	7	30	
Perfluorononanesulfonic acid	24.0	23.1		ng/g		96	60 - 132	10	30	
EVE Acid	25.0	20.7		ng/g		83	70 - 130	14	30	
8:2 FTUCA	25.0	23.8		ng/g		95	70 - 130	6	30	
6:2 FTUCA	25.0	24.4		ng/g		98	70 - 130	4	30	
10:2 FTUCA	25.0	23.8		ng/g		95	70 - 130	3	30	
Perfluorotridecanoic acid	25.0	22.7		ng/g		91	53 - 143	3	30	
Hydro-PS Acid	25.0	20.7		ng/g		83	70 - 130	3	30	
Perfluorooctanesulfonamide	25.0	22.9		ng/g		92	47 - 149	2	30	
9Cl-PF3ONS	23.3	22.9		ng/g		98	62 - 130	3	30	
4:2 Fluorotelomer sulfonic acid	23.4	22.2		ng/g		95	58 - 131	2	30	
11Cl-PF3OUdS	23.3	24.2		ng/g		104	55 - 135	6	30	
Hydro-EVE Acid	25.0	17.9		ng/g		72	70 - 130	5	30	
Perfluorododecanesulfonic acid	24.2	22.7		ng/g		94	38 - 145	6	30	
PFECA G	25.0	28.1		ng/g		112	70 - 130	6	30	

Eurofins Lancaster Laboratories Environment Testing, LLC

QC Sample Results

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

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

Lab Sample ID: LCSD 410-320797/3-B

Matrix: Solid

Analysis Batch: 329876

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 320797

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
7:3 FTCA	25.0	12.4	*-	ng/g		49	70 - 130	5	30
PFECA A	25.0	28.9		ng/g		116	70 - 130	2	30
5:3 FTCA	25.0	25.2		ng/g		101	70 - 130	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	23.6	23.4		ng/g		99	57 - 137	5	30
MTP	25.0	34.2	*+	ng/g		137	70 - 130	6	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
d5-NEtFOSAA	106		10 - 193
d3-NMeFOSAA	100		10 - 178
13C3 HFPO-DA	85		10 - 169
d7-N-MeFOSE-M	56		10 - 179
d9-N-EtFOSE-M	53		10 - 185
M2-6:2 FTS	79		10 - 200
M2-8:2 FTS	76		15 - 200
13C3 PFBS	77		27 - 179
M2-4:2 FTS	77		10 - 200
13C5 PFHxA	83		10 - 174
13C9 PFNA	106		26 - 165
13C6 PFDA	84		26 - 161
13C7 PFUnA	91		12 - 173
13C3 PFHxS	78		24 - 171
13C2-PFDODA	93		11 - 166
d5-NEtPFOSA	35		10 - 180
d3-NMePFOSA	45		10 - 175
13C2-2-Perfluorohexylethanoic acid	169		10 - 200
13C2-2-Perfluorooctylethanoic acid	177		10 - 200
13C2-2-Perfluorodecylethanoic acid	180		10 - 200
13C2-2H-Perfluoro-2-octenoic acid	69		10 - 164
13C2-2H-Perfluoro-2-decenoic acid	69		10 - 162
13C2-2H-Perfluoro-2-dodecenoic acid	73		10 - 161
13C4 PFBA	91		28 - 153
13C5 PFPeA	94		24 - 161
13C4 PFHpA	81		10 - 178
13C8 PFOA	83		26 - 159
13C8 PFOS	93		41 - 154
13C8 FOSA	96		14 - 163
13C2 PFTeDA	84		10 - 169

QC Association Summary

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

LCMS

Prep Batch: 320797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103813-1	Bloom Fertilizer #1/#2	Total/NA	Solid	T-WI-12031r10	
MB 410-320797/1-B	Method Blank	Total/NA	Solid	T-WI-12031r10	
LCS 410-320797/2-B	Lab Control Sample	Total/NA	Solid	T-WI-12031r10	
LCSD 410-320797/3-B	Lab Control Sample Dup	Total/NA	Solid	T-WI-12031r10	

Cleanup Batch: 320862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103813-1	Bloom Fertilizer #1/#2	Total/NA	Solid	Extract Aliquot	320797
MB 410-320797/1-B	Method Blank	Total/NA	Solid	Extract Aliquot	320797
LCS 410-320797/2-B	Lab Control Sample	Total/NA	Solid	Extract Aliquot	320797
LCSD 410-320797/3-B	Lab Control Sample Dup	Total/NA	Solid	Extract Aliquot	320797

Analysis Batch: 329876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103813-1	Bloom Fertilizer #1/#2	Total/NA	Solid	537 IDA	320862
MB 410-320797/1-B	Method Blank	Total/NA	Solid	537 IDA	320862
LCS 410-320797/2-B	Lab Control Sample	Total/NA	Solid	537 IDA	320862
LCSD 410-320797/3-B	Lab Control Sample Dup	Total/NA	Solid	537 IDA	320862

General Chemistry

Analysis Batch: 313176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-103813-1	Bloom Fertilizer #1/#2	Total/NA	Solid	Moisture	

Lab Chronicle

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Date Collected: 10/29/22 09:30

Matrix: Solid

Date Received: 10/31/22 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	313176	UVJN	ELLE	11/02/22 12:40

Client Sample ID: Bloom Fertilizer #1/#2

Lab Sample ID: 410-103813-1

Date Collected: 10/29/22 09:30

Matrix: Solid

Date Received: 10/31/22 08:40

Percent Solids: 70.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	T-WI-12031r10			320797	QLP7	ELLE	11/23/22 19:49
Total/NA	Cleanup	Extract Aliquot			320862	QLP7	ELLE	11/25/22 13:36
Total/NA	Analysis	537 IDA		1	329876	PY4D	ELLE	12/23/22 10:36

Laboratory References:

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



Accreditation/Certification Summary

Client: PEER
 Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, 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	06-30-23

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	T-WI-12031r10	Solid	10:2 FTCA
537 IDA	T-WI-12031r10	Solid	10:2 FTS
537 IDA	T-WI-12031r10	Solid	10:2 FTUCA
537 IDA	T-WI-12031r10	Solid	11Cl-PF3OUdS
537 IDA	T-WI-12031r10	Solid	3:3 FTCA
537 IDA	T-WI-12031r10	Solid	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537 IDA	T-WI-12031r10	Solid	4:2 Fluorotelomer sulfonic acid
537 IDA	T-WI-12031r10	Solid	5:3 FTCA
537 IDA	T-WI-12031r10	Solid	6:2 Fluorotelomer sulfonic acid
537 IDA	T-WI-12031r10	Solid	6:2 FTCA
537 IDA	T-WI-12031r10	Solid	6:2 FTUCA
537 IDA	T-WI-12031r10	Solid	7:3 FTCA
537 IDA	T-WI-12031r10	Solid	8:2 Fluorotelomer sulfonic acid
537 IDA	T-WI-12031r10	Solid	8:2 FTCA
537 IDA	T-WI-12031r10	Solid	8:2 FTUCA
537 IDA	T-WI-12031r10	Solid	9Cl-PF3ONS
537 IDA	T-WI-12031r10	Solid	EVE Acid
537 IDA	T-WI-12031r10	Solid	HFPODA
537 IDA	T-WI-12031r10	Solid	Hydro-EVE Acid
537 IDA	T-WI-12031r10	Solid	Hydrolyzed PSDA
537 IDA	T-WI-12031r10	Solid	Hydro-PS Acid
537 IDA	T-WI-12031r10	Solid	MTP
537 IDA	T-WI-12031r10	Solid	NEtFOSA
537 IDA	T-WI-12031r10	Solid	NEtFOSAA
537 IDA	T-WI-12031r10	Solid	NEtFOSE
537 IDA	T-WI-12031r10	Solid	NMeFOSA
537 IDA	T-WI-12031r10	Solid	NMeFOSAA
537 IDA	T-WI-12031r10	Solid	NMeFOSE
537 IDA	T-WI-12031r10	Solid	NVHOS
537 IDA	T-WI-12031r10	Solid	PEPA
537 IDA	T-WI-12031r10	Solid	Perfluoro (2-ethoxyethane) sulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluoro-4-ethylcyclohexanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorobutanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorobutanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorodecanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorodecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorododecanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorododecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluoroheptanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluoroheptanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorohexadecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorohexanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorohexanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorononanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorononanoic acid

Accreditation/Certification Summary

Client: PEER
 Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
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	T-WI-12031r10	Solid	Perfluorooctadecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorooctanesulfonamide
537 IDA	T-WI-12031r10	Solid	Perfluorooctanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorooctanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluoropentanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluoropentanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluoropropanesulfonic acid
537 IDA	T-WI-12031r10	Solid	Perfluorotetradecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluorotridecanoic acid
537 IDA	T-WI-12031r10	Solid	Perfluoroundecanoic acid
537 IDA	T-WI-12031r10	Solid	PFECA A
537 IDA	T-WI-12031r10	Solid	PFECA B
537 IDA	T-WI-12031r10	Solid	PFECA F
537 IDA	T-WI-12031r10	Solid	PFECA G
537 IDA	T-WI-12031r10	Solid	PFMOAA
537 IDA	T-WI-12031r10	Solid	PFO2HxA
537 IDA	T-WI-12031r10	Solid	PFO3OA
537 IDA	T-WI-12031r10	Solid	PFO4DA
537 IDA	T-WI-12031r10	Solid	PMPA
537 IDA	T-WI-12031r10	Solid	PPF Acid
537 IDA	T-WI-12031r10	Solid	PS Acid
537 IDA	T-WI-12031r10	Solid	R-EVE
537 IDA	T-WI-12031r10	Solid	R-PSDA
537 IDA	T-WI-12031r10	Solid	R-PSDCA
537 IDA	T-WI-12031r10	Solid	TAF
Moisture		Solid	Percent Moisture

Method Summary

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Method	Method Description	Protocol	Laboratory
537 IDA	EPA 537 Isotope Dilution	EPA	ELLE
Moisture	Percent Moisture	EPA	ELLE
Extract Aliquot	Preparation, Extract Aliquot	None	ELLE
T-WI-12031r10	SOP(00037) T-PFAS-WI12031 Rev. 10	ELLE - Lancaster	ELLE

Protocol References:

- ELLE - Lancaster = Eurofins Lancaster, Facility Standard Operating Procedure.
- EPA = US Environmental Protection Agency
- None = None

Laboratory References:

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



Sample Summary

Client: PEER
Project/Site: PFAS in Biosolids

Job ID: 410-103813-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-103813-1	Bloom Fertilizer #1/#2	Solid	10/29/22 09:30	10/31/22 08:40

1

2

3

4

5

6

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10

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15

Login Sample Receipt Checklist

Client: PEER

Job Number: 410-103813-1

Login Number: 103813

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: Foreman, Leah M

Question	Answer	Comment
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.	False	Water present in cooler; indicates evidence of melted ice
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, 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	
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	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)?	N/A	