

ANALYTICAL REPORT

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Laboratory Job ID: 320-60142-1
Laboratory Sample Delivery Group: 04/11/2020
Client Project/Site: CDPHE_PFAS

For:
Terracon Consulting Eng & Scientists
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Authorized for release by:
4/30/2020 3:09:10 PM

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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.



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Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Qualifiers

LCMS

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Job ID: 320-60142-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Reviewed and ready to finalize on 4/30/2020

Job Narrative 320-60142-1

Receipt

The samples were received on 4/11/2020 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.4° C.

LCMS

Method 537.1 DW: HFPO-DA (GenX) is qualified with an E flag in the laboratory control sample (LCS 320-372189/2-A) associated with analytical batch 320-372432. The highest standard was not utilized in the initial calibration due to QC issues. As a result, the LCS spike concentration was at the upper limit of the calibration range. The recovery (%Rec) was within limits and there is no adverse impact on the sample data.

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

Organic Prep

Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-372198.

Method 537.1 DW: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-372189.

Method 537.1 DW: Elevated reporting limits are provided for the following sample due to insufficient volume (<250mL) provided for preparation: CO0105500-007T (320-60142-4).
preparation batch 320-372189

Method 537.1 DW: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-372197.

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

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-009T

Lab Sample ID: 320-60142-1

No Detections.

Client Sample ID: CO0105500-005T

Lab Sample ID: 320-60142-2

No Detections.

Client Sample ID: CO0105500-002T

Lab Sample ID: 320-60142-3

No Detections.

Client Sample ID: CO0105500-007T

Lab Sample ID: 320-60142-4

No Detections.

Client Sample ID: CO0105500-006T

Lab Sample ID: 320-60142-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	0.63	J	1.8	0.45	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	1.6	J	1.8	0.45	ng/L	1		537.1 DW	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		1.8	0.45	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.2		1.8	0.45	ng/L	1		537.1 DW	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.7		1.8	0.45	ng/L	1		537.1 DW	Total/NA

Client Sample ID: CO0105500-001T

Lab Sample ID: 320-60142-6

No Detections.

Client Sample ID: CO0105500-008T

Lab Sample ID: 320-60142-7

No Detections.

Client Sample ID: CO0255600-002

Lab Sample ID: 320-60142-8

No Detections.

Client Sample ID: CO0155200-003T

Lab Sample ID: 320-60142-9

No Detections.

Client Sample ID: CO0111525-002

Lab Sample ID: 320-60142-10

No Detections.

Client Sample ID: CO0108900-001

Lab Sample ID: 320-60142-11

No Detections.

Client Sample ID: CO0115784-003

Lab Sample ID: 320-60142-12

No Detections.

Client Sample ID: CO0126121-001

Lab Sample ID: 320-60142-13

No Detections.

Client Sample ID: CO0104900-006

Lab Sample ID: 320-60142-14

No Detections.

Client Sample ID: CO0121675-001T

Lab Sample ID: 320-60142-15

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0121675-003T

Lab Sample ID: 320-60142-16

No Detections.

Client Sample ID: CO0214142-005

Lab Sample ID: 320-60142-17

No Detections.

Client Sample ID: CO0214142-003

Lab Sample ID: 320-60142-18

No Detections.

Client Sample ID: CO0162285-001

Lab Sample ID: 320-60142-19

No Detections.

Client Sample ID: CO0203012-012

Lab Sample ID: 320-60142-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	2.0	0.17	ng/L	1		537 (modified)	Total/NA

Client Sample ID: CO0203012-003T

Lab Sample ID: 320-60142-21

No Detections.

Client Sample ID: CO0118020-008

Lab Sample ID: 320-60142-22

No Detections.

Client Sample ID: CO0118020-011

Lab Sample ID: 320-60142-23

No Detections.

Client Sample ID: CO0130035-014

Lab Sample ID: 320-60142-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	1.1	J	1.9	0.48	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	0.48	J	1.9	0.48	ng/L	1		537.1 DW	Total/NA

Client Sample ID: CO0118076-017

Lab Sample ID: 320-60142-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.3		1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.81	J	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorooctanoic acid (PFOA)	1.4	J	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.8	0.44	ng/L	1		537.1 DW	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.8	0.44	ng/L	1		537.1 DW	Total/NA

Client Sample ID: CO0118076-002

Lab Sample ID: 320-60142-26

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-009T

Lab Sample ID: 320-60142-1

Date Collected: 04/08/20 09:35

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
F-53B Major	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
F-53B Minor	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
HFPO-DA (GenX)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1
DONA	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	95		70 - 130	04/13/20 18:48	04/15/20 03:36	1
13C2 PFDA	91		70 - 130	04/13/20 18:48	04/15/20 03:36	1
d5-NEtFOSAA	87		70 - 130	04/13/20 18:48	04/15/20 03:36	1
13C3 HFPO-DA	95		70 - 130	04/13/20 18:48	04/15/20 03:36	1

Client Sample ID: CO0105500-005T

Lab Sample ID: 320-60142-2

Date Collected: 04/08/20 09:08

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
F-53B Major	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
F-53B Minor	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-005T

Lab Sample ID: 320-60142-2

Date Collected: 04/08/20 09:08

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA (GenX)	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
DONA	ND		1.8	0.46	ng/L		04/13/20 18:48	04/15/20 03:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	100		70 - 130				04/13/20 18:48	04/15/20 03:44	1
13C2 PFDA	98		70 - 130				04/13/20 18:48	04/15/20 03:44	1
d5-NEtFOSAA	95		70 - 130				04/13/20 18:48	04/15/20 03:44	1
13C3 HFPO-DA	97		70 - 130				04/13/20 18:48	04/15/20 03:44	1

Client Sample ID: CO0105500-002T

Lab Sample ID: 320-60142-3

Date Collected: 04/08/20 08:50

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
F-53B Major	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
F-53B Minor	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
HFPO-DA (GenX)	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
DONA	ND		1.9	0.49	ng/L		04/13/20 18:48	04/15/20 03:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	95		70 - 130				04/13/20 18:48	04/15/20 03:52	1
13C2 PFDA	94		70 - 130				04/13/20 18:48	04/15/20 03:52	1
d5-NEtFOSAA	91		70 - 130				04/13/20 18:48	04/15/20 03:52	1
13C3 HFPO-DA	98		70 - 130				04/13/20 18:48	04/15/20 03:52	1

Client Sample ID: CO0105500-007T

Lab Sample ID: 320-60142-4

Date Collected: 04/08/20 09:45

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-007T

Lab Sample ID: 320-60142-4

Date Collected: 04/08/20 09:45

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
F-53B Major	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
F-53B Minor	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
HFPO-DA (GenX)	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1
DONA	ND		2.0	0.51	ng/L		04/13/20 18:48	04/15/20 03:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	97		70 - 130	04/13/20 18:48	04/15/20 03:59	1
13C2 PFDA	94		70 - 130	04/13/20 18:48	04/15/20 03:59	1
d5-NEtFOSAA	88		70 - 130	04/13/20 18:48	04/15/20 03:59	1
13C3 HFPO-DA	95		70 - 130	04/13/20 18:48	04/15/20 03:59	1

Client Sample ID: CO0105500-006T

Lab Sample ID: 320-60142-5

Date Collected: 04/08/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	0.63	J	1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorooctanoic acid (PFOA)	1.6	J	1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorohexanesulfonic acid (PFHxS)	8.2		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Perfluorooctanesulfonic acid (PFOS)	8.7		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
F-53B Major	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
F-53B Minor	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-006T

Lab Sample ID: 320-60142-5

Date Collected: 04/08/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DONA	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	94		70 - 130				04/13/20 18:48	04/15/20 04:07	1
13C2 PFDA	91		70 - 130				04/13/20 18:48	04/15/20 04:07	1
d5-NEtFOSAA	92		70 - 130				04/13/20 18:48	04/15/20 04:07	1
13C3 HFPO-DA	94		70 - 130				04/13/20 18:48	04/15/20 04:07	1

Client Sample ID: CO0105500-001T

Lab Sample ID: 320-60142-6

Date Collected: 04/08/20 08:42

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
F-53B Major	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
F-53B Minor	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
DONA	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130				04/13/20 18:48	04/15/20 04:15	1
13C2 PFDA	97		70 - 130				04/13/20 18:48	04/15/20 04:15	1
d5-NEtFOSAA	84		70 - 130				04/13/20 18:48	04/15/20 04:15	1
13C3 HFPO-DA	98		70 - 130				04/13/20 18:48	04/15/20 04:15	1

Client Sample ID: CO0105500-008T

Lab Sample ID: 320-60142-7

Date Collected: 04/08/20 09:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-008T

Lab Sample ID: 320-60142-7

Date Collected: 04/08/20 09:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
F-53B Major	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
F-53B Minor	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
HFPO-DA (GenX)	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
DONA	ND		1.9	0.48	ng/L		04/13/20 18:48	04/15/20 04:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	94		70 - 130				04/13/20 18:48	04/15/20 04:22	1
13C2 PFDA	96		70 - 130				04/13/20 18:48	04/15/20 04:22	1
d5-NEtFOSAA	88		70 - 130				04/13/20 18:48	04/15/20 04:22	1
13C3 HFPO-DA	97		70 - 130				04/13/20 18:48	04/15/20 04:22	1

Client Sample ID: CO0255600-002

Lab Sample ID: 320-60142-8

Date Collected: 04/08/20 10:15

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
F-53B Major	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
F-53B Minor	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
HFPO-DA (GenX)	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1
DONA	ND		1.9	0.47	ng/L		04/13/20 18:48	04/15/20 04:30	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0255600-002

Lab Sample ID: 320-60142-8

Date Collected: 04/08/20 10:15

Matrix: Water

Date Received: 04/11/20 09:50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	93		70 - 130	04/13/20 18:48	04/15/20 04:30	1
13C2 PFDA	94		70 - 130	04/13/20 18:48	04/15/20 04:30	1
d5-NEtFOSAA	87		70 - 130	04/13/20 18:48	04/15/20 04:30	1
13C3 HFPO-DA	94		70 - 130	04/13/20 18:48	04/15/20 04:30	1

Client Sample ID: CO0155200-003T

Lab Sample ID: 320-60142-9

Date Collected: 04/08/20 10:00

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
F-53B Major	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
F-53B Minor	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1
DONA	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 04:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	93		70 - 130	04/13/20 18:48	04/15/20 04:38	1
13C2 PFDA	93		70 - 130	04/13/20 18:48	04/15/20 04:38	1
d5-NEtFOSAA	90		70 - 130	04/13/20 18:48	04/15/20 04:38	1
13C3 HFPO-DA	96		70 - 130	04/13/20 18:48	04/15/20 04:38	1

Client Sample ID: CO0111525-002

Lab Sample ID: 320-60142-10

Date Collected: 04/08/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO011525-002

Lab Sample ID: 320-60142-10

Date Collected: 04/08/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		70 - 130				04/13/20 18:48	04/15/20 05:09	1
13C2 PFDA	93		70 - 130				04/13/20 18:48	04/15/20 05:09	1
d5-NEtFOSAA	89		70 - 130				04/13/20 18:48	04/15/20 05:09	1
13C3 HFPO-DA	95		70 - 130				04/13/20 18:48	04/15/20 05:09	1

Client Sample ID: CO0108900-001

Lab Sample ID: 320-60142-11

Date Collected: 04/08/20 13:45

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130				04/13/20 18:48	04/15/20 05:16	1
13C2 PFDA	91		70 - 130				04/13/20 18:48	04/15/20 05:16	1
d5-NEtFOSAA	85		70 - 130				04/13/20 18:48	04/15/20 05:16	1
13C3 HFPO-DA	91		70 - 130				04/13/20 18:48	04/15/20 05:16	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0115784-003

Lab Sample ID: 320-60142-12

Date Collected: 04/08/20 10:00

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
F-53B Major	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
F-53B Minor	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1
DONA	ND		1.8	0.45	ng/L		04/13/20 18:48	04/15/20 05:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		70 - 130	04/13/20 18:48	04/15/20 05:24	1
13C2 PFDA	92		70 - 130	04/13/20 18:48	04/15/20 05:24	1
d5-NEtFOSAA	75		70 - 130	04/13/20 18:48	04/15/20 05:24	1
13C3 HFPO-DA	91		70 - 130	04/13/20 18:48	04/15/20 05:24	1

Client Sample ID: CO0126121-001

Lab Sample ID: 320-60142-13

Date Collected: 04/08/20 09:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0126121-001

Lab Sample ID: 320-60142-13

Date Collected: 04/08/20 09:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	93		70 - 130				04/13/20 18:48	04/15/20 05:32	1
13C2 PFDA	92		70 - 130				04/13/20 18:48	04/15/20 05:32	1
d5-NEtFOSAA	91		70 - 130				04/13/20 18:48	04/15/20 05:32	1
13C3 HFPO-DA	91		70 - 130				04/13/20 18:48	04/15/20 05:32	1

Client Sample ID: CO0104900-006

Lab Sample ID: 320-60142-14

Date Collected: 04/08/20 09:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 05:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130				04/13/20 18:48	04/15/20 05:39	1
13C2 PFDA	93		70 - 130				04/13/20 18:48	04/15/20 05:39	1
d5-NEtFOSAA	90		70 - 130				04/13/20 18:48	04/15/20 05:39	1
13C3 HFPO-DA	94		70 - 130				04/13/20 18:48	04/15/20 05:39	1

Client Sample ID: CO0121675-001T

Lab Sample ID: 320-60142-15

Date Collected: 04/09/20 06:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0121675-001T

Lab Sample ID: 320-60142-15

Date Collected: 04/09/20 06:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
F-53B Major	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
F-53B Minor	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
HFPO-DA (GenX)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1
DONA	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130	04/13/20 18:48	04/15/20 05:47	1
13C2 PFDA	94		70 - 130	04/13/20 18:48	04/15/20 05:47	1
d5-NEtFOSAA	85		70 - 130	04/13/20 18:48	04/15/20 05:47	1
13C3 HFPO-DA	93		70 - 130	04/13/20 18:48	04/15/20 05:47	1

Client Sample ID: CO0121675-003T

Lab Sample ID: 320-60142-16

Date Collected: 04/09/20 06:48

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
F-53B Major	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
F-53B Minor	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
HFPO-DA (GenX)	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1
DONA	ND		1.7	0.42	ng/L		04/13/20 18:48	04/15/20 05:55	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0121675-003T

Lab Sample ID: 320-60142-16

Date Collected: 04/09/20 06:48

Matrix: Water

Date Received: 04/11/20 09:50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130	04/13/20 18:48	04/15/20 05:55	1
13C2 PFDA	93		70 - 130	04/13/20 18:48	04/15/20 05:55	1
d5-NEtFOSAA	94		70 - 130	04/13/20 18:48	04/15/20 05:55	1
13C3 HFPO-DA	96		70 - 130	04/13/20 18:48	04/15/20 05:55	1

Client Sample ID: CO0214142-005

Lab Sample ID: 320-60142-17

Date Collected: 04/09/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorooctanoic acid (PFOA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
F-53B Major	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
F-53B Minor	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
HFPO-DA (GenX)	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1
DONA	ND		1.6	0.41	ng/L		04/13/20 18:48	04/15/20 06:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		70 - 130	04/13/20 18:48	04/15/20 06:02	1
13C2 PFDA	93		70 - 130	04/13/20 18:48	04/15/20 06:02	1
d5-NEtFOSAA	89		70 - 130	04/13/20 18:48	04/15/20 06:02	1
13C3 HFPO-DA	91		70 - 130	04/13/20 18:48	04/15/20 06:02	1

Client Sample ID: CO0214142-003

Lab Sample ID: 320-60142-18

Date Collected: 04/09/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0214142-003

Lab Sample ID: 320-60142-18

Date Collected: 04/09/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	97		70 - 130				04/13/20 18:48	04/15/20 06:10	1
13C2 PFDA	92		70 - 130				04/13/20 18:48	04/15/20 06:10	1
d5-NEtFOSAA	90		70 - 130				04/13/20 18:48	04/15/20 06:10	1
13C3 HFPO-DA	93		70 - 130				04/13/20 18:48	04/15/20 06:10	1

Client Sample ID: CO0162285-001

Lab Sample ID: 320-60142-19

Date Collected: 04/10/20 07:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
F-53B Major	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
F-53B Minor	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
HFPO-DA (GenX)	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
DONA	ND		1.7	0.41	ng/L		04/13/20 18:48	04/15/20 06:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130				04/13/20 18:48	04/15/20 06:18	1
13C2 PFDA	88		70 - 130				04/13/20 18:48	04/15/20 06:18	1
d5-NEtFOSAA	90		70 - 130				04/13/20 18:48	04/15/20 06:18	1
13C3 HFPO-DA	89		70 - 130				04/13/20 18:48	04/15/20 06:18	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0203012-012

Lab Sample ID: 320-60142-20

Date Collected: 04/10/20 10:15

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.57	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.84	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.54	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	2.0	0.17	ng/L		04/14/20 04:40	04/14/20 19:01	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.53	ng/L		04/14/20 04:40	04/14/20 19:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		04/14/20 04:40	04/14/20 19:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		04/14/20 04:40	04/14/20 19:01	1
F-53B Major	ND		2.0	0.24	ng/L		04/14/20 04:40	04/14/20 19:01	1
F-53B Minor	ND		2.0	0.32	ng/L		04/14/20 04:40	04/14/20 19:01	1
HFPO-DA (GenX)	ND		3.9	1.5	ng/L		04/14/20 04:40	04/14/20 19:01	1
DONA	ND		2.0	0.18	ng/L		04/14/20 04:40	04/14/20 19:01	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2 PFHxA	89		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C2 PFDA	95		25 - 150				04/14/20 04:40	04/14/20 19:01	1
d5-NEtFOSAA	78		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C3 HFPO-DA	94		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C4 PFHpA	93		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C4 PFOA	91		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C4 PFOS	81		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C5 PFNA	91		25 - 150				04/14/20 04:40	04/14/20 19:01	1
d3-NMeFOSAA	75		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C2 PFUnA	108		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C2 PFDoA	104		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C2 PFTeDA	131		25 - 150				04/14/20 04:40	04/14/20 19:01	1
13C3 PFBS	87		25 - 150				04/14/20 04:40	04/14/20 19:01	1
18O2 PFHxS	82		25 - 150				04/14/20 04:40	04/14/20 19:01	1

Client Sample ID: CO0203012-003T

Lab Sample ID: 320-60142-21

Date Collected: 04/10/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0203012-003T

Lab Sample ID: 320-60142-21

Date Collected: 04/10/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
F-53B Major	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
F-53B Minor	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1
DONA	ND		1.7	0.43	ng/L		04/13/20 18:48	04/15/20 06:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130	04/13/20 18:48	04/15/20 06:49	1
13C2 PFDA	90		70 - 130	04/13/20 18:48	04/15/20 06:49	1
d5-NEtFOSAA	92		70 - 130	04/13/20 18:48	04/15/20 06:49	1
13C3 HFPO-DA	93		70 - 130	04/13/20 18:48	04/15/20 06:49	1

Client Sample ID: CO0118020-008

Lab Sample ID: 320-60142-22

Date Collected: 04/10/20 08:45

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
F-53B Major	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
F-53B Minor	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
HFPO-DA (GenX)	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1
DONA	ND		1.7	0.43	ng/L		04/14/20 04:31	04/15/20 02:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	90		70 - 130	04/14/20 04:31	04/15/20 02:11	1
13C2 PFDA	97		70 - 130	04/14/20 04:31	04/15/20 02:11	1
d5-NEtFOSAA	93		70 - 130	04/14/20 04:31	04/15/20 02:11	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0118020-008

Lab Sample ID: 320-60142-22

Date Collected: 04/10/20 08:45

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		70 - 130	04/14/20 04:31	04/15/20 02:11	1

Client Sample ID: CO0118020-011

Lab Sample ID: 320-60142-23

Date Collected: 04/10/20 08:30

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
F-53B Major	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
F-53B Minor	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1
DONA	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	93		70 - 130	04/14/20 04:31	04/15/20 02:19	1
13C2 PFDA	96		70 - 130	04/14/20 04:31	04/15/20 02:19	1
d5-NEtFOSAA	94		70 - 130	04/14/20 04:31	04/15/20 02:19	1
13C3 HFPO-DA	94		70 - 130	04/14/20 04:31	04/15/20 02:19	1

Client Sample ID: CO0130035-014

Lab Sample ID: 320-60142-24

Date Collected: 04/10/20 13:10

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	1.1	J	1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorooctanoic acid (PFOA)	0.48	J	1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0130035-014

Lab Sample ID: 320-60142-24

Date Collected: 04/10/20 13:10

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
F-53B Major	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
F-53B Minor	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
HFPO-DA (GenX)	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1
DONA	ND		1.9	0.48	ng/L		04/14/20 04:31	04/15/20 02:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		70 - 130	04/14/20 04:31	04/15/20 02:27	1
13C2 PFDA	95		70 - 130	04/14/20 04:31	04/15/20 02:27	1
d5-NEtFOSAA	94		70 - 130	04/14/20 04:31	04/15/20 02:27	1
13C3 HFPO-DA	95		70 - 130	04/14/20 04:31	04/15/20 02:27	1

Client Sample ID: CO0118076-017

Lab Sample ID: 320-60142-25

Date Collected: 04/10/20 09:10

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	3.3		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluoroheptanoic acid (PFHpA)	0.81	J	1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorooctanoic acid (PFOA)	1.4	J	1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorobutanesulfonic acid (PFBS)	1.5	J	1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
F-53B Major	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
F-53B Minor	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
HFPO-DA (GenX)	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1
DONA	ND		1.8	0.44	ng/L		04/14/20 04:31	04/15/20 02:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	91		70 - 130	04/14/20 04:31	04/15/20 02:35	1
13C2 PFDA	93		70 - 130	04/14/20 04:31	04/15/20 02:35	1
d5-NEtFOSAA	96		70 - 130	04/14/20 04:31	04/15/20 02:35	1
13C3 HFPO-DA	95		70 - 130	04/14/20 04:31	04/15/20 02:35	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Client Sample ID: CO0118076-002

Lab Sample ID: 320-60142-26

Date Collected: 04/10/20 08:50

Matrix: Water

Date Received: 04/11/20 09:50

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
F-53B Major	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
F-53B Minor	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
HFPO-DA (GenX)	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1
DONA	ND		1.8	0.45	ng/L		04/14/20 04:31	04/15/20 02:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		70 - 130	04/14/20 04:31	04/15/20 02:42	1
13C2 PFDA	99		70 - 130	04/14/20 04:31	04/15/20 02:42	1
d5-NEtFOSAA	99		70 - 130	04/14/20 04:31	04/15/20 02:42	1
13C3 HFPO-DA	93		70 - 130	04/14/20 04:31	04/15/20 02:42	1

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA	PFDA	d5NEFOS	HFPODA
		(70-130)	(70-130)	(70-130)	(70-130)
320-60142-1	CO0105500-009T	95	91	87	95
320-60142-2	CO0105500-005T	100	98	95	97
320-60142-3	CO0105500-002T	95	94	91	98
320-60142-4	CO0105500-007T	97	94	88	95
320-60142-5	CO0105500-006T	94	91	92	94
320-60142-6	CO0105500-001T	96	97	84	98
320-60142-7	CO0105500-008T	94	96	88	97
320-60142-8	CO0255600-002	93	94	87	94
320-60142-9	CO0155200-003T	93	93	90	96
320-60142-10	CO0111525-002	92	93	89	95
320-60142-11	CO0108900-001	90	91	85	91
320-60142-12	CO0115784-003	91	92	75	91
320-60142-13	CO0126121-001	93	92	91	91
320-60142-14	CO0104900-006	96	93	90	94
320-60142-15	CO0121675-001T	96	94	85	93
320-60142-16	CO0121675-003T	96	93	94	96
320-60142-17	CO0214142-005	91	93	89	91
320-60142-18	CO0214142-003	97	92	90	93
320-60142-19	CO0162285-001	90	88	90	89
320-60142-21	CO0203012-003T	90	90	92	93
320-60142-22	CO0118020-008	90	97	93	93
320-60142-23	CO0118020-011	93	96	94	94
320-60142-24	CO0130035-014	91	95	94	95
320-60142-25	CO0118076-017	91	93	96	95
320-60142-26	CO0118076-002	92	99	99	93
LCS 320-372189/2-A	Lab Control Sample	102	92	87	99
LCSD 320-372189/3-A	Lab Control Sample Dup	85	93	90	89
LLCS 320-372197/2-A	Lab Control Sample	96	101	92	98
LLCSD 320-372197/3-A	Lab Control Sample Dup	93	95	95	95
MB 320-372189/1-A	Method Blank	100	98	90	101
MB 320-372197/1-A	Method Blank	92	95	93	94

Surrogate Legend

- PFHxA = 13C2 PFHxA
- PFDA = 13C2 PFDA
- d5NEFOS = d5-NEtFOSAA
- HFPODA = 13C3 HFPO-DA

Isotope Dilution Summary

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA (25-150)	PFDA (25-150)	d5NEFOS (25-150)	HFPODA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFOS (25-150)	PFNA (25-150)
320-60142-20	CO0203012-012	89	95	78	94	93	91	81	91
LCS 320-372198/2-A	Lab Control Sample	92	105	76	90	97	94	83	98
LCSD 320-372198/3-A	Lab Control Sample Dup	90	101	78	98	95	94	78	93
MB 320-372198/1-A	Method Blank	96	113	83	98	101	94	87	103

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d3NMFOS (25-150)	PFUnA (25-150)	PFDaA (25-150)	PFTDA (25-150)	C3PFBS (25-150)	PFHxS (25-150)
320-60142-20	CO0203012-012	75	108	104	131	87	82
LCS 320-372198/2-A	Lab Control Sample	74	114	103	123	87	80
LCSD 320-372198/3-A	Lab Control Sample Dup	79	116	108	117	86	79
MB 320-372198/1-A	Method Blank	82	112	116	130	90	84

Surrogate Legend

PFHxA = 13C2 PFHxA
 PFDA = 13C2 PFDA
 d5NEFOS = d5-NEtFOSAA
 HFPODA = 13C3 HFPO-DA
 C4PFHA = 13C4 PFHpA
 PFOA = 13C4 PFOA
 PFOS = 13C4 PFOS
 PFNA = 13C5 PFNA
 d3NMFOS = d3-NMeFOSAA
 PFUnA = 13C2 PFUnA
 PFDaA = 13C2 PFDaA
 PFTDA = 13C2 PFTeDA
 C3PFBS = 13C3 PFBS
 PFHxS = 18O2 PFHxS

QC Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-372198/1-A
Matrix: Water
Analysis Batch: 372332

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372198

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorohexanesulfonic acid (PFHxS)	0.334	J	2.0	0.17	ng/L		04/14/20 04:40	04/14/20 18:06	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		04/14/20 04:40	04/14/20 18:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		04/14/20 04:40	04/14/20 18:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		04/14/20 04:40	04/14/20 18:06	1
F-53B Major	ND		2.0	0.24	ng/L		04/14/20 04:40	04/14/20 18:06	1
F-53B Minor	ND		2.0	0.32	ng/L		04/14/20 04:40	04/14/20 18:06	1
HFPO-DA (GenX)	ND		4.0	1.5	ng/L		04/14/20 04:40	04/14/20 18:06	1
DONA	ND		2.0	0.18	ng/L		04/14/20 04:40	04/14/20 18:06	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C2 PFDA	113		25 - 150	04/14/20 04:40	04/14/20 18:06	1
d5-NEtFOSAA	83		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C3 HFPO-DA	98		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C4 PFHpA	101		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C4 PFOA	94		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C4 PFOS	87		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C5 PFNA	103		25 - 150	04/14/20 04:40	04/14/20 18:06	1
d3-NMeFOSAA	82		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C2 PFUnA	112		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C2 PFDoA	116		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C2 PFTeDA	130		25 - 150	04/14/20 04:40	04/14/20 18:06	1
13C3 PFBS	90		25 - 150	04/14/20 04:40	04/14/20 18:06	1
18O2 PFHxS	84		25 - 150	04/14/20 04:40	04/14/20 18:06	1

Lab Sample ID: LCS 320-372198/2-A
Matrix: Water
Analysis Batch: 372332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372198

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	40.0	38.2		ng/L		96	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	40.7		ng/L		102	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	43.5		ng/L		109	70 - 130
Perfluorononanoic acid (PFNA)	40.0	43.6		ng/L		109	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	40.5		ng/L		101	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	34.1		ng/L		85	68 - 128

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

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

Lab Sample ID: LCS 320-372198/2-A
Matrix: Water
Analysis Batch: 372332

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372198

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorododecanoic acid (PFDoA)	40.0	39.8		ng/L		99	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	44.9		ng/L		112	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	35.6		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	34.9		ng/L		99	67 - 127
Perfluorohexanesulfonic acid (PFHxS)	36.4	37.4		ng/L		103	59 - 119
Perfluorooctanesulfonic acid (PFOS)	37.1	35.3		ng/L		95	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	39.9		ng/L		100	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	41.2		ng/L		103	76 - 136
F-53B Major	37.3	35.0		ng/L		94	75 - 135
F-53B Minor	37.7	33.7		ng/L		90	54 - 114
HFPO-DA (GenX)	40.0	41.7		ng/L		104	51 - 173
DONA	37.7	38.4		ng/L		102	79 - 139

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C2 PFHxA	92		25 - 150
13C2 PFDA	105		25 - 150
d5-NEtFOSAA	76		25 - 150
13C3 HFPO-DA	90		25 - 150
13C4 PFHpA	97		25 - 150
13C4 PFOA	94		25 - 150
13C4 PFOS	83		25 - 150
13C5 PFNA	98		25 - 150
d3-NMeFOSAA	74		25 - 150
13C2 PFUnA	114		25 - 150
13C2 PFDoA	103		25 - 150
13C2 PFTeDA	123		25 - 150
13C3 PFBS	87		25 - 150
18O2 PFHxS	80		25 - 150

Lab Sample ID: LCSD 320-372198/3-A
Matrix: Water
Analysis Batch: 372332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372198

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
Perfluorohexanoic acid (PFHxA)	40.0	41.0		ng/L		102	73 - 133	7	30
Perfluoroheptanoic acid (PFHpA)	40.0	40.5		ng/L		101	72 - 132	1	30
Perfluorooctanoic acid (PFOA)	40.0	40.5		ng/L		101	70 - 130	7	30
Perfluorononanoic acid (PFNA)	40.0	42.2		ng/L		105	75 - 135	3	30
Perfluorodecanoic acid (PFDA)	40.0	39.6		ng/L		99	76 - 136	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	36.7		ng/L		92	68 - 128	7	30
Perfluorododecanoic acid (PFDoA)	40.0	36.9		ng/L		92	71 - 131	7	30

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

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

Lab Sample ID: LCSD 320-372198/3-A
Matrix: Water
Analysis Batch: 372332

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372198

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTriA)	40.0	44.8		ng/L		112	71 - 131	0	30
Perfluorotetradecanoic acid (PFTeA)	40.0	36.4		ng/L		91	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	35.4	33.3		ng/L		94	67 - 127	5	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.3		ng/L		100	59 - 119	3	30
Perfluorooctanesulfonic acid (PFOS)	37.1	35.3		ng/L		95	70 - 130	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.6		ng/L		97	76 - 136	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	39.0		ng/L		97	76 - 136	6	30
F-53B Major	37.3	37.8		ng/L		101	75 - 135	8	30
F-53B Minor	37.7	33.9		ng/L		90	54 - 114	1	30
HFPO-DA (GenX)	40.0	38.0		ng/L		95	51 - 173	9	30
DONA	37.7	42.1		ng/L		112	79 - 139	9	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
13C2 PFHxA	90		25 - 150
13C2 PFDA	101		25 - 150
d5-NEtFOSAA	78		25 - 150
13C3 HFPO-DA	98		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	94		25 - 150
13C4 PFOS	78		25 - 150
13C5 PFNA	93		25 - 150
d3-NMeFOSAA	79		25 - 150
13C2 PFUnA	116		25 - 150
13C2 PFDoA	108		25 - 150
13C2 PFTeDA	117		25 - 150
13C3 PFBS	86		25 - 150
18O2 PFHxS	79		25 - 150

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MB 320-372189/1-A
Matrix: Water
Analysis Batch: 372428

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MB 320-372189/1-A
Matrix: Water
Analysis Batch: 372428

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372189

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
F-53B Major	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
F-53B Minor	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
HFPO-DA (GenX)	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1
DONA	ND		2.0	0.50	ng/L		04/13/20 18:48	04/15/20 03:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	100		70 - 130	04/13/20 18:48	04/15/20 03:28	1
13C2 PFDA	98		70 - 130	04/13/20 18:48	04/15/20 03:28	1
d5-NEtFOSAA	90		70 - 130	04/13/20 18:48	04/15/20 03:28	1
13C3 HFPO-DA	101		70 - 130	04/13/20 18:48	04/15/20 03:28	1

Lab Sample ID: LCS 320-372189/2-A
Matrix: Water
Analysis Batch: 372432

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	200	173		ng/L		87	70 - 130
Perfluoroheptanoic acid (PFHpA)	200	179		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	200	170		ng/L		85	70 - 130
Perfluorononanoic acid (PFNA)	200	171		ng/L		86	70 - 130
Perfluorodecanoic acid (PFDA)	200	186		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	200	167		ng/L		84	70 - 130
Perfluorododecanoic acid (PFDoA)	200	164		ng/L		82	70 - 130
Perfluorotridecanoic acid (PFTriA)	200	163		ng/L		81	70 - 130
Perfluorotetradecanoic acid (PFTeA)	200	161		ng/L		80	70 - 130
Perfluorobutanesulfonic acid (PFBS)	177	160		ng/L		90	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	182	157		ng/L		86	70 - 130
Perfluorooctanesulfonic acid (PFOS)	186	157		ng/L		84	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	200	163		ng/L		81	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	200	159		ng/L		80	70 - 130
F-53B Major	186	163		ng/L		88	70 - 130
F-53B Minor	188	143		ng/L		76	70 - 130
HFPO-DA (GenX)	200	200	E	ng/L		100	70 - 130
DONA	188	149		ng/L		79	70 - 130

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 320-372189/2-A
Matrix: Water
Analysis Batch: 372432

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372189

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
13C2 PFHxA	102		70 - 130
13C2 PFDA	92		70 - 130
d5-NEtFOSAA	87		70 - 130
13C3 HFPO-DA	99		70 - 130

Lab Sample ID: LCSD 320-372189/3-A
Matrix: Water
Analysis Batch: 372432

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372189

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	200	174		ng/L		87	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	200	169		ng/L		85	70 - 130	0	30
Perfluorononanoic acid (PFNA)	200	168		ng/L		84	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	200	183		ng/L		92	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	200	175		ng/L		88	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	200	168		ng/L		84	70 - 130	2	30
Perfluorotridecanoic acid (PFTriA)	200	172		ng/L		86	70 - 130	6	30
Perfluorotetradecanoic acid (PFTeA)	200	164		ng/L		82	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	177	134		ng/L		76	70 - 130	17	30
Perfluorohexanesulfonic acid (PFHxS)	182	162		ng/L		89	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	186	164		ng/L		89	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	200	169		ng/L		85	70 - 130	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	200	160		ng/L		80	70 - 130	1	30
F-53B Major	186	173		ng/L		93	70 - 130	6	30
F-53B Minor	188	159		ng/L		84	70 - 130	10	30
HFPO-DA (GenX)	200	177		ng/L		88	70 - 130	12	30
DONA	188	145		ng/L		77	70 - 130	3	30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C2 PFHxA	85		70 - 130
13C2 PFDA	93		70 - 130
d5-NEtFOSAA	90		70 - 130
13C3 HFPO-DA	89		70 - 130

Lab Sample ID: MB 320-372197/1-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372197

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1

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QC Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MB 320-372197/1-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 372197

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
F-53B Major	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
F-53B Minor	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
HFPO-DA (GenX)	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1
DONA	ND		2.0	0.50	ng/L		04/14/20 04:31	04/15/20 02:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	92		70 - 130	04/14/20 04:31	04/15/20 02:04	1
13C2 PFDA	95		70 - 130	04/14/20 04:31	04/15/20 02:04	1
d5-NEtFOSAA	93		70 - 130	04/14/20 04:31	04/15/20 02:04	1
13C3 HFPO-DA	94		70 - 130	04/14/20 04:31	04/15/20 02:04	1

Lab Sample ID: LLCS 320-372197/2-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372197

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	Limits
Perfluorohexanoic acid (PFHxA)	4.00	3.68		ng/L		92	50 - 150
Perfluoroheptanoic acid (PFHpA)	4.00	3.95		ng/L		99	50 - 150
Perfluorooctanoic acid (PFOA)	4.00	3.47		ng/L		87	50 - 150
Perfluorononanoic acid (PFNA)	4.00	3.73		ng/L		93	50 - 150
Perfluorodecanoic acid (PFDA)	4.00	4.27		ng/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	4.00	3.95		ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	4.00	4.03		ng/L		101	50 - 150
Perfluorotridecanoic acid (PFTriA)	4.00	3.92		ng/L		98	50 - 150
Perfluorotetradecanoic acid (PFTeA)	4.00	3.69		ng/L		92	50 - 150
Perfluorobutanesulfonic acid (PFBS)	3.54	3.02		ng/L		85	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	3.64	2.99		ng/L		82	50 - 150
Perfluorooctanesulfonic acid (PFOS)	3.71	3.22		ng/L		87	50 - 150

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCS 320-372197/2-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 372197

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	4.00	3.54		ng/L		88	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.68		ng/L		92	50 - 150
F-53B Major	3.73	3.27		ng/L		88	50 - 150
F-53B Minor	3.77	2.99		ng/L		79	50 - 150
HFPO-DA (GenX)	4.00	4.19		ng/L		105	50 - 150
DONA	3.77	3.40		ng/L		90	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	LLCS Limits
13C2 PFHxA	96		70 - 130
13C2 PFDA	101		70 - 130
d5-NEtFOSAA	92		70 - 130
13C3 HFPO-DA	98		70 - 130

Lab Sample ID: LLCSD 320-372197/3-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372197

Analyte	Spike Added	LLCSD Result	LLCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	4.00	3.61		ng/L		90	50 - 150	2	50
Perfluoroheptanoic acid (PFHpA)	4.00	3.77		ng/L		94	50 - 150	5	50
Perfluorooctanoic acid (PFOA)	4.00	3.62		ng/L		90	50 - 150	4	50
Perfluorononanoic acid (PFNA)	4.00	3.74		ng/L		94	50 - 150	0.4	50
Perfluorodecanoic acid (PFDA)	4.00	3.96		ng/L		99	50 - 150	8	50
Perfluoroundecanoic acid (PFUnA)	4.00	3.81		ng/L		95	50 - 150	4	50
Perfluorododecanoic acid (PFDoA)	4.00	3.77		ng/L		94	50 - 150	7	50
Perfluorotridecanoic acid (PFTriA)	4.00	3.72		ng/L		93	50 - 150	5	50
Perfluorotetradecanoic acid (PFTeA)	4.00	3.53		ng/L		88	50 - 150	4	50
Perfluorobutanesulfonic acid (PFBS)	3.54	3.13		ng/L		89	50 - 150	4	50
Perfluorohexanesulfonic acid (PFHxS)	3.64	3.25		ng/L		89	50 - 150	8	50
Perfluorooctanesulfonic acid (PFOS)	3.71	3.33		ng/L		90	50 - 150	3	50
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	4.00	3.74		ng/L		93	50 - 150	5	50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.00	3.98		ng/L		99	50 - 150	8	50
F-53B Major	3.73	3.38		ng/L		91	50 - 150	3	50
F-53B Minor	3.77	2.95		ng/L		78	50 - 150	1	50
HFPO-DA (GenX)	4.00	3.95		ng/L		99	50 - 150	6	50
DONA	3.77	3.25		ng/L		86	50 - 150	5	50

Surrogate	LLCSD %Recovery	LLCSD Qualifier	LLCSD Limits
13C2 PFHxA	93		70 - 130
13C2 PFDA	95		70 - 130

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Method: 537.1 DW - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LLCSD 320-372197/3-A
Matrix: Water
Analysis Batch: 372426

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 372197

Surrogate	LLCSD		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	95		70 - 130
13C3 HFPO-DA	95		70 - 130

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- 16

QC Association Summary

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

LCMS

Prep Batch: 372189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-1	CO0105500-009T	Total/NA	Water	537.1 DW	
320-60142-2	CO0105500-005T	Total/NA	Water	537.1 DW	
320-60142-3	CO0105500-002T	Total/NA	Water	537.1 DW	
320-60142-4	CO0105500-007T	Total/NA	Water	537.1 DW	
320-60142-5	CO0105500-006T	Total/NA	Water	537.1 DW	
320-60142-6	CO0105500-001T	Total/NA	Water	537.1 DW	
320-60142-7	CO0105500-008T	Total/NA	Water	537.1 DW	
320-60142-8	CO0255600-002	Total/NA	Water	537.1 DW	
320-60142-9	CO0155200-003T	Total/NA	Water	537.1 DW	
320-60142-10	CO0111525-002	Total/NA	Water	537.1 DW	
320-60142-11	CO0108900-001	Total/NA	Water	537.1 DW	
320-60142-12	CO0115784-003	Total/NA	Water	537.1 DW	
320-60142-13	CO0126121-001	Total/NA	Water	537.1 DW	
320-60142-14	CO0104900-006	Total/NA	Water	537.1 DW	
320-60142-15	CO0121675-001T	Total/NA	Water	537.1 DW	
320-60142-16	CO0121675-003T	Total/NA	Water	537.1 DW	
320-60142-17	CO0214142-005	Total/NA	Water	537.1 DW	
320-60142-18	CO0214142-003	Total/NA	Water	537.1 DW	
320-60142-19	CO0162285-001	Total/NA	Water	537.1 DW	
320-60142-21	CO0203012-003T	Total/NA	Water	537.1 DW	
MB 320-372189/1-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 320-372189/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 320-372189/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	

Prep Batch: 372197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-22	CO0118020-008	Total/NA	Water	537.1 DW	
320-60142-23	CO0118020-011	Total/NA	Water	537.1 DW	
320-60142-24	CO0130035-014	Total/NA	Water	537.1 DW	
320-60142-25	CO0118076-017	Total/NA	Water	537.1 DW	
320-60142-26	CO0118076-002	Total/NA	Water	537.1 DW	
MB 320-372197/1-A	Method Blank	Total/NA	Water	537.1 DW	
LLCS 320-372197/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LLCSD 320-372197/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	

Prep Batch: 372198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-20	CO0203012-012	Total/NA	Water	3535	
MB 320-372198/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-372198/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-372198/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 372332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-20	CO0203012-012	Total/NA	Water	537 (modified)	372198
MB 320-372198/1-A	Method Blank	Total/NA	Water	537 (modified)	372198
LCS 320-372198/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	372198
LCSD 320-372198/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	372198

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

LCMS

Analysis Batch: 372426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-22	CO0118020-008	Total/NA	Water	537.1 DW	372197
320-60142-23	CO0118020-011	Total/NA	Water	537.1 DW	372197
320-60142-24	CO0130035-014	Total/NA	Water	537.1 DW	372197
320-60142-25	CO0118076-017	Total/NA	Water	537.1 DW	372197
320-60142-26	CO0118076-002	Total/NA	Water	537.1 DW	372197
MB 320-372197/1-A	Method Blank	Total/NA	Water	537.1 DW	372197
LLCS 320-372197/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	372197
LLCSD 320-372197/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	372197

Analysis Batch: 372428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-1	CO0105500-009T	Total/NA	Water	537.1 DW	372189
320-60142-2	CO0105500-005T	Total/NA	Water	537.1 DW	372189
320-60142-3	CO0105500-002T	Total/NA	Water	537.1 DW	372189
320-60142-4	CO0105500-007T	Total/NA	Water	537.1 DW	372189
320-60142-5	CO0105500-006T	Total/NA	Water	537.1 DW	372189
320-60142-6	CO0105500-001T	Total/NA	Water	537.1 DW	372189
320-60142-7	CO0105500-008T	Total/NA	Water	537.1 DW	372189
320-60142-8	CO0255600-002	Total/NA	Water	537.1 DW	372189
320-60142-9	CO0155200-003T	Total/NA	Water	537.1 DW	372189
MB 320-372189/1-A	Method Blank	Total/NA	Water	537.1 DW	372189

Analysis Batch: 372430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-10	CO0111525-002	Total/NA	Water	537.1 DW	372189
320-60142-11	CO0108900-001	Total/NA	Water	537.1 DW	372189
320-60142-12	CO0115784-003	Total/NA	Water	537.1 DW	372189
320-60142-13	CO0126121-001	Total/NA	Water	537.1 DW	372189
320-60142-14	CO0104900-006	Total/NA	Water	537.1 DW	372189
320-60142-15	CO0121675-001T	Total/NA	Water	537.1 DW	372189
320-60142-16	CO0121675-003T	Total/NA	Water	537.1 DW	372189
320-60142-17	CO0214142-005	Total/NA	Water	537.1 DW	372189
320-60142-18	CO0214142-003	Total/NA	Water	537.1 DW	372189
320-60142-19	CO0162285-001	Total/NA	Water	537.1 DW	372189

Analysis Batch: 372432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-60142-21	CO0203012-003T	Total/NA	Water	537.1 DW	372189
LCS 320-372189/2-A	Lab Control Sample	Total/NA	Water	537.1 DW	372189
LCSD 320-372189/3-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	372189

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Client Sample ID: CO0105500-009T

Lab Sample ID: 320-60142-1

Date Collected: 04/08/20 09:35

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			271.9 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 03:36	P1N	TAL SAC

Client Sample ID: CO0105500-005T

Lab Sample ID: 320-60142-2

Date Collected: 04/08/20 09:08

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			272 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 03:44	P1N	TAL SAC

Client Sample ID: CO0105500-002T

Lab Sample ID: 320-60142-3

Date Collected: 04/08/20 08:50

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			256.9 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 03:52	P1N	TAL SAC

Client Sample ID: CO0105500-007T

Lab Sample ID: 320-60142-4

Date Collected: 04/08/20 09:45

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			244 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 03:59	P1N	TAL SAC

Client Sample ID: CO0105500-006T

Lab Sample ID: 320-60142-5

Date Collected: 04/08/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			275.7 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 04:07	P1N	TAL SAC

Client Sample ID: CO0105500-001T

Lab Sample ID: 320-60142-6

Date Collected: 04/08/20 08:42

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			279.9 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 04:15	P1N	TAL SAC

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0105500-008T

Lab Sample ID: 320-60142-7

Date Collected: 04/08/20 09:20

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			259.7 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 04:22	P1N	TAL SAC

Client Sample ID: CO0255600-002

Lab Sample ID: 320-60142-8

Date Collected: 04/08/20 10:15

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			266.7 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 04:30	P1N	TAL SAC

Client Sample ID: CO0155200-003T

Lab Sample ID: 320-60142-9

Date Collected: 04/08/20 10:00

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			276.8 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372428	04/15/20 04:38	P1N	TAL SAC

Client Sample ID: CO0111525-002

Lab Sample ID: 320-60142-10

Date Collected: 04/08/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			292.7 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:09	P1N	TAL SAC

Client Sample ID: CO0108900-001

Lab Sample ID: 320-60142-11

Date Collected: 04/08/20 13:45

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			290.3 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:16	P1N	TAL SAC

Client Sample ID: CO0115784-003

Lab Sample ID: 320-60142-12

Date Collected: 04/08/20 10:00

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			278.4 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:24	P1N	TAL SAC

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Client Sample ID: CO0126121-001

Lab Sample ID: 320-60142-13

Date Collected: 04/08/20 09:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			287.4 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:32	P1N	TAL SAC

Client Sample ID: CO0104900-006

Lab Sample ID: 320-60142-14

Date Collected: 04/08/20 09:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			288 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:39	P1N	TAL SAC

Client Sample ID: CO0121675-001T

Lab Sample ID: 320-60142-15

Date Collected: 04/09/20 06:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			296.2 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:47	P1N	TAL SAC

Client Sample ID: CO0121675-003T

Lab Sample ID: 320-60142-16

Date Collected: 04/09/20 06:48

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			296.1 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 05:55	P1N	TAL SAC

Client Sample ID: CO0214142-005

Lab Sample ID: 320-60142-17

Date Collected: 04/09/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			303.5 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 06:02	P1N	TAL SAC

Client Sample ID: CO0214142-003

Lab Sample ID: 320-60142-18

Date Collected: 04/09/20 10:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			288.9 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 06:10	P1N	TAL SAC

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Client Sample ID: CO0162285-001

Lab Sample ID: 320-60142-19

Date Collected: 04/10/20 07:20

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			301.9 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372430	04/15/20 06:18	P1N	TAL SAC

Client Sample ID: CO0203012-012

Lab Sample ID: 320-60142-20

Date Collected: 04/10/20 10:15

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			253.9 mL	10 mL	372198	04/14/20 04:40	NSS	TAL SAC
Total/NA	Analysis	537 (modified)		1			372332	04/14/20 19:01	S1M	TAL SAC

Client Sample ID: CO0203012-003T

Lab Sample ID: 320-60142-21

Date Collected: 04/10/20 10:20

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			292 mL	1.00 mL	372189	04/13/20 18:48	AZ	TAL SAC
Total/NA	Analysis	537.1 DW		1			372432	04/15/20 06:49	P1N	TAL SAC

Client Sample ID: CO0118020-008

Lab Sample ID: 320-60142-22

Date Collected: 04/10/20 08:45

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			292.3 mL	1.00 mL	372197	04/14/20 04:31	EH	TAL SAC
Total/NA	Analysis	537.1 DW		1			372426	04/15/20 02:11	P1N	TAL SAC

Client Sample ID: CO0118020-011

Lab Sample ID: 320-60142-23

Date Collected: 04/10/20 08:30

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			276.4 mL	1.00 mL	372197	04/14/20 04:31	EH	TAL SAC
Total/NA	Analysis	537.1 DW		1			372426	04/15/20 02:19	P1N	TAL SAC

Client Sample ID: CO0130035-014

Lab Sample ID: 320-60142-24

Date Collected: 04/10/20 13:10

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			258.1 mL	1.00 mL	372197	04/14/20 04:31	EH	TAL SAC
Total/NA	Analysis	537.1 DW		1			372426	04/15/20 02:27	P1N	TAL SAC

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Client Sample ID: CO0118076-017

Lab Sample ID: 320-60142-25

Date Collected: 04/10/20 09:10

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			285.4 mL	1.00 mL	372197	04/14/20 04:31	EH	TAL SAC
Total/NA	Analysis	537.1 DW		1			372426	04/15/20 02:35	P1N	TAL SAC

Client Sample ID: CO0118076-002

Lab Sample ID: 320-60142-26

Date Collected: 04/10/20 08:50

Matrix: Water

Date Received: 04/11/20 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	537.1 DW			278.2 mL	1.00 mL	372197	04/14/20 04:31	EH	TAL SAC
Total/NA	Analysis	537.1 DW		1			372426	04/15/20 02:42	P1N	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
 Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
 SDG: 04/11/2020

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
Colorado	State	CA0004	08-31-20

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 (modified)	3535	Water	DONA
537 (modified)	3535	Water	F-53B Major
537 (modified)	3535	Water	F-53B Minor
537 (modified)	3535	Water	HFPO-DA (GenX)
537 (modified)	3535	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537 (modified)	3535	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)
537.1 DW	537.1 DW	Water	DONA
537.1 DW	537.1 DW	Water	F-53B Major
537.1 DW	537.1 DW	Water	F-53B Minor
537.1 DW	537.1 DW	Water	HFPO-DA (GenX)
537.1 DW	537.1 DW	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537.1 DW	537.1 DW	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537.1 DW	537.1 DW	Water	Perfluorobutanesulfonic acid (PFBS)
537.1 DW	537.1 DW	Water	Perfluorodecanoic acid (PFDA)
537.1 DW	537.1 DW	Water	Perfluorododecanoic acid (PFDoA)
537.1 DW	537.1 DW	Water	Perfluoroheptanoic acid (PFHpA)
537.1 DW	537.1 DW	Water	Perfluorohexanesulfonic acid (PFHxS)
537.1 DW	537.1 DW	Water	Perfluorohexanoic acid (PFHxA)
537.1 DW	537.1 DW	Water	Perfluorononanoic acid (PFNA)
537.1 DW	537.1 DW	Water	Perfluorooctanesulfonic acid (PFOS)
537.1 DW	537.1 DW	Water	Perfluorooctanoic acid (PFOA)
537.1 DW	537.1 DW	Water	Perfluorotetradecanoic acid (PFTeA)
537.1 DW	537.1 DW	Water	Perfluorotridecanoic acid (PFTriA)
537.1 DW	537.1 DW	Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
537.1 DW	Perfluorinated Alkyl Acids (LC/MS)	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	TAL SAC

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:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: CDPHE_PFAS

Job ID: 320-60142-1
SDG: 04/11/2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-60142-1	CO0105500-009T	Water	04/08/20 09:35	04/11/20 09:50	
320-60142-2	CO0105500-005T	Water	04/08/20 09:08	04/11/20 09:50	
320-60142-3	CO0105500-002T	Water	04/08/20 08:50	04/11/20 09:50	
320-60142-4	CO0105500-007T	Water	04/08/20 09:45	04/11/20 09:50	
320-60142-5	CO0105500-006T	Water	04/08/20 10:30	04/11/20 09:50	
320-60142-6	CO0105500-001T	Water	04/08/20 08:42	04/11/20 09:50	
320-60142-7	CO0105500-008T	Water	04/08/20 09:20	04/11/20 09:50	
320-60142-8	CO0255600-002	Water	04/08/20 10:15	04/11/20 09:50	
320-60142-9	CO0155200-003T	Water	04/08/20 10:00	04/11/20 09:50	
320-60142-10	CO0111525-002	Water	04/08/20 10:20	04/11/20 09:50	
320-60142-11	CO0108900-001	Water	04/08/20 13:45	04/11/20 09:50	
320-60142-12	CO0115784-003	Water	04/08/20 10:00	04/11/20 09:50	
320-60142-13	CO0126121-001	Water	04/08/20 09:30	04/11/20 09:50	
320-60142-14	CO0104900-006	Water	04/08/20 09:30	04/11/20 09:50	
320-60142-15	CO0121675-001T	Water	04/09/20 06:30	04/11/20 09:50	
320-60142-16	CO0121675-003T	Water	04/09/20 06:48	04/11/20 09:50	
320-60142-17	CO0214142-005	Water	04/09/20 10:20	04/11/20 09:50	
320-60142-18	CO0214142-003	Water	04/09/20 10:30	04/11/20 09:50	
320-60142-19	CO0162285-001	Water	04/10/20 07:20	04/11/20 09:50	
320-60142-20	CO0203012-012	Water	04/10/20 10:15	04/11/20 09:50	
320-60142-21	CO0203012-003T	Water	04/10/20 10:20	04/11/20 09:50	
320-60142-22	CO0118020-008	Water	04/10/20 08:45	04/11/20 09:50	
320-60142-23	CO0118020-011	Water	04/10/20 08:30	04/11/20 09:50	
320-60142-24	CO0130035-014	Water	04/10/20 13:10	04/11/20 09:50	
320-60142-25	CO0118076-017	Water	04/10/20 09:10	04/11/20 09:50	
320-60142-26	CO0118076-002	Water	04/10/20 08:50	04/11/20 09:50	

Regulatory Program:

Client Contact		Jared Geissler		Site Contact: <i>719-597-2117</i>		Date: <i>4/13/20</i>		COC No: 1 of 1	
Location Description		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix	
OFFSITE CLEARWELL, EP		<i>4/13/20 10:20A</i>				G		W	
Sample Identification		Location Description		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)	
CO011525-002		OFFSITE CLEARWELL, EP		<i>4/13/20 10:20A</i>				G	
Analysis Turnaround Time		Sample Date		Sample Time		Sample Type (C=Comp, G=Grab)		Matrix	
TAT if different from Below Standard		<i>4/13/20 10:20A</i>				G		W	
Lab Contact: Linda Laver		Carrier:		Perform MS / MSD (Y / N)		Filtered Sample (Y / N)		537.1 (Trimza)	
				N		N		X	
Lab Contact: Linda Laver		Carrier:		Perform MS / MSD (Y / N)		Filtered Sample (Y / N)		537 MOD	
				N		N		X	
TALS Project #:		Sampler: <i>719-597-2117</i>		Walk-in Client:		Lab Sampling:		Job / SDG No.:	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.									
Special Instructions/QC Requirements & Comments:									
Custody Seal No.: <i>1212564</i>		Company: <i>HORCA</i>		Date/Time: <i>4/13/20 10:20</i>		Received by: <i>[Signature]</i>		Cooler Temp. (oC): <i>2-8</i>	
Relinquished by: <i>[Signature]</i>		Company: <i>TA</i>		Date/Time: <i>4/13/20 1500</i>		Received by: <i>[Signature]</i>		Company: <i>TA</i>	
Relinquished by: <i>[Signature]</i>		Company: <i>TA</i>		Date/Time: <i>4/13/20 1500</i>		Received by: <i>[Signature]</i>		Company: <i>TA-Sul</i>	
Relinquished by: <i>[Signature]</i>		Company: <i>TA</i>		Date/Time: <i>04/11/2020 9:30</i>		Received by: <i>[Signature]</i>		Company: <i>TA-Sul</i>	
Therm ID No.: <i>AK1</i>		Date/Time: <i>4/13/20 1240</i>		Date/Time: <i>4/13/20 1500</i>		Date/Time: <i>04/11/2020 9:30</i>			

Client Contact Terracon 4172 Center Park Drive Colorado Springs, Colorado 80916 719-597-2116 719-597-2117 CDPHE PFAS Testing Site: CO0115784 - UPPER SURFACE CREEK DOMESTIC W P O # 202000007826		Client Contact Jared Geissler jared.geissler@terracon.com 719-597-2117 Analysis Turnaround Time TAT if different from Below Standard		Site Contact: <u>Deception 1148</u> Date: <u>4/5/20</u> Carrier:		COC No: 1 of 1 TALS Project #: Sampler: <u>1. Deception 1148</u> For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:					
Sample Identification CO0115784-0C3	Location Description WATER TREATMENT PLANT, EP	Sample Date <u>4/8/20 10:00</u>	Sample Time (C=Comp, G=Grab)	Sample Type G	Matrix W	# of Cont. 2	Filtered Sample (Y / N) N	Perform MS / MSD (Y / N) N	537.1 (Trimza) X	537 MOD	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.											
Special Instructions/QC Requirements & Comments:											
Relinquished by: <u>Deception 1148</u>		Custody Seal No.: <u>122564</u>		Cooler Temp. (oC): Obs'd:		Received by: <u>Deception 1148</u>		Company: <u>7F</u>		Date/Time: <u>4/12/20 12:40</u>	
Relinquished by: <u>Deception 1148</u>		Company: <u>7F</u>		Date/Time: <u>4/8/20 10:00</u>		Received by: <u>Deception 1148</u>		Company: <u>7F</u>		Date/Time: <u>4/12/20 15:00</u>	
Relinquished by: <u>Deception 1148</u>		Company: <u>7F</u>		Date/Time: <u>4/8/20 15:00</u>		Received in Laboratory by: <u>Deception 1148</u>		Company: <u>7F</u>		Date/Time: <u>4/11/20 9:30</u>	

Eurofins TestAmerica, Sacramento
880 Riverside Parkway

West Sacramento, CA 95605-1500
phone 916.373.5600 fax 303.467.7248

Chain of Custody Record

Denver SVC
280



Environment Testing
TestAmerica

Regulatory Program: **Jared Geissler**
jared.geissler@terracon.com
719-597-2117

Client Contact
Terracon
4172 Center Park Drive
Colorado Springs, Colorado 80916
719-597-2116
719-597-2117
GDPHE PFAS Testing
Site: FOX HILLS HOA
P O #

Site Contact: **Linda Laver**
Lab Contact: **Linda Laver**
Date: _____
Carrier: _____
COC No. _____ of _____ COCs
TALS Project #:
Sampler:
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Analysis Turnaround Time
 CALENDAR DAYS WORKING DAYS
TAT if different from Below
 2 weeks
 1 week
 2 days
 1 day

Sample Identification	Location Description	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
CO0162285-001	CHLORINATOR FOR NEW WELL, ENTRY POINT	4/10/20	7:20A	G	W	2

Sample Identification	Location Description	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)
CO0162285-001	CHLORINATOR FOR NEW WELL, ENTRY POINT	4/10/20	7:20A	G	W	2	N	N

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the
 Non-Hazard Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments:
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.:	1212564	Cooler Temp. (°C):	Obs'd: 56	Therm ID No.:	ACT
Relinquished by:	Company: F4HA	Date/Time:	4/10-7:30A	Company:	Terracon
Relinquished by:	Company: Terracon	Date/Time:	4/10/20 15L	Company:	Terracon
Relinquished by:	Company: F4	Date/Time:	4-10-20	Company:	Terracon

Form No. CA-C-WI-002, Rev. 4.30, dated 1/1/2020



Regulatory Program:

Jared Geissler
jared.geissler@terracon.com
719-597-2117

Client Contact
Terracon
4172 Center Park Drive
Colorado Springs, Colorado 80916
719-597-2116
719-597-2117
CDPHE PFAS Testing
Site: CO0203012 - INVERNESS WSD
P O # 202000007826

Site Contact: Linda Laver
Lab Contact: Linda Laver
Date:
Carrier:

Analysis Turnaround Time
TAT if different from Below Standard

COC No: 1 of 1
TALS Project #:
Sampler: Kendra Christensen
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.:

Sample Identification	Location Description	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	537 MOD
CO0203012-012	WELL 3R, RW	4/10/20	10:15	G	W	2	N	N	X
CO0203012-003T	TREATMENT PLANT WELL 3R, EP	4/10/20	10:20	G	W	2	N	N	X
CO0203012-014	WELL 3R, RW			G	W	2	N	N	X
CO0203012-015	WELL 3R, RW			G	W	2	N	N	X
CO0203012-016	WELL 3R, RW			G	W	2	N	N	X
CO0203012-017	WELL 3R, RW			G	W	2	N	N	X
CO0203012-018	WELL 3R, RW			G	W	2	N	N	X
CO0203012-019	WELL 3R, RW			G	W	2	N	N	X
CO0203012-020	WELL 3R, RW			G	W	2	N	N	X

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification: Please List any EPA Hazardous Waste? **Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Are any samples from a listed EPA Hazardous Waste? **Received by:** **Company:** **Date/Time:**
 Comments Section if the lab is to dispose of the sample. **Received by:** **Company:** **Date/Time:**

Special Instructions/QC Requirements & Comments:

Custody Seal No.: 121564
Company: INVERNESS W&S
Relinquished by: Kendra Christensen
Relinquished by: [Signature]
Relinquished by: [Signature]

Custody Seal Intact: Yes
Company: TERRACON
Received by: [Signature]
Company: TERRACON
Date/Time: 4/10/20 12:00
Received by: [Signature]
Company: TERRACON
Date/Time: 4/10/20 13:50
Received in Laboratory by: [Signature]
Company: TA-CAL
Date/Time: 04/11/2020 9:30

Therm ID No.: 51
Corr'd: 20
Obs'd: 20
Received by: [Signature]
Company: TERRACON
Date/Time: 4/10/20 11:37
Received by: [Signature]
Company: TERRACON
Date/Time: 4/10/20 13:56
Received in Laboratory by: [Signature]
Company: TA-CAL
Date/Time: 04/11/2020 9:30

West Sacramento, CA 95605-1500
phone 916.373.5600 fax 303.467.7248

Regulatory Program:

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Client Contact Jared Geissler jared.geissler@terracon.com 719-597-2117		Site Contact: Linda Laver Date: _____ Carrier: _____		COC No: 1 of 1							
Analysis Turnaround Time TAT if different from Below Standard		Lab Contact: Linda Laver		Sampler: For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:							
Sample Identification	Location Description	Sample Date	Sample Time	Sample Type (G=Grab, C=Comp)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	537,1 (Trimza)	537 MOD	
CO0118020-010	TREATMENT PLANT FOR WELL D3, EP	4/10/20	0845	G	W	2	N	N	X		
CO0118020-008	TREATMENT PLANT FOR WELL D3, EP	4/10/20	0830	G	W	2	N	N	X		
CO0118020-007	TREATMENT PLANT FOR WELL D4, EP										
CO0118020-011	TREATMENT PLANT FOR WELL D4, EP										
CO0118020-010	TREATMENT PLANT FOR WELL D4, EP										
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.											
Special Instructions/QC Requirements & Comments:											
Custody Seals Intact: <i>yes</i>		Custody Seal No.: 122864		Cooler Temp. (pC): Obs'd:		Received by: <i>TRAFACON</i>		Company: <i>TRAFACON</i>		Therm ID No: <i>AK1</i>	
Relinquished by: <i>Rendra Christensen</i>		Date/Time: 4/10/20 1000		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356		Date/Time: 4/11/2020 9:30	
Relinquished by: <i>SPK</i>		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356		Date/Time: 4/10/20 1356	
Relinquished by: <i>PPJ</i>		Date/Time: 4/10/20 1415		Date/Time: 4/10/20 1415		Date/Time: 4/10/20 1415		Date/Time: 4/10/20 1415		Date/Time: 4/10/20 1415	

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 320-60142-1

SDG Number: 04/11/2020

Login Number: 60142

List Number: 1

Creator: Her, David A

List Source: Eurofins TestAmerica, Sacramento

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1212588/1212564
Sample custody seals, if present, are intact.	N/A	
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.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed on all pages of the COC
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

