

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
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Laboratory Job ID: 410-75694-1
Client Project/Site: PFAS & Perchlorate

For:
Pittsburgh Water and Sewer Authority
900 Freeport Road
Pittsburgh, Pennsylvania 15238

Attn: Aimee Butch



Authorized for release by:
3/21/2022 8:30:57 AM

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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.



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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A handwritten signature in black ink, appearing to read "Stephen Gordon".

Stephen Gordon
Senior Project Manager
3/21/2022 8:30:57 AM



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Definitions/Glossary

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Qualifiers

LCMS

Qualifier	Qualifier Description
!	Laboratory is not accredited for this parameter.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
B	Analyte was found in the blank.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
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: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Job ID: 410-75694-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

**Job Narrative
410-75694-1**

Receipt

The samples were received on 3/10/2022 4:42 PM. 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 0.7°C

LCMS

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

PFAS

Method PFC_IDA: Target analytes Perfluorooctanoic acid and Perfluorooctanesulfonic acid were detected in the method blank associated with the following samples: RAW 300 and EP101. The following action was taken: The samples were re-extracted within the method holding time and no target analytes were detected in the associated method blank; however, the labeled isotope recovery was outside of the QC acceptance limits in the re-extracted samples. The recovery for the labeled isotope(s) in the method blank associated with the following sample(s): RAW 300 and EP101 is outside the QC acceptance limits. The following action was taken: This sample(s) were re-extracted within the required holding time and the recovery for the labeled isotope(s) in the re-extracted method blank was within the QC acceptance limits.

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



Detection Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid	0.52	J	1.9	0.48	ng/L	1		EPA 537.1	Total/NA
Perfluorohexanoic acid	0.77	J	1.9	0.48	ng/L	1		EPA 537.1	Total/NA
Perfluorooctanesulfonic acid	0.70	J	1.9	0.48	ng/L	1		EPA 537.1	Total/NA
Perfluorooctanoic acid	0.72	J	1.9	0.48	ng/L	1		EPA 537.1	Total/NA

Client Sample ID: EP 101

Lab Sample ID: 410-75694-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid	0.55	J	1.9	0.47	ng/L	1		EPA 537.1	Total/NA
Perfluorohexanoic acid	0.69	J	1.9	0.47	ng/L	1		EPA 537.1	Total/NA
Perfluorooctanesulfonic acid	0.67	J	1.9	0.47	ng/L	1		EPA 537.1	Total/NA
Perfluorooctanoic acid	0.66	J	1.9	0.47	ng/L	1		EPA 537.1	Total/NA

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid	0.61	J cn	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	0.46	J cn	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid	0.90	J B cn	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid	0.74	J B cn	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid	0.47	J cn	1.8	0.45	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EP101

Lab Sample ID: 410-75694-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid	0.56	J cn	1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid	1.0	J B cn	1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid	0.97	J B cn	1.9	0.47	ng/L	1		537 (modified)	Total/NA

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-5

No Detections.

Client Sample ID: EP 101

Lab Sample ID: 410-75694-6

No Detections.

Client Sample ID: Field Blank RAW 300

Lab Sample ID: 410-75694-7

No Detections.

Client Sample ID: Field Blank EP 101

Lab Sample ID: 410-75694-8

No Detections.

This Detection Summary does not include radiochemical test results.

Euofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-1

Date Collected: 03/08/22 07:45

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
NMeFOSAA	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorobutanesulfonic acid	0.52	J	1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorodecanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorododecanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluoroheptanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorohexanesulfonic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorohexanoic acid	0.77	J	1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorononanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorooctanesulfonic acid	0.70	J	1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorooctanoic acid	0.72	J	1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorotetradecanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluorotridecanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1
Perfluoroundecanoic acid	ND		1.9	0.48	ng/L		03/11/22 21:05	03/14/22 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	89		70 - 130	03/11/22 21:05	03/14/22 15:19	1
13C2 PFHxA	98		70 - 130	03/11/22 21:05	03/14/22 15:19	1
13C3 HFPO-DA	99		70 - 130	03/11/22 21:05	03/14/22 15:19	1
d5-NEtFOSAA	77		70 - 130	03/11/22 21:05	03/14/22 15:19	1

Client Sample ID: EP 101

Lab Sample ID: 410-75694-2

Date Collected: 03/08/22 08:10

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
NMeFOSAA	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorobutanesulfonic acid	0.55	J	1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorodecanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorododecanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluoroheptanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorohexanesulfonic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorohexanoic acid	0.69	J	1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorononanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorooctanesulfonic acid	0.67	J	1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorooctanoic acid	0.66	J	1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorotetradecanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluorotridecanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1
Perfluoroundecanoic acid	ND		1.9	0.47	ng/L		03/11/22 21:05	03/14/22 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	85		70 - 130	03/11/22 21:05	03/14/22 15:31	1
13C2 PFHxA	99		70 - 130	03/11/22 21:05	03/14/22 15:31	1
13C3 HFPO-DA	94		70 - 130	03/11/22 21:05	03/14/22 15:31	1
d5-NEtFOSAA	77		70 - 130	03/11/22 21:05	03/14/22 15:31	1

Client Sample Results

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-3

Date Collected: 03/08/22 07:45

Matrix: Water

Date Received: 03/10/22 16:42

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	0.61	J cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluoroheptanoic acid	0.46	J cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorooctanoic acid	0.90	J I B cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorononanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorodecanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorotridecanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorotetradecanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorobutanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorohexanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorooctanesulfonic acid	0.74	J B cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
NEtFOSAA	ND	cn	2.7	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
NMeFOSAA	ND	cn	1.8	0.55	ng/L		03/12/22 11:11	03/16/22 01:46	1
10:2 FTS	ND	cn	4.5	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluoropentanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluoroheptanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorononanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorodecanesulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorododecanesulfonic acid (PFDoS)	ND	cn	2.7	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorooctanesulfonamide	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorohexadecanoic acid	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorooctadecanoic acid	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorobutanoic acid	ND	cn	4.5	1.8	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluoropentanoic acid	0.47	J cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
NMeFOSE	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
NMeFOSA	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
NEtFOSE	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
NEtFOSA	ND	cn	4.5	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluorododecanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
Perfluoroundecanoic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
4:2 Fluorotelomer sulfonic acid	ND	cn	1.8	0.45	ng/L		03/12/22 11:11	03/16/22 01:46	1
6:2 Fluorotelomer sulfonic acid	ND	cn	4.5	1.8	ng/L		03/12/22 11:11	03/16/22 01:46	1
8:2 Fluorotelomer sulfonic acid	ND	cn	2.7	0.91	ng/L		03/12/22 11:11	03/16/22 01:46	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	128	cn	10 - 200	03/12/22 11:11	03/16/22 01:46	1
M2-8:2 FTS	117	cn	33 - 200	03/12/22 11:11	03/16/22 01:46	1
M2-6:2 FTS	126	cn	17 - 200	03/12/22 11:11	03/16/22 01:46	1
13C5 PFHxA	106	cn	24 - 179	03/12/22 11:11	03/16/22 01:46	1
13C4 PFHpA	113	cn	31 - 182	03/12/22 11:11	03/16/22 01:46	1
13C8 PFOA	125	cn	48 - 162	03/12/22 11:11	03/16/22 01:46	1
13C9 PFNA	118	cn	51 - 167	03/12/22 11:11	03/16/22 01:46	1
13C6 PFDA	115	cn	49 - 163	03/12/22 11:11	03/16/22 01:46	1
13C7 PFUnA	107	cn	34 - 174	03/12/22 11:11	03/16/22 01:46	1
13C2-PFDoDA	93	cn	17 - 176	03/12/22 11:11	03/16/22 01:46	1
13C2 PFTeDA	82	cn	10 - 179	03/12/22 11:11	03/16/22 01:46	1
13C3 PFBS	153	cn	16 - 200	03/12/22 11:11	03/16/22 01:46	1
13C3 PFHxS	118	cn	28 - 188	03/12/22 11:11	03/16/22 01:46	1
13C8 PFOS	114	cn	51 - 159	03/12/22 11:11	03/16/22 01:46	1
d3-NMeFOSAA	120	cn	31 - 174	03/12/22 11:11	03/16/22 01:46	1

Client Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: RAW 300

Lab Sample ID: 410-75694-3

Date Collected: 03/08/22 07:45

Matrix: Water

Date Received: 03/10/22 16:42

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	126	cn	29 - 195	03/12/22 11:11	03/16/22 01:46	1
13C8 FOSA	124	cn	10 - 168	03/12/22 11:11	03/16/22 01:46	1
13C4 PFBA	118	cn	42 - 165	03/12/22 11:11	03/16/22 01:46	1
13C5 PFPeA	144	cn	38 - 187	03/12/22 11:11	03/16/22 01:46	1
d7-N-MeFOSE-M	74	cn	10 - 178	03/12/22 11:11	03/16/22 01:46	1
d3-NMePFOSA	68	cn	10 - 155	03/12/22 11:11	03/16/22 01:46	1
d9-N-EtFOSE-M	75	cn	10 - 177	03/12/22 11:11	03/16/22 01:46	1
d5-NEtPFOSA	67	cn	10 - 159	03/12/22 11:11	03/16/22 01:46	1

Client Sample ID: EP101

Lab Sample ID: 410-75694-4

Date Collected: 03/08/22 08:10

Matrix: Water

Date Received: 03/10/22 16:42

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	0.56	J cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluoroheptanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorooctanoic acid	1.0	J B cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorononanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorodecanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorotridecanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorotetradecanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorobutanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorohexanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorooctanesulfonic acid	0.97	J B cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
NEtFOSAA	ND	cn	2.8	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
NMeFOSAA	ND	cn	1.9	0.57	ng/L		03/12/22 11:11	03/16/22 01:57	1
10:2 FTS	ND	cn	4.7	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluoropentanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluoroheptanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorononanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorodecanesulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorododecanesulfonic acid (PFDoS)	ND	cn	2.8	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorooctanesulfonamide	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorohexadecanoic acid	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorooctadecanoic acid	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorobutanoic acid	ND	cn	4.7	1.9	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluoropentanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
NMeFOSE	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
NMeFOSA	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
NEtFOSE	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
NEtFOSA	ND	cn	4.7	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluorododecanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
Perfluoroundecanoic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
4:2 Fluorotelomer sulfonic acid	ND	cn	1.9	0.47	ng/L		03/12/22 11:11	03/16/22 01:57	1
6:2 Fluorotelomer sulfonic acid	ND	cn	4.7	1.9	ng/L		03/12/22 11:11	03/16/22 01:57	1
8:2 Fluorotelomer sulfonic acid	ND	cn	2.8	0.95	ng/L		03/12/22 11:11	03/16/22 01:57	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
M2-4:2 FTS	117	cn	10 - 200	03/12/22 11:11	03/16/22 01:57	1			

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Client Sample Results

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: EP101

Date Collected: 03/08/22 08:10

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	112	cn	33 - 200	03/12/22 11:11	03/16/22 01:57	1
M2-6:2 FTS	123	cn	17 - 200	03/12/22 11:11	03/16/22 01:57	1
13C5 PFHxA	104	cn	24 - 179	03/12/22 11:11	03/16/22 01:57	1
13C4 PFHpA	115	cn	31 - 182	03/12/22 11:11	03/16/22 01:57	1
13C8 PFOA	122	cn	48 - 162	03/12/22 11:11	03/16/22 01:57	1
13C9 PFNA	103	cn	51 - 167	03/12/22 11:11	03/16/22 01:57	1
13C6 PFDA	106	cn	49 - 163	03/12/22 11:11	03/16/22 01:57	1
13C7 PFUnA	96	cn	34 - 174	03/12/22 11:11	03/16/22 01:57	1
13C2-PFDoDA	83	cn	17 - 176	03/12/22 11:11	03/16/22 01:57	1
13C2 PFTeDA	88	cn	10 - 179	03/12/22 11:11	03/16/22 01:57	1
13C3 PFBS	154	cn	16 - 200	03/12/22 11:11	03/16/22 01:57	1
13C3 PFHxS	118	cn	28 - 188	03/12/22 11:11	03/16/22 01:57	1
13C8 PFOS	103	cn	51 - 159	03/12/22 11:11	03/16/22 01:57	1
d3-NMeFOSAA	103	cn	31 - 174	03/12/22 11:11	03/16/22 01:57	1
d5-NEtFOSAA	124	cn	29 - 195	03/12/22 11:11	03/16/22 01:57	1
13C8 FOSA	103	cn	10 - 168	03/12/22 11:11	03/16/22 01:57	1
13C4 PFBA	121	cn	42 - 165	03/12/22 11:11	03/16/22 01:57	1
13C5 PFPeA	144	cn	38 - 187	03/12/22 11:11	03/16/22 01:57	1
d7-N-MeFOSE-M	69	cn	10 - 178	03/12/22 11:11	03/16/22 01:57	1
d3-NMePFOSA	59	cn	10 - 155	03/12/22 11:11	03/16/22 01:57	1
d9-N-EtFOSE-M	73	cn	10 - 177	03/12/22 11:11	03/16/22 01:57	1
d5-NEtPFOSA	63	cn	10 - 159	03/12/22 11:11	03/16/22 01:57	1

Client Sample ID: RAW 300

Date Collected: 03/08/22 08:45

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-5

Matrix: Drinking Water

Method: SW846 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND	!	1.0	0.23	ug/L		03/15/22 10:38	03/18/22 12:20	1

Client Sample ID: EP 101

Date Collected: 03/08/22 08:10

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-6

Matrix: Drinking Water

Method: SW846 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND	!	1.0	0.23	ug/L		03/15/22 10:38	03/18/22 12:29	1

Client Sample ID: Field Blank RAW 300

Date Collected: 03/08/22 07:45

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-7

Matrix: Drinking Water

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
NMeFOSAA	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorobutanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorodecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorododecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluoroheptanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: Field Blank RAW 300

Lab Sample ID: 410-75694-7

Date Collected: 03/08/22 07:45

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorohexanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorononanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorooctanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorooctanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorotetradecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluorotridecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1
Perfluoroundecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	80		70 - 130	03/11/22 21:05	03/14/22 15:42	1
13C2 PFHxA	100		70 - 130	03/11/22 21:05	03/14/22 15:42	1
13C3 HFPO-DA	88		70 - 130	03/11/22 21:05	03/14/22 15:42	1
d5-NEtFOSAA	89		70 - 130	03/11/22 21:05	03/14/22 15:42	1

Client Sample ID: Field Blank EP 101

Lab Sample ID: 410-75694-8

Date Collected: 03/08/22 08:10

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
NMeFOSAA	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorobutanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorodecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorododecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluoroheptanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorohexanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorohexanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorononanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorooctanesulfonic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorooctanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorotetradecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluorotridecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1
Perfluoroundecanoic acid	ND		1.9	0.46	ng/L		03/11/22 21:05	03/14/22 15:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	84		70 - 130	03/11/22 21:05	03/14/22 15:54	1
13C2 PFHxA	95		70 - 130	03/11/22 21:05	03/14/22 15:54	1
13C3 HFPO-DA	89		70 - 130	03/11/22 21:05	03/14/22 15:54	1
d5-NEtFOSAA	94		70 - 130	03/11/22 21:05	03/14/22 15:54	1

Surrogate Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDA	PFHxA	HFPODA	d5NEFOS
		(70-130)	(70-130)	(70-130)	(70-130)
410-75694-1	RAW 300	89	98	99	77
410-75694-2	EP 101	85	99	94	77
410-75694-7	Field Blank RAW 300	80	100	88	89
410-75694-8	Field Blank EP 101	84	95	89	94
LCS 410-232874/2-A	Lab Control Sample	81	98	96	79
LCSD 410-232874/3-A	Lab Control Sample Dup	78	99	91	85
MB 410-232874/1-A	Method Blank	72	91	86	85

Surrogate Legend

PFDA = 13C2 PFDA

PFHxA = 13C2 PFHxA

HFPODA = 13C3 HFPO-DA

d5NEFOS = d5-NEtFOSAA

Isotope Dilution Summary

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M242FTS (10-200)	M282FTS (33-200)	M262FTS (17-200)	13C5PHA (24-179)	C4PFHA (31-182)	C8PFOA (48-162)	C9PFNA (51-167)	C6PFDA (49-163)
410-75694-3	RAW 300	128 cn	117 cn	126 cn	106 cn	113 cn	125 cn	118 cn	115 cn
410-75694-4	EP101	117 cn	112 cn	123 cn	104 cn	115 cn	122 cn	103 cn	106 cn
LCS 410-232926/2-A	Lab Control Sample	145	125	129	126	118	138	113	129
LCS 410-234364/2-A	Lab Control Sample	161	116	132	131	136	141	129	125
LCSD 410-232926/3-A	Lab Control Sample Dup	124	114	119	113	111	132	109	117
LCSD 410-234364/3-A	Lab Control Sample Dup	150	103	122	112	112	120	119	114
MB 410-232926/1-A	Method Blank	184	156	175	156	153	180 *5+	146	144
MB 410-234364/1-A	Method Blank	162	119	139	130	128	138	135	131

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	13C7PUA (34-174)	PFDODA (17-176)	PFTDA (10-179)	C3PFBS (16-200)	C3PFHS (28-188)	C8PFOS (51-159)	d3NMFOS (31-174)	d5NEFOS (29-195)
410-75694-3	RAW 300	107 cn	93 cn	82 cn	153 cn	118 cn	114 cn	120 cn	126 cn
410-75694-4	EP101	96 cn	83 cn	88 cn	154 cn	118 cn	103 cn	103 cn	124 cn
LCS 410-232926/2-A	Lab Control Sample	125	111	112	117	135	119	144	157
LCS 410-234364/2-A	Lab Control Sample	122	113	99	129	133	126	114	119
LCSD 410-232926/3-A	Lab Control Sample Dup	119	107	110	117	127	117	125	132
LCSD 410-234364/3-A	Lab Control Sample Dup	114	103	94	112	112	112	113	110
MB 410-232926/1-A	Method Blank	146	139	130	146	171	142	164	174
MB 410-234364/1-A	Method Blank	127	113	99	138	124	133	130	122

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFOSA (10-168)	PFBA (42-165)	PFPeA (38-187)	NMFM (10-178)	d3NMFSA (10-155)	NEFM (10-177)	d5NPFSA (10-159)
410-75694-3	RAW 300	124 cn	118 cn	144 cn	74 cn	68 cn	75 cn	67 cn
410-75694-4	EP101	103 cn	121 cn	144 cn	69 cn	59 cn	73 cn	63 cn
LCS 410-232926/2-A	Lab Control Sample	113	114	122	96	85	97	89
LCS 410-234364/2-A	Lab Control Sample	104	121	137	87	81	94	85
LCSD 410-232926/3-A	Lab Control Sample Dup	107	116	122	90	79	92	86
LCSD 410-234364/3-A	Lab Control Sample Dup	89	112	120	87	77	87	79
MB 410-232926/1-A	Method Blank	125	142	149	105	99	109	105
MB 410-234364/1-A	Method Blank	103	126	142	97	79	99	77

Surrogate Legend

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

Isotope Dilution Summary

Client: Pittsburgh Water and Sewer Authority

Job ID: 410-75694-1

Project/Site: PFAS & Perchlorate

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

NMFM = d7-N-MeFOSE-M

d3NMFSA = d3-NMePFOSA

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 410-232926/1-A

Matrix: Water

Analysis Batch: 233890

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232926

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorooctanoic acid	2.66	B *5+	2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorooctanesulfonic acid	0.722	J B	2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
NETFOSAA	ND		3.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
NMeFOSAA	ND		2.0	0.60	ng/L		03/12/22 11:11	03/15/22 22:59	1
10:2 FTS	ND		5.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorononanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorohexadecanoic acid	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorooctadecanoic acid	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
NMeFOSE	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
NMeFOSA	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
NETFOSE	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
NETFOSA	ND		5.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		03/12/22 11:11	03/15/22 22:59	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		03/12/22 11:11	03/15/22 22:59	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		03/12/22 11:11	03/15/22 22:59	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
M2-4:2 FTS	184		10 - 200	03/12/22 11:11	03/15/22 22:59	1
M2-8:2 FTS	156		33 - 200	03/12/22 11:11	03/15/22 22:59	1
M2-6:2 FTS	175		17 - 200	03/12/22 11:11	03/15/22 22:59	1
13C5 PFHxA	156		24 - 179	03/12/22 11:11	03/15/22 22:59	1
13C4 PFHpA	153		31 - 182	03/12/22 11:11	03/15/22 22:59	1
13C8 PFOA	180	*5+	48 - 162	03/12/22 11:11	03/15/22 22:59	1
13C9 PFNA	146		51 - 167	03/12/22 11:11	03/15/22 22:59	1
13C6 PFDA	144		49 - 163	03/12/22 11:11	03/15/22 22:59	1
13C7 PFUnA	146		34 - 174	03/12/22 11:11	03/15/22 22:59	1
13C2-PFDoDA	139		17 - 176	03/12/22 11:11	03/15/22 22:59	1
13C2 PFTeDA	130		10 - 179	03/12/22 11:11	03/15/22 22:59	1
13C3 PFBS	146		16 - 200	03/12/22 11:11	03/15/22 22:59	1
13C3 PFHxS	171		28 - 188	03/12/22 11:11	03/15/22 22:59	1
13C8 PFOS	142		51 - 159	03/12/22 11:11	03/15/22 22:59	1

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QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-232926/1-A
Matrix: Water
Analysis Batch: 233890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232926

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d3-NMeFOSAA	164		31 - 174	03/12/22 11:11	03/15/22 22:59	1
d5-NEtFOSAA	174		29 - 195	03/12/22 11:11	03/15/22 22:59	1
13C8 FOSA	125		10 - 168	03/12/22 11:11	03/15/22 22:59	1
13C4 PFBA	142		42 - 165	03/12/22 11:11	03/15/22 22:59	1
13C5 PFPeA	149		38 - 187	03/12/22 11:11	03/15/22 22:59	1
d7-N-MeFOSE-M	105		10 - 178	03/12/22 11:11	03/15/22 22:59	1
d3-NMePFOSA	99		10 - 155	03/12/22 11:11	03/15/22 22:59	1
d9-N-EtFOSE-M	109		10 - 177	03/12/22 11:11	03/15/22 22:59	1
d5-NEtPFOSA	105		10 - 159	03/12/22 11:11	03/15/22 22:59	1

Lab Sample ID: LCS 410-232926/2-A
Matrix: Water
Analysis Batch: 233890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Perfluorohexanoic acid	25.6	24.5		ng/L		96	58 - 139
Perfluoroheptanoic acid	25.6	26.7		ng/L		104	59 - 145
Perfluorooctanoic acid	25.6	21.2		ng/L		83	51 - 145
Perfluorononanoic acid	25.6	25.2		ng/L		98	61 - 139
Perfluorodecanoic acid	25.6	23.7		ng/L		93	56 - 138
Perfluorotridecanoic acid	25.6	25.4		ng/L		99	58 - 146
Perfluorotetradecanoic acid	25.6	23.7		ng/L		92	62 - 139
Perfluorobutanesulfonic acid	22.7	19.8		ng/L		88	53 - 138
Perfluorohexanesulfonic acid	23.3	21.9		ng/L		94	58 - 134
Perfluorooctanesulfonic acid	23.7	23.5		ng/L		99	45 - 150
NEtFOSAA	25.6	19.3		ng/L		75	55 - 134
NMeFOSAA	25.6	20.8		ng/L		81	59 - 140
10:2 FTS	24.7	23.8		ng/L		96	50 - 146
Perfluoropentanesulfonic acid	24.0	20.6		ng/L		86	55 - 140
Perfluoroheptanesulfonic acid	24.4	21.5		ng/L		88	56 - 140
Perfluorononanesulfonic acid	24.6	22.0		ng/L		90	59 - 136
Perfluorodecanesulfonic acid	24.7	20.2		ng/L		82	55 - 137
Perfluorododecanesulfonic acid (PFDoS)	24.8	21.5		ng/L		87	48 - 138
Perfluorooctanesulfonamide	25.6	22.6		ng/L		88	43 - 167
Perfluorohexadecanoic acid	25.6	24.2		ng/L		95	41 - 158
Perfluorooctadecanoic acid	25.6	25.1		ng/L		98	29 - 172
Perfluorobutanoic acid	25.6	24.6		ng/L		96	59 - 136
Perfluoropentanoic acid	25.6	19.1		ng/L		74	57 - 141
NMeFOSE	25.6	22.6		ng/L		88	55 - 144
NMeFOSA	25.6	22.7		ng/L		89	64 - 143
NEtFOSE	25.6	21.1		ng/L		83	60 - 136
NEtFOSA	25.6	24.7		ng/L		97	61 - 134
Perfluorododecanoic acid	25.6	25.6		ng/L		100	59 - 143
Perfluoroundecanoic acid	25.6	24.8	I	ng/L		97	60 - 141
4:2 Fluorotelomer sulfonic acid	23.9	19.4		ng/L		81	55 - 139
6:2 Fluorotelomer sulfonic acid	24.3	20.1		ng/L		83	28 - 173
8:2 Fluorotelomer sulfonic acid	24.5	22.7		ng/L		92	55 - 138

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
M2-4:2 FTS	145		10 - 200
M2-8:2 FTS	125		33 - 200
M2-6:2 FTS	129		17 - 200
13C5 PFHxA	126		24 - 179
13C4 PFHpA	118		31 - 182
13C8 PFOA	138		48 - 162
13C9 PFNA	113		51 - 167
13C6 PFDA	129		49 - 163
13C7 PFUnA	125		34 - 174
13C2-PFDoDA	111		17 - 176
13C2 PFTeDA	112		10 - 179
13C3 PFBS	117		16 - 200
13C3 PFHxS	135		28 - 188
13C8 PFOS	119		51 - 159
d3-NMeFOSAA	144		31 - 174
d5-NEtFOSAA	157		29 - 195
13C8 FOSA	113		10 - 168
13C4 PFBA	114		42 - 165
13C5 PFPeA	122		38 - 187
d7-N-MeFOSE-M	96		10 - 178
d3-NMePFOSA	85		10 - 155
d9-N-EtFOSE-M	97		10 - 177
d5-NEtPFOSA	89		10 - 159

Lab Sample ID: LCSD 410-232926/3-A
Matrix: Water
Analysis Batch: 233890

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 232926

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD
									Limit
Perfluorohexanoic acid	25.6	24.8		ng/L		97	58 - 139	1	30
Perfluoroheptanoic acid	25.6	26.9		ng/L		105	59 - 145	1	30
Perfluorooctanoic acid	25.6	23.6		ng/L		92	51 - 145	11	30
Perfluorononanoic acid	25.6	25.8		ng/L		101	61 - 139	2	30
Perfluorodecanoic acid	25.6	24.4		ng/L		95	56 - 138	3	30
Perfluorotridecanoic acid	25.6	25.4		ng/L		99	58 - 146	0	30
Perfluorotetradecanoic acid	25.6	23.9		ng/L		93	62 - 139	1	30
Perfluorobutanesulfonic acid	22.7	20.7		ng/L		91	53 - 138	4	30
Perfluorohexanesulfonic acid	23.3	21.6		ng/L		92	58 - 134	1	30
Perfluorooctanesulfonic acid	23.7	22.4		ng/L		95	45 - 150	5	30
NEtFOSAA	25.6	22.8		ng/L		89	55 - 134	17	30
NMeFOSAA	25.6	23.9		ng/L		93	59 - 140	14	30
10:2 FTS	24.7	23.7		ng/L		96	50 - 146	0	30
Perfluoropentanesulfonic acid	24.0	21.3		ng/L		89	55 - 140	3	30
Perfluoroheptanesulfonic acid	24.4	21.2		ng/L		87	56 - 140	1	30
Perfluorononanesulfonic acid	24.6	22.6		ng/L		92	59 - 136	3	30
Perfluorodecanesulfonic acid	24.7	18.6		ng/L		75	55 - 137	8	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	19.5		ng/L		79	48 - 138	10	30
Perfluorooctanesulfonamide	25.6	22.3		ng/L		87	43 - 167	1	30
Perfluorohexadecanoic acid	25.6	22.3		ng/L		87	41 - 158	8	30
Perfluorooctadecanoic acid	25.6	22.9		ng/L		90	29 - 172	9	30
Perfluorobutanoic acid	25.6	24.4		ng/L		95	59 - 136	1	30

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 410-232926/3-A
Matrix: Water
Analysis Batch: 233890

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 232926

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoropentanoic acid	25.6	19.4		ng/L		76	57 - 141	2	30
NMeFOSE	25.6	22.8		ng/L		89	55 - 144	1	30
NMeFOSA	25.6	23.2		ng/L		91	64 - 143	2	30
NEtFOSE	25.6	19.9		ng/L		78	60 - 136	6	30
NEtFOSA	25.6	23.3		ng/L		91	61 - 134	6	30
Perfluorododecanoic acid	25.6	24.5		ng/L		96	59 - 143	4	30
Perfluoroundecanoic acid	25.6	24.9		ng/L		97	60 - 141	1	30
4:2 Fluorotelomer sulfonic acid	23.9	20.1		ng/L		84	55 - 139	3	30
6:2 Fluorotelomer sulfonic acid	24.3	20.7		ng/L		85	28 - 173	3	30
8:2 Fluorotelomer sulfonic acid	24.5	21.3		ng/L		87	55 - 138	6	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
M2-4:2 FTS	124		10 - 200
M2-8:2 FTS	114		33 - 200
M2-6:2 FTS	119		17 - 200
13C5 PFHxA	113		24 - 179
13C4 PFHpA	111		31 - 182
13C8 PFOA	132		48 - 162
13C9 PFNA	109		51 - 167
13C6 PFDA	117		49 - 163
13C7 PFUnA	119		34 - 174
13C2-PFDoDA	107		17 - 176
13C2 PFTeDA	110		10 - 179
13C3 PFBS	117		16 - 200
13C3 PFHxS	127		28 - 188
13C8 PFOS	117		51 - 159
d3-NMeFOSAA	125		31 - 174
d5-NEtFOSAA	132		29 - 195
13C8 FOSA	107		10 - 168
13C4 PFBA	116		42 - 165
13C5 PFPeA	122		38 - 187
d7-N-MeFOSE-M	90		10 - 178
d3-NMePFOSA	79		10 - 155
d9-N-EtFOSE-M	92		10 - 177
d5-NEtPFOSA	86		10 - 159

Lab Sample ID: MB 410-234364/1-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234364

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-234364/1-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234364

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
NEtFOSAA	ND		3.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
NMeFOSAA	ND		2.0	0.60	ng/L		03/16/22 15:53	03/17/22 21:35	1
10:2 FTS	ND		5.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluoropentanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluoroheptanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorononanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorodecanesulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorooctanesulfonamide	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorohexadecanoic acid	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorooctadecanoic acid	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorobutanoic acid	ND		5.0	2.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluoropentanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
NMeFOSE	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
NMeFOSA	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
NEtFOSE	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
NEtFOSA	ND		5.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		03/16/22 15:53	03/17/22 21:35	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		03/16/22 15:53	03/17/22 21:35	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		03/16/22 15:53	03/17/22 21:35	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
M2-4:2 FTS	162		10 - 200	03/16/22 15:53	03/17/22 21:35	1
M2-8:2 FTS	119		33 - 200	03/16/22 15:53	03/17/22 21:35	1
M2-6:2 FTS	139		17 - 200	03/16/22 15:53	03/17/22 21:35	1
13C5 PFHxA	130		24 - 179	03/16/22 15:53	03/17/22 21:35	1
13C4 PFHpA	128		31 - 182	03/16/22 15:53	03/17/22 21:35	1
13C8 PFOA	138		48 - 162	03/16/22 15:53	03/17/22 21:35	1
13C9 PFNA	135		51 - 167	03/16/22 15:53	03/17/22 21:35	1
13C6 PFDA	131		49 - 163	03/16/22 15:53	03/17/22 21:35	1
13C7 PFUnA	127		34 - 174	03/16/22 15:53	03/17/22 21:35	1
13C2-PFDoDA	113		17 - 176	03/16/22 15:53	03/17/22 21:35	1
13C2 PFTeDA	99		10 - 179	03/16/22 15:53	03/17/22 21:35	1
13C3 PFBS	138		16 - 200	03/16/22 15:53	03/17/22 21:35	1
13C3 PFHxS	124		28 - 188	03/16/22 15:53	03/17/22 21:35	1
13C8 PFOS	133		51 - 159	03/16/22 15:53	03/17/22 21:35	1
d3-NMeFOSAA	130		31 - 174	03/16/22 15:53	03/17/22 21:35	1
d5-NEtFOSAA	122		29 - 195	03/16/22 15:53	03/17/22 21:35	1
13C8 FOSA	103		10 - 168	03/16/22 15:53	03/17/22 21:35	1
13C4 PFBA	126		42 - 165	03/16/22 15:53	03/17/22 21:35	1
13C5 PFPeA	142		38 - 187	03/16/22 15:53	03/17/22 21:35	1
d7-N-MeFOSE-M	97		10 - 178	03/16/22 15:53	03/17/22 21:35	1
d3-NMePFOSA	79		10 - 155	03/16/22 15:53	03/17/22 21:35	1
d9-N-EtFOSE-M	99		10 - 177	03/16/22 15:53	03/17/22 21:35	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 410-234364/1-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234364

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtPFOSA	77		10 - 159	03/16/22 15:53	03/17/22 21:35	1

Lab Sample ID: LCS 410-234364/2-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid	25.6	24.0		ng/L		94	58 - 139
Perfluoroheptanoic acid	25.6	24.7		ng/L		96	59 - 145
Perfluorooctanoic acid	25.6	22.6		ng/L		88	51 - 145
Perfluorononanoic acid	25.6	23.8		ng/L		93	61 - 139
Perfluorodecanoic acid	25.6	22.0		ng/L		86	56 - 138
Perfluorotridecanoic acid	25.6	23.0		ng/L		90	58 - 146
Perfluorotetradecanoic acid	25.6	24.1		ng/L		94	62 - 139
Perfluorobutanesulfonic acid	22.7	20.3		ng/L		90	53 - 138
Perfluorohexanesulfonic acid	23.3	20.1		ng/L		86	58 - 134
Perfluorooctanesulfonic acid	23.7	21.9		ng/L		92	45 - 150
NEtFOSAA	25.6	22.0		ng/L		86	55 - 134
NMeFOSAA	25.6	21.8		ng/L		85	59 - 140
10:2 FTS	24.7	20.9		ng/L		85	50 - 146
Perfluoropentanesulfonic acid	24.0	19.8		ng/L		82	55 - 140
Perfluoroheptanesulfonic acid	24.4	20.1		ng/L		83	56 - 140
Perfluorononanesulfonic acid	24.6	21.1		ng/L		86	59 - 136
Perfluorodecanesulfonic acid	24.7	17.4		ng/L		71	55 - 137
Perfluorododecanesulfonic acid (PFDoS)	24.8	17.6		ng/L		71	48 - 138
Perfluorooctanesulfonamide	25.6	22.2		ng/L		87	43 - 167
Perfluorohexadecanoic acid	25.6	22.0		ng/L		86	41 - 158
Perfluorooctadecanoic acid	25.6	20.8		ng/L		81	29 - 172
Perfluorobutanoic acid	25.6	22.2		ng/L		87	59 - 136
Perfluoropentanoic acid	25.6	18.3		ng/L		72	57 - 141
NMeFOSE	25.6	22.2		ng/L		87	55 - 144
NMeFOSA	25.6	20.3		ng/L		79	64 - 143
NEtFOSE	25.6	21.5		ng/L		84	60 - 136
NEtFOSA	25.6	22.0		ng/L		86	61 - 134
Perfluorododecanoic acid	25.6	21.7		ng/L		85	59 - 143
Perfluoroundecanoic acid	25.6	24.0		ng/L		94	60 - 141
4:2 Fluorotelomer sulfonic acid	23.9	21.0		ng/L		88	55 - 139
6:2 Fluorotelomer sulfonic acid	24.3	21.1		ng/L		87	28 - 173
8:2 Fluorotelomer sulfonic acid	24.5	21.5		ng/L		88	55 - 138

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
M2-4:2 FTS	161		10 - 200
M2-8:2 FTS	116		33 - 200
M2-6:2 FTS	132		17 - 200
13C5 PFHxA	131		24 - 179
13C4 PFHpA	136		31 - 182
13C8 PFOA	141		48 - 162
13C9 PFNA	129		51 - 167

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 410-234364/2-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234364

<u>Isotope Dilution</u>	<u>LCS %Recovery</u>	<u>LCS Qualifier</u>	<u>Limits</u>
13C6 PFDA	125		49 - 163
13C7 PFUnA	122		34 - 174
13C2-PFDoDA	113		17 - 176
13C2 PFTeDA	99		10 - 179
13C3 PFBS	129		16 - 200
13C3 PFHxS	133		28 - 188
13C8 PFOS	126		51 - 159
d3-NMeFOSAA	114		31 - 174
d5-NEtFOSAA	119		29 - 195
13C8 FOSA	104		10 - 168
13C4 PFBA	121		42 - 165
13C5 PFPeA	137		38 - 187
d7-N-MeFOSE-M	87		10 - 178
d3-NMePFOSA	81		10 - 155
d9-N-EtFOSE-M	94		10 - 177
d5-NEtPFOSA	85		10 - 159

Lab Sample ID: LCSD 410-234364/3-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234364

<u>Analyte</u>	<u>Spike Added</u>	<u>LCSD Result</u>	<u>LCSD Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec. Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Perfluorohexanoic acid	25.6	23.2		ng/L		91	58 - 139	3	30
Perfluoroheptanoic acid	25.6	24.5		ng/L		96	59 - 145	1	30
Perfluorooctanoic acid	25.6	23.2		ng/L		90	51 - 145	2	30
Perfluorononanoic acid	25.6	24.7		ng/L		97	61 - 139	4	30
Perfluorodecanoic acid	25.6	22.6		ng/L		88	56 - 138	3	30
Perfluorotridecanoic acid	25.6	23.6		ng/L		92	58 - 146	3	30
Perfluorotetradecanoic acid	25.6	23.6		ng/L		92	62 - 139	2	30
Perfluorobutanesulfonic acid	22.7	21.0		ng/L		93	53 - 138	3	30
Perfluorohexanesulfonic acid	23.3	21.0		ng/L		90	58 - 134	4	30
Perfluorooctanesulfonic acid	23.7	22.9		ng/L		97	45 - 150	4	30
NEtFOSAA	25.6	21.7		ng/L		85	55 - 134	1	30
NMeFOSAA	25.6	20.3		ng/L		79	59 - 140	7	30
10:2 FTS	24.7	21.2		ng/L		86	50 - 146	2	30
Perfluoropentanesulfonic acid	24.0	20.6		ng/L		86	55 - 140	4	30
Perfluoroheptanesulfonic acid	24.4	19.9		ng/L		82	56 - 140	1	30
Perfluorononanesulfonic acid	24.6	21.5		ng/L		87	59 - 136	2	30
Perfluorodecanesulfonic acid	24.7	18.1		ng/L		73	55 - 137	4	30
Perfluorododecanesulfonic acid (PFDoS)	24.8	18.6		ng/L		75	48 - 138	6	30
Perfluorooctanesulfonamide	25.6	22.3		ng/L		87	43 - 167	0	30
Perfluorohexadecanoic acid	25.6	22.9		ng/L		89	41 - 158	4	30
Perfluorooctadecanoic acid	25.6	21.9		ng/L		85	29 - 172	5	30
Perfluorobutanoic acid	25.6	22.0		ng/L		86	59 - 136	1	30
Perfluoropentanoic acid	25.6	18.4		ng/L		72	57 - 141	0	30
NMeFOSE	25.6	22.3		ng/L		87	55 - 144	0	30
NMeFOSA	25.6	22.5		ng/L		88	64 - 143	11	30
NEtFOSE	25.6	22.5		ng/L		88	60 - 136	5	30

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 410-234364/3-A
Matrix: Water
Analysis Batch: 234739

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234364

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NEtFOSA	25.6	23.5		ng/L		92	61 - 134	7	30
Perfluorododecanoic acid	25.6	23.4		ng/L		91	59 - 143	7	30
Perfluoroundecanoic acid	25.6	24.7		ng/L		96	60 - 141	3	30
4:2 Fluorotelomer sulfonic acid	23.9	19.4		ng/L		81	55 - 139	8	30
6:2 Fluorotelomer sulfonic acid	24.3	19.1		ng/L		79	28 - 173	10	30
8:2 Fluorotelomer sulfonic acid	24.5	25.0		ng/L		102	55 - 138	15	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
M2-4:2 FTS	150		10 - 200
M2-8:2 FTS	103		33 - 200
M2-6:2 FTS	122		17 - 200
13C5 PFHxA	112		24 - 179
13C4 PFHpA	112		31 - 182
13C8 PFOA	120		48 - 162
13C9 PFNA	119		51 - 167
13C6 PFDA	114		49 - 163
13C7 PFUnA	114		34 - 174
13C2-PFDoDA	103		17 - 176
13C2 PFTeDA	94		10 - 179
13C3 PFBS	112		16 - 200
13C3 PFHxS	112		28 - 188
13C8 PFOS	112		51 - 159
d3-NMeFOSAA	113		31 - 174
d5-NEtFOSAA	110		29 - 195
13C8 FOSA	89		10 - 168
13C4 PFBA	112		42 - 165
13C5 PFPeA	120		38 - 187
d7-N-MeFOSE-M	87		10 - 178
d3-NMePFOSA	77		10 - 155
d9-N-EtFOSE-M	87		10 - 177
d5-NEtPFOSA	79		10 - 159

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018

Lab Sample ID: MB 410-232874/1-A
Matrix: Drinking Water
Analysis Batch: 233121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NEtFOSAA	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
NMeFOSAA	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorobutanesulfonic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorodecanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorododecanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluoroheptanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorohexanesulfonic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorohexanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorononanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorooctanesulfonic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018 (Continued)

Lab Sample ID: MB 410-232874/1-A
Matrix: Drinking Water
Analysis Batch: 233121

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorotetradecanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluorotridecanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1
Perfluoroundecanoic acid	ND		2.0	0.50	ng/L		03/11/22 21:05	03/14/22 14:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	72		70 - 130	03/11/22 21:05	03/14/22 14:21	1
13C2 PFHxA	91		70 - 130	03/11/22 21:05	03/14/22 14:21	1
13C3 HFPO-DA	86		70 - 130	03/11/22 21:05	03/14/22 14:21	1
d5-NEtFOSAA	85		70 - 130	03/11/22 21:05	03/14/22 14:21	1

Lab Sample ID: LCS 410-232874/2-A
Matrix: Drinking Water
Analysis Batch: 233121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
NEtFOSAA	80.0	62.8		ng/L		78	70 - 130
NMeFOSAA	80.0	61.0		ng/L		76	70 - 130
Perfluorobutanesulfonic acid	70.8	74.2	E	ng/L		105	70 - 130
Perfluorodecanoic acid	80.0	65.4		ng/L		82	70 - 130
Perfluorododecanoic acid	80.0	63.2		ng/L		79	70 - 130
Perfluoroheptanoic acid	80.0	82.5	E	ng/L		103	70 - 130
Perfluorohexanesulfonic acid	73.0	76.7	E	ng/L		105	70 - 130
Perfluorohexanoic acid	80.0	82.0	E	ng/L		102	70 - 130
Perfluorononanoic acid	80.0	69.6		ng/L		87	70 - 130
Perfluorooctanesulfonic acid	74.0	68.6		ng/L		93	70 - 130
Perfluorooctanoic acid	80.0	74.3		ng/L		93	70 - 130
Perfluorotetradecanoic acid	80.0	56.4		ng/L		70	70 - 130
Perfluorotridecanoic acid	80.0	57.8		ng/L		72	70 - 130
Perfluoroundecanoic acid	80.0	65.8		ng/L		82	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C2 PFDA	81		70 - 130
13C2 PFHxA	98		70 - 130
13C3 HFPO-DA	96		70 - 130
d5-NEtFOSAA	79		70 - 130

Lab Sample ID: LCSD 410-232874/3-A
Matrix: Drinking Water
Analysis Batch: 233121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 232874

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NEtFOSAA	80.0	72.8		ng/L		91	70 - 130	15	30
NMeFOSAA	80.0	67.2		ng/L		84	70 - 130	10	30
Perfluorobutanesulfonic acid	70.8	74.5	E	ng/L		105	70 - 130	0	30
Perfluorodecanoic acid	80.0	64.0		ng/L		80	70 - 130	2	30
Perfluorododecanoic acid	80.0	62.5		ng/L		78	70 - 130	1	30
Perfluoroheptanoic acid	80.0	82.9	E	ng/L		104	70 - 130	1	30

Eurofins Lancaster Laboratories Env, LLC

QC Sample Results

Client: Pittsburgh Water and Sewer Authority
 Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method: EPA 537.1 - EPA 537.1, Ver 1.0 Nov 2018 (Continued)

Lab Sample ID: LCSD 410-232874/3-A
Matrix: Drinking Water
Analysis Batch: 233121

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 232874

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid	73.0	75.3	E	ng/L		103	70 - 130	2	30
Perfluorohexanoic acid	80.0	85.4	E	ng/L		107	70 - 130	4	30
Perfluorononanoic acid	80.0	69.2		ng/L		87	70 - 130	1	30
Perfluorooctanesulfonic acid	74.0	70.3		ng/L		95	70 - 130	2	30
Perfluorooctanoic acid	80.0	74.9		ng/L		94	70 - 130	1	30
Perfluorotetradecanoic acid	80.0	58.2		ng/L		73	70 - 130	3	30
Perfluorotridecanoic acid	80.0	60.0		ng/L		75	70 - 130	4	30
Perfluoroundecanoic acid	80.0	64.2		ng/L		80	70 - 130	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C2 PFDA	78		70 - 130
13C2 PFHxA	99		70 - 130
13C3 HFPO-DA	91		70 - 130
d5-NEtFOSAA	85		70 - 130

Method: SW846 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 410-233699/1-A
Matrix: Drinking Water
Analysis Batch: 234306

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 233699

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		1.0	0.23	ug/L		03/15/22 10:38	03/18/22 11:51	1

Lab Sample ID: LCS 410-233699/2-A
Matrix: Drinking Water
Analysis Batch: 234306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 233699

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	1.00	0.929	J	ug/L		93	80 - 120

QC Association Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

LCMS

Prep Batch: 232874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-1	RAW 300	Total/NA	Drinking Water	537.1 DW Prep	
410-75694-2	EP 101	Total/NA	Drinking Water	537.1 DW Prep	
410-75694-7	Field Blank RAW 300	Total/NA	Drinking Water	537.1 DW Prep	
410-75694-8	Field Blank EP 101	Total/NA	Drinking Water	537.1 DW Prep	
MB 410-232874/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW Prep	
LCS 410-232874/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW Prep	
LCSD 410-232874/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	537.1 DW Prep	

Prep Batch: 232926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-3	RAW 300	Total/NA	Water	3535	
410-75694-4	EP101	Total/NA	Water	3535	
MB 410-232926/1-A	Method Blank	Total/NA	Water	3535	
LCS 410-232926/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 410-232926/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 233121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-1	RAW 300	Total/NA	Drinking Water	EPA 537.1	232874
410-75694-2	EP 101	Total/NA	Drinking Water	EPA 537.1	232874
410-75694-7	Field Blank RAW 300	Total/NA	Drinking Water	EPA 537.1	232874
410-75694-8	Field Blank EP 101	Total/NA	Drinking Water	EPA 537.1	232874
MB 410-232874/1-A	Method Blank	Total/NA	Drinking Water	EPA 537.1	232874
LCS 410-232874/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 537.1	232874
LCSD 410-232874/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 537.1	232874

Prep Batch: 233699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-5	RAW 300	Total/NA	Drinking Water	6850 Prep	
410-75694-6	EP 101	Total/NA	Drinking Water	6850 Prep	
MB 410-233699/1-A	Method Blank	Total/NA	Drinking Water	6850 Prep	
LCS 410-233699/2-A	Lab Control Sample	Total/NA	Drinking Water	6850 Prep	

Analysis Batch: 233890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-3	RAW 300	Total/NA	Water	537 (modified)	232926
410-75694-4	EP101	Total/NA	Water	537 (modified)	232926
MB 410-232926/1-A	Method Blank	Total/NA	Water	537 (modified)	232926
LCS 410-232926/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	232926
LCSD 410-232926/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	232926

Analysis Batch: 234306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-5	RAW 300	Total/NA	Drinking Water	SW846 6850	233699
410-75694-6	EP 101	Total/NA	Drinking Water	SW846 6850	233699
MB 410-233699/1-A	Method Blank	Total/NA	Drinking Water	SW846 6850	233699
LCS 410-233699/2-A	Lab Control Sample	Total/NA	Drinking Water	SW846 6850	233699

Prep Batch: 234364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-3 - RE	RAW 300	Total/NA	Water	3535	

QC Association Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

LCMS (Continued)

Prep Batch: 234364 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-4 - RE	EP101	Total/NA	Water	3535	
MB 410-234364/1-A	Method Blank	Total/NA	Water	3535	
LCS 410-234364/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 410-234364/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 234739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-75694-3 - RE	RAW 300	Total/NA	Water	537 (modified)	234364
410-75694-4 - RE	EP101	Total/NA	Water	537 (modified)	234364
MB 410-234364/1-A	Method Blank	Total/NA	Water	537 (modified)	234364
LCS 410-234364/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	234364
LCSD 410-234364/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	234364

Lab Chronicle

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: RAW 300

Date Collected: 03/08/22 07:45

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW Prep			232874	03/11/22 21:05	GU2F	ELLE
Total/NA	Analysis	EPA 537.1		1	233121	03/14/22 15:19	DCS9	ELLE

Client Sample ID: EP 101

Date Collected: 03/08/22 08:10

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-2

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW Prep			232874	03/11/22 21:05	GU2F	ELLE
Total/NA	Analysis	EPA 537.1		1	233121	03/14/22 15:31	DCS9	ELLE

Client Sample ID: RAW 300

Date Collected: 03/08/22 07:45

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			232926	03/12/22 11:11	ZWK6	ELLE
Total/NA	Analysis	537 (modified)		1	233890	03/16/22 01:46	MT26	ELLE
Total/NA	Prep	3535	RE		234364	03/16/22 15:53	ZWK6	ELLE
Total/NA	Analysis	537 (modified)	RE	1	234739	03/17/22 22:54	QD9Y	ELLE

Client Sample ID: EP101

Date Collected: 03/08/22 08:10

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			232926	03/12/22 11:11	ZWK6	ELLE
Total/NA	Analysis	537 (modified)		1	233890	03/16/22 01:57	MT26	ELLE
Total/NA	Prep	3535	RE		234364	03/16/22 15:53	ZWK6	ELLE
Total/NA	Analysis	537 (modified)	RE	1	234739	03/17/22 23:05	QD9Y	ELLE

Client Sample ID: RAW 300

Date Collected: 03/08/22 08:45

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-5

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	6850 Prep			233699	03/15/22 10:38	UAD3	ELLE
Total/NA	Analysis	SW846 6850		1	234306	03/18/22 12:20	UAD3	ELLE

Client Sample ID: EP 101

Date Collected: 03/08/22 08:10

Date Received: 03/10/22 16:42

Lab Sample ID: 410-75694-6

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	6850 Prep			233699	03/15/22 10:38	UAD3	ELLE
Total/NA	Analysis	SW846 6850		1	234306	03/18/22 12:29	UAD3	ELLE

Lab Chronicle

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Client Sample ID: Field Blank RAW 300

Lab Sample ID: 410-75694-7

Date Collected: 03/08/22 07:45

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW Prep			232874	03/11/22 21:05	GU2F	ELLE
Total/NA	Analysis	EPA 537.1		1	233121	03/14/22 15:42	DCS9	ELLE

Client Sample ID: Field Blank EP 101

Lab Sample ID: 410-75694-8

Date Collected: 03/08/22 08:10

Matrix: Drinking Water

Date Received: 03/10/22 16:42

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW Prep			232874	03/11/22 21:05	GU2F	ELLE
Total/NA	Analysis	EPA 537.1		1	233121	03/14/22 15:54	DCS9	ELLE

Laboratory References:

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

Accreditation/Certification Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

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
Pennsylvania	NELAP	36-00037	01-31-23

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
SW846 6850	6850 Prep	Drinking Water	Perchlorate



Method Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	ELLE
EPA 537.1	EPA 537.1, Ver 1.0 Nov 2018	EPA	ELLE
SW846 6850	Perchlorate by LC/MS or LC/MS/MS	SW846	ELLE
3535	Solid-Phase Extraction (SPE)	SW846	ELLE
537.1 DW Prep	Extraction of Perfluorinated Alkyl Acids	EPA	ELLE
6850 Prep	Perchlorate Water Prep	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: Pittsburgh Water and Sewer Authority
Project/Site: PFAS & Perchlorate

Job ID: 410-75694-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-75694-1	RAW 300	Drinking Water	03/08/22 07:45	03/10/22 16:42
410-75694-2	EP 101	Drinking Water	03/08/22 08:10	03/10/22 16:42
410-75694-3	RAW 300	Water	03/08/22 07:45	03/10/22 16:42
410-75694-4	EP101	Water	03/08/22 08:10	03/10/22 16:42
410-75694-5	RAW 300	Drinking Water	03/08/22 08:45	03/10/22 16:42
410-75694-6	EP 101	Drinking Water	03/08/22 08:10	03/10/22 16:42
410-75694-7	Field Blank RAW 300	Drinking Water	03/08/22 07:45	03/10/22 16:42
410-75694-8	Field Blank EP 101	Drinking Water	03/08/22 08:10	03/10/22 16:42

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Eurofins Lancaster Laboratories Env, LLC

2425 New Holland Pike
 Lancaster, PA 17601
 Phone: 717-656-2300 Fax 717-656-2681

Chain of Custody Record



eurofins Environment Testing America

Client Information		Sampler <i>Robert Gomez</i>		Lab PM Gordon, Stephen J		410-75694 Chain of Custody		C No 0-51295-7775 1	
Client Contact Linda Leopold		Phone		E-Mail Stephen.Gordon@eurofinset.com		State of Origin		Page Page 1 of 1	
Company Pittsburgh Water and Sewer Authority				PWSID <i>S2203R</i>		Analysis Requested			
Address 900 Freepoint Road		Due Date Requested:		Field Filtered Sample (Yes/No) 537.1_DW - PFAS DW 14 compounds 6660 - Perchlorate by LC/MS or LC/MS/MS PFC_IDA - PFAS 32 Compounds		total Number of containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify)	
City Pittsburgh		TAT Requested (days):						Other:	
State, Zip PA, 15238		Compliance Project: Δ Yes Δ No							
Phone		PO # Purchase Order not required							
Email		WO #							
Project Name PFAS & Perchlorate		Project # 41004440							
Site		SSOW#							
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other, BT=Tissue, A=Air)	Preservation Code	N	N	N
<i>Raw 300</i>		<i>3/8/22</i>	<i>0745</i>	<i>G</i>	<i>Drinking Water</i>		<i>✓</i>		
<i>EP 101</i>		<i>3/8/22</i>	<i>0810</i>	<i>G</i>	<i>Drinking Water</i>		<i>✓</i>		
<i>Raw 300</i>		<i>3/8/22</i>	<i>0745</i>	<i>G</i>	<i>Water</i>			<i>✓</i>	
<i>EP 101</i>		<i>3/8/22</i>	<i>0810</i>	<i>G</i>	<i>Water</i>			<i>✓</i>	
<i>Raw 300</i>		<i>3/8/22</i>	<i>0745</i>	<i>G</i>	<i>Drinking Water</i>		<i>✓</i>		
<i>EP 101</i>		<i>3/8/22</i>	<i>0810</i>	<i>G</i>	<i>Drinking Water</i>		<i>✓</i>		
<i>Field Blank Raw 300</i>		<i>3/8/22</i>	<i>0745</i>	<i>G</i>	<i>20</i>		<i>✓</i>		
<i>Field Blank EP 101</i>		<i>3/8/22</i>	<i>0810</i>	<i>G</i>	<i>20</i>		<i>✓</i>		
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:							
Empty Kit Relinquished by		Date:		Time:		Method of Shipment			
Relinquished by <i>Karl L. Muth</i>		Date/Time <i>3-3-22 10:30</i>		Company <i>ELLE</i>		Received by		Date/Time	
Relinquished by <i>Robert Gomez</i>		Date/Time <i>3/8/22 1010</i>		Company <i>PWSA</i>		Received by		Date/Time	
Relinquished by		Date/Time		Company		Received by		Date/Time	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>0.7</i>					

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Login Sample Receipt Checklist

Client: Pittsburgh Water and Sewer Authority

Job Number: 410-75694-1

Login Number: 75694

List Source: Eurofins Lancaster Laboratories Env, LLC

List Number: 1

Creator: Jeremiah, Cory T

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.	True	
Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	True	
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?	True	
Sample custody seals are intact.	N/A	