



Via Electronic Mail and Federal Express

December 20, 2018

Daniel J. Eaton
NYSDEC
Division of Environmental Remediation
Remedial Bureau A, Section C
625 Broadway
Albany, NY 12233-7258

**Subject: PFAS Sampling and Analysis Report
Wyeth Pharmaceuticals, LLC, 64 Maple Street, Rouses Point, NY**

Dear Mr. Eaton:

On behalf of Wyeth Pharmaceuticals, LLC (Wyeth), the following Per- & Poly-Fluorinated Alkyl Substances (PFAS) Sampling and Analysis Report (hereafter referenced as the PFAS SAR) was prepared by Woodard & Curran Engineering PA PC pursuant to groundwater sampling activities at the Wyeth facility located at 64 Maple Street, Rouses Point, NY (the Site), refer to **Figure 1**. The sampling of existing groundwater monitoring wells for PFAS has been performed by Wyeth in response to comments received from the New York State Department of Environmental Conservation (NYSDEC) on November 29, 2017 that directed Wyeth to include analysis for PFAS compounds for certain wells during the next round of groundwater sampling. Pursuant to NYSDEC's comments, a task-specific PFAS Sampling and Analysis Plan (SAP) dated June 18, 2018 was submitted to the NYSDEC and approved by electronic mail on August 6, 2018 with the requested modification that sampling activities include an additional well, MW-12. Activities reported under this PFAS SAR were conducted in accordance with the PFAS SAP as approved by the NYSDEC.

1. Sampling Methodology

Between August 20 and August 23, 2018, groundwater samples were collected from the planned 17 monitoring wells in accordance with the PFAS SAP. The wells that were sampled are summarized below (refer to **Figure 2**):

- Fifteen (15) monitoring wells including MW-5, MW-5S, MW-7, MW-8, MW-10, MW-12, MW-30, MW-30S, MW-33, MW-33S, MW-34, MW-34S, MW-36, MW-36S, and MW-37 were sampled as specified in comments received from the NYSDEC on November 29, 2017 and August 6, 2018.
- Two (2) monitoring wells, MW-13 and MW-14, were sampled as background/ upgradient monitoring wells.

Consistent with the SAP, one duplicate sample was collected from well MW-34S. Matrix spike and matrix spike duplicate (MS/MSD) samples were collected from well MW-33. One field blank (lab-certified PFAS-free water manually poured directly into a sample container) and one field equipment blank (lab-certified PFAS-free water drawn into a sample container using the well sampling equipment set-up) were collected each day of sampling. Temperature blanks accompanied the sample shipments to the laboratory.



Samples were placed in coolers on ice with Chain of Custody forms and shipped by overnight courier to TestAmerica Laboratories, Inc. (TestAmerica). Per the SAP, samples were to be sent to Test America's South Burlington, Vermont facility; however, the Vermont facility was experiencing equipment problems at the time of sampling, and samples were instead sent to TestAmerica's West Sacramento, California facility. Both facilities are New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified, and the NYSDEC was notified of the change in laboratory facilities. Samples were analyzed for the NYSDEC PFAS List of compounds by Modified EPA Method 537 utilizing isotope dilution.

2. Sample Results and Validation

PFAS sample results are summarized in **Table 1** and analytical laboratory reports are included in **Appendix A**. Laboratory reports were sent for validation by an independent third-party data validator, Alpha Geoscience of Clifton Park, New York. All data were deemed to be usable with applicable qualifiers. The validator's Data Usability Summary Reports (DUSRs) are included in **Appendix B** and applicable data qualifiers are included on **Table 1**.

3. Data Evaluation

All reported concentrations of PFAS in groundwater samples were less than the NYSDOH Maximum Contaminant Level (MCL) for any unspecified organic contaminant of 50,000 parts per trillion (ppt or ng/L).

We trust that you will find this information satisfactory. Please contact the undersigned at (203) 699-6042 or aproctor@woodardcurran.com with any questions or comments.

Sincerely,

WOODARD & CURRAN

A handwritten signature in blue ink that reads "Anne E. Proctor".

Anne E. Proctor, PE
Sr. Project Manager

Attachments

Copy (electronic): J. Swartwout – NYSDEC
 S. McLaughlin, C. Bethoney – NYSDOH
 C. Clark – Pfizer
 M. McCullough – Wyeth

Table 1

Groundwater Sampling Results
Wyeth Pharmaceuticals LLC
Rouses Point, New York

Sample ID		MW-5	MW-5S	MW-7	MW-8	MW-10	MW-12	MW-13	MW-14	MW-30	MW-30S	MW-33	MW-33S
Sample Collection Date and Time		08/21/2018 10:20	08/20/2018 16:10	08/21/2018 14:55	08/22/2018 14:30	08/22/2018 11:05	08/22/2018 11:20	08/20/2018 16:05	08/20/2018 13:55	08/21/2018 16:10	08/21/2018 16:20	08/21/2018 12:40	08/21/2018 10:40
Laboratory Order Number		320-42375-2	320-42314-4	320-42375-4	320-42404-8	320-42404-1	320-42404-6	320-42314-3	320-42314-1	320-42375-8	320-42375-9	320-42375-1	320-42375-7
Parameter	NYSDOH MCL for Unspecified Organic Contaminant							Upgradient/ Background Well	Upgradient/ Background Well				
LCMS by 537 (modified)													
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	50,000	< 18	< 18	< 17	< 18	< 18	< 17	< 17	< 17	5.2 J	< 17	< 17	< 17
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	50,000	10 JB	< 18	< 17	2.3 J	2.9 J	< 17	< 17	< 17	740 BJ+	< 17	22 B	< 17
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	50,000	< 18	< 18	< 17	< 18	< 18	< 17	< 17	< 17	< 17	< 17	< 17	< 17
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	50,000	< 18	< 18	< 17	< 18	< 18	< 17	< 17	< 17	< 17	< 17	< 17	< 17
Perfluorobutanesulfonic acid (PFBS)*	50,000	0.32 J	0.98 J	0.37 J	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	1.3 J	0.51 J	0.42 J	0.95 J
Perfluorobutanoic acid (PFBA)*	50,000	64	7.2	9.6	5.5 B	< 1.8	< 1.7	0.63 J	0.31 J	240	7.3	88	8.0
Perfluorodecanesulfonic acid (PFDS)*	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Perfluorodecanoic acid (PFDA)*	50,000	< 1.8	0.85 J	0.43 J	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	0.34 J
Perfluorododecanoic acid (PFDoA)*	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Perfluoroheptanesulfonic Acid (PFHpS)*	50,000	< 1.8	< 1.8	0.29 J	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	0.34 J	0.35 J	< 1.7	< 1.7
Perfluoroheptanoic acid (PFHpA)*	50,000	9.1	3.6	4.2	1.4 J	< 1.8	< 1.7	< 1.7	< 1.7	73	7.2	5.4	4.3
Perfluorohexanesulfonic acid (PFHxS)*	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	4.3	< 1.7	< 1.7
Perfluorohexanoic acid (PFHxA)*	50,000	28	4.4	4.1	2.4	< 1.8	< 1.7	< 1.7	< 1.7	300	5.7	42	5.8
Perfluorononanoic acid (PFNA)*	50,000	0.81 J	1.4 J	4.4	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	3.2	1.6 J	< 1.7	1.0 J
Perfluorooctane Sulfonamide (PFOSA)	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Perfluorooctanesulfonic acid (PFOS)*	50,000	5.2	1.4 J	13	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	2.1	5.5	< 1.7	2.3
Perfluorooctanoic acid (PFOA)*	50,000	7.7	3.3	7.7	0.79 J	< 1.8	< 1.7	< 1.7	< 1.7	57	16	2.4	3.9
Perfluoropentanoic acid (PFPeA)*	50,000	110	5.7	8.2	4.6	< 1.8	< 1.7	< 1.7	< 1.7	730 J+	7.4	170	10
Perfluorotetradecanoic acid (PFTeA)*	50,000	< 1.8	< 1.8	< 1.7	0.42 J	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Perfluorotridecanoic Acid (PFTriA)*	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Perfluoroundecanoic acid (PFUnA)*	50,000	< 1.8	< 1.8	< 1.7	< 1.8	< 1.8	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7

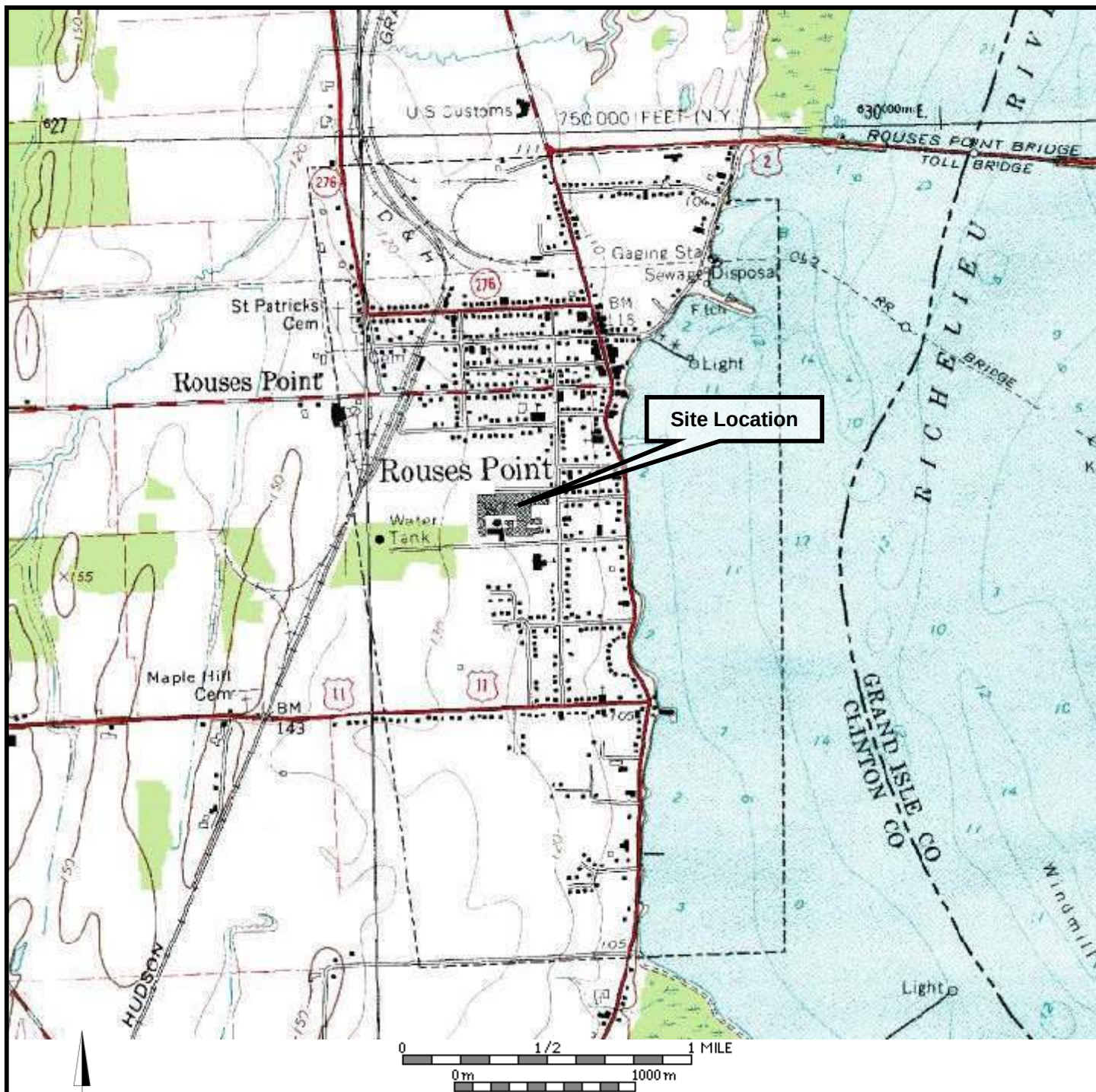
Notes:
Results are in nanogram per liter (ng/l).
B - Compound was found in the blank and sample.
J - Result is approximate, between the Reporting and Method Detection Limits.
J+ - Estimated result biased high
* Compound included in the NYSDEC list of PFAS Compounds.

Table 1

Groundwater Sampling Results
Wyeth Pharmaceuticals LLC
Rouses Point, New York

Sample ID		MW-34	MW-34S	DUP-1	MW-36	MW-36S	MW-37	Equip Blank	FB-1	EB-2	FB-2	EB-3	FB-3	EB-4	FB-4
Sample Collection Date and Time		08/22/2018 13:15	08/21/2018 11:35	08/21/2018 00:00	08/22/2018 15:00	08/22/2018 16:20	08/23/2018 11:05	08/20/2018 16:50	08/20/2018 14:05	08/21/2018 16:50	08/21/2018 10:50	08/22/2018 15:45	08/22/2018 11:30	08/23/2018 11:45	08/23/2018 11:10
Laboratory Order Number		320-42404-3	320-42375-5	320-42375-6	320-42404-4	320-42404-7	320-42476-1	320-42314-5	320-42314-2	320-42375-10	320-42375-3	320-42404-2	320-42404-5	320-42476-2	320-42476-3
Parameter	NYSDOH MCL for Unspecified Organic Contaminant														
LCMS by 537 (modified)															
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	50,000	2.9 J	< 18	< 18	< 16	< 20	< 18	< 17	< 17	< 18	< 17	< 18	< 17	< 18	< 17
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	50,000	630 J+	< 18	< 18	< 16	< 20	2.8 J	< 17	< 17	1.9J	1.8J	< 18	< 17	< 18	< 17
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	50,000	< 18	< 18	< 18	< 16	< 20	< 18	< 17	< 17	< 18	< 17	< 18	< 17	< 18	< 17
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	50,000	< 18	< 18	< 18	< 16	< 20	< 18	< 17	< 17	< 18	< 17	< 18	< 17	< 18	< 17
Perfluorobutanesulfonic acid (PFBS)*	50,000	2.1	0.68 J	0.53 J	< 1.6	1.1 J	1.4 J	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorobutanoic acid (PFBA)*	50,000	290 B	7.2	7.2	4.1 B	2.9 B	11 B	< 1.7	< 1.7	< 1.8	< 1.7	0.37J	< 1.7	0.46J	< 1.7
Perfluorodecanesulfonic acid (PFDS)*	50,000	< 1.8	< 1.8	< 1.8	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorodecanoic acid (PFDA)*	50,000	< 1.8	3.7	3.6	< 1.6	5.4	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorododecanoic acid (PFDoA)*	50,000	< 1.8	< 1.8	< 1.8	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluoroheptanesulfonic Acid (PFHpS)*	50,000	< 1.8	0.41 J	0.31 J	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluoroheptanoic acid (PFHpA)*	50,000	56	6.6	6.4	< 1.6	2.9	5.5	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorohexanesulfonic acid (PFHxS)*	50,000	1.6 J	< 1.8	< 1.8	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorohexanoic acid (PFHxA)*	50,000	280	5.2	5.4	< 1.6	3.3	6.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorononanoic acid (PFNA)*	50,000	2.1	6.3	6.4	< 1.6	2.9	0.85 J	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorooctane Sulfonamide (PFOSA)	50,000	< 1.8	3.8	3.6	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorooctanesulfonic acid (PFOS)*	50,000	1.7 J	28	28	< 1.6	16	5.4	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorooctanoic acid (PFOA)*	50,000	44	10	10	0.87 J	5.6	7.4	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluoropentanoic acid (PFPeA)*	50,000	780 J+	5.8	5.6	1.5 J	2.7	12	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorotetradecanoic acid (PFTeA)*	50,000	< 1.8	< 1.8	< 1.8	< 1.6	0.95 J	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluorotridecanoic Acid (PFTriA)*	50,000	< 1.8	< 1.8	< 1.8	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7
Perfluoroundecanoic acid (PFUnA)*	50,000	< 1.8	1.1 J	0.99 J	< 1.6	< 2.0	< 1.8	< 1.7	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7	< 1.8	< 1.7

Notes:
Results are in nanogram per liter (ng/l).
B - Compound was found in the blank and sample.
J - Result is approximate, between the Reporting and Method Detection Limits.
J+ - Estimated result biased high
* Compound included in the NYSDEC list of PFAS Compounds.



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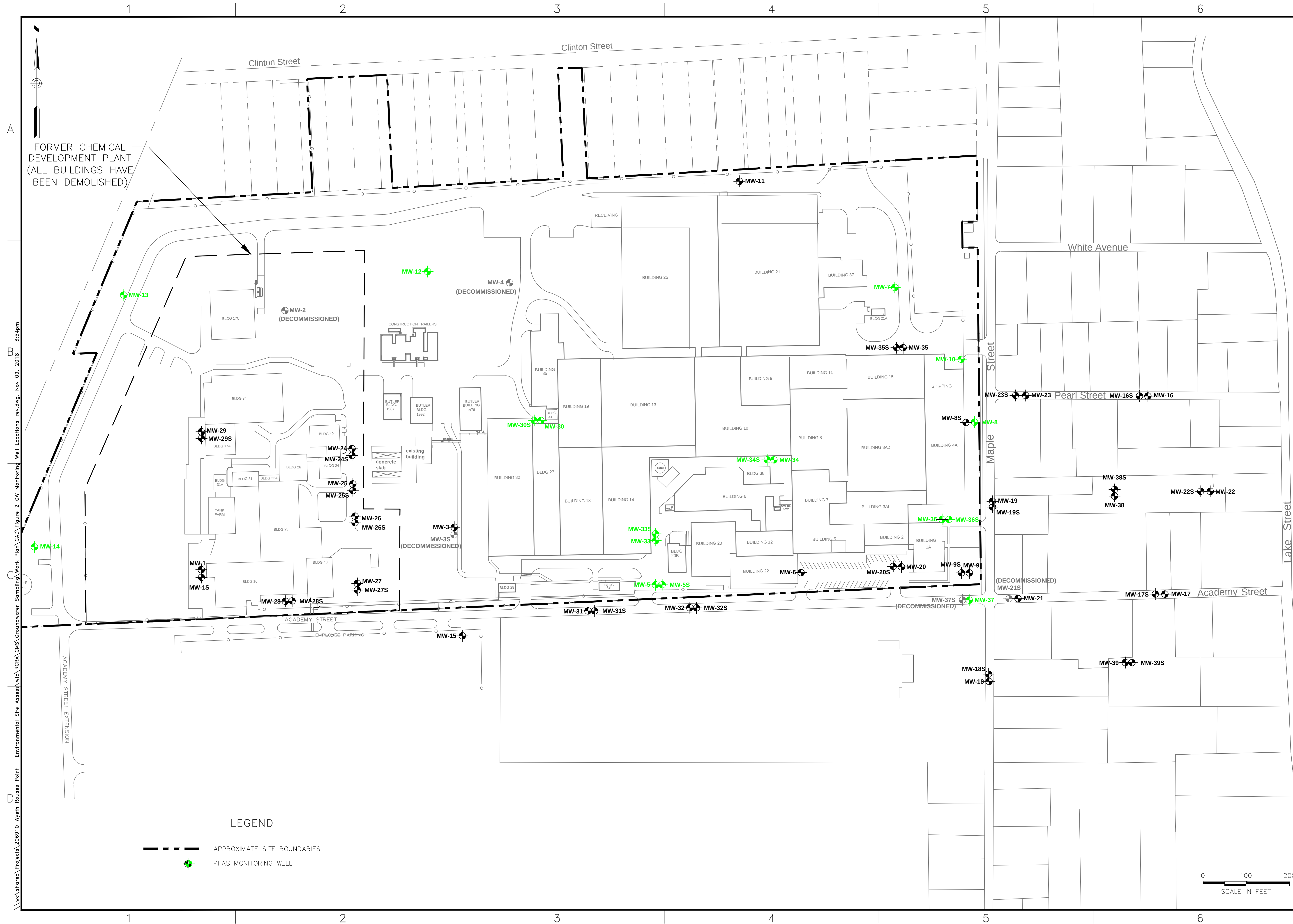


QUADRANGLE LOCATION

Figure 1 SITE LOCATION MAP
 Wyeth Pharmaceuticals, LLC
 Rouses Point, NY



COMMITMENT & INTEGRITY DRIVE RESULTS



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COMMITMENT & INTEGRITY DRIVE RESULTS

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LOCATIONS OF MONITORING WELLS FOR ANALYSIS OF PFAS

WYETH PHARMACEUTICALS, LLC ROUSES POINT, NEW YORK	PFAS SAP
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JOB NO.: 209610
DATE: NOVEMBER 2018
SCALE: AS NOTED
SHEET: 1 OF 1

FIGURE 2

APPENDIX A

Analytical Laboratory Reports



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Tel: (916)373-5600

TestAmerica Job ID: 320-42314-1

Client Project/Site: Rouses Point

For:

Woodard & Curran, Inc.

213 Court St

4th Floor

Middletown, Connecticut 06457

Attn: Ms. Anne Proctor



Authorized for release by:

9/24/2018 2:18:10 PM

Anthony Strollo, Project Management Assistant I

anthony.strollo@testamericainc.com

Designee for

Becky Mason, Project Manager II

(413)572-4000

becky.mason@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Qualifiers

LCMS

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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)

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-14

Lab Sample ID: 320-42314-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	0.31	J	1.7	0.30	ng/L	1			537 (modified)	Total/NA

Client Sample ID: FB-1

Lab Sample ID: 320-42314-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.19	J B	1.7	0.14	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 320-42314-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	0.63	J	1.7	0.30	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-5S

Lab Sample ID: 320-42314-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	3.6		1.8	0.23	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.3		1.8	0.77	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.4	J	1.8	0.25	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.98	J	1.8	0.18	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.45	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.4	J	1.8	0.49	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.7		1.8	0.44	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		1.8	0.53	ng/L	1			537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.85	J	1.8	0.28	ng/L	1			537 (modified)	Total/NA

Client Sample ID: Equip Blank

Lab Sample ID: 320-42314-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.30	J B	1.7	0.25	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 320-42404-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	1.3	J	1.8	0.31	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.9	J	18	1.8	ng/L	1			537 (modified)	Total/NA

Client Sample ID: EB-3

Lab Sample ID: 320-42404-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	0.37	J	1.8	0.32	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-34

Lab Sample ID: 320-42404-3

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-34 (Continued)

Lab Sample ID: 320-42404-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	56		1.8	0.22	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	44		1.8	0.74	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.1		1.8	0.24	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		1.8	0.18	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.6	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.7	J	1.8	0.47	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	290		1.8	0.31	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	280		1.8	0.51	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	2.9	J	18	1.8	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	780		8.8	2.1	ng/L	5			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2) - DL	630		88	8.8	ng/L	5			537 (modified)	Total/NA

Client Sample ID: MW-36

Lab Sample ID: 320-42404-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.87	J	1.6	0.69	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B	1.6	0.14	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	4.1		1.6	0.28	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.5	J	1.6	0.40	ng/L	1			537 (modified)	Total/NA

Client Sample ID: FB-3

Lab Sample ID: 320-42404-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 320-42404-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B	1.7	0.14	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	0.41	J	1.7	0.29	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-36S

Lab Sample ID: 320-42404-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	2.9		2.0	0.25	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.6		2.0	0.85	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.9		2.0	0.27	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	J	2.0	0.20	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.74	J B	2.0	0.17	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16		2.0	0.54	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	2.9		2.0	0.35	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.7		2.0	0.49	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		2.0	0.58	ng/L	1			537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	5.4		2.0	0.31	ng/L	1			537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.95	J	2.0	0.29	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 320-42404-8

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-8 (Continued)

Lab Sample ID: 320-42404-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.8	0.22	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.79	J	1.8	0.75	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	5.5		1.8	0.31	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.6		1.8	0.43	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4		1.8	0.51	ng/L	1			537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.42	J	1.8	0.26	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.3	J	18	1.8	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-37

Lab Sample ID: 320-42476-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	5.5		1.8	0.22	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.4		1.8	0.75	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.85	J	1.8	0.24	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.18	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.4		1.8	0.47	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	11		1.8	0.31	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	12		1.8	0.43	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.8		1.8	0.51	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.8	J	18	1.8	ng/L	1			537 (modified)	Total/NA

Client Sample ID: EB-4

Lab Sample ID: 320-42476-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.20	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	0.46	J	1.8	0.31	ng/L	1			537 (modified)	Total/NA

Client Sample ID: FB-4

Lab Sample ID: 320-42476-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.27	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-14
Date Collected: 08/20/18 13:55
Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorobutanoic acid (PFBA)	0.31	J	1.7	0.30	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 10:57	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 10:57	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 10:57	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 10:57	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 10:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	101		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C4-PFHxA	98		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C4 PFOA	96		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C4 PFOS	96		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C5 PFNA	103		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C4 PFBA	98		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C2 PFHxA	98		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C2 PFDA	94		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C2 PFUnA	95		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C2 PFDoA	92		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C8 FOSA	94		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C5-PFPeA	99		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C2-PFTeDA	97		25 - 150				08/31/18 08:21	09/01/18 10:57	1
d3-NMeFOSAA	91		25 - 150				08/31/18 08:21	09/01/18 10:57	1
d5-NEtFOSAA	97		25 - 150				08/31/18 08:21	09/01/18 10:57	1
M2-6:2FTS	95		25 - 150				08/31/18 08:21	09/01/18 10:57	1
M2-8:2FTS	93		25 - 150				08/31/18 08:21	09/01/18 10:57	1
13C3-PFBS	98		25 - 150				08/31/18 08:21	09/01/18 10:57	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-1

Date Collected: 08/20/18 14:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.71	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorohexanesulfonic acid (PFHxS)	0.19	J B	1.7	0.14	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.29	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.41	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.49	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 11:05	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/31/18 08:21	09/01/18 11:05	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 11:05	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:05	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C4-PFHpa	95		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C4 PFOA	97		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C4 PFOS	96		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C5 PFNA	98		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C4 PFBA	93		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C2 PFHxA	96		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C2 PFDA	93		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C2 PFUnA	95		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C2 PFDoA	95		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C8 FOSA	87		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C5-PFPeA	94		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C2-PFTeDA	126		25 - 150	08/31/18 08:21	09/01/18 11:05	1
d3-NMeFOSAA	88		25 - 150	08/31/18 08:21	09/01/18 11:05	1
d5-NEtFOSAA	98		25 - 150	08/31/18 08:21	09/01/18 11:05	1
M2-6:2FTS	103		25 - 150	08/31/18 08:21	09/01/18 11:05	1
M2-8:2FTS	103		25 - 150	08/31/18 08:21	09/01/18 11:05	1
13C3-PFBS	89		25 - 150	08/31/18 08:21	09/01/18 11:05	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-13

Date Collected: 08/20/18 16:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorobutanoic acid (PFBA)	0.63	J	1.7	0.30	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.94	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 11:13	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 11:13	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 11:13	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:13	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	83		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C4-PFHpA	85		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C4 PFOA	84		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C4 PFOS	78		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C5 PFNA	85		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C4 PFBA	79		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C2 PFHxA	81		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C2 PFDA	83		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C2 PFUnA	64		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C2 PFDoA	54		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C8 FOSA	77		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C5-PFPeA	82		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C2-PFTeDA	55		25 - 150	08/31/18 08:21	09/01/18 11:13	1
d3-NMeFOSAA	110		25 - 150	08/31/18 08:21	09/01/18 11:13	1
d5-NEtFOSAA	67		25 - 150	08/31/18 08:21	09/01/18 11:13	1
M2-6:2FTS	76		25 - 150	08/31/18 08:21	09/01/18 11:13	1
M2-8:2FTS	97		25 - 150	08/31/18 08:21	09/01/18 11:13	1
13C3-PFBS	80		25 - 150	08/31/18 08:21	09/01/18 11:13	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-5S

Date Collected: 08/20/18 16:10

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	3.6		1.8	0.23	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctanoic acid (PFOA)	3.3		1.8	0.77	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorononanoic acid (PFNA)	1.4	J	1.8	0.25	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorobutanesulfonic acid (PFBS)	0.98	J	1.8	0.18	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorohexanesulfonic acid (PFHxS)	0.45	J B	1.8	0.15	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctanesulfonic acid (PFOS)	1.4	J	1.8	0.49	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoropentanoic acid (PFPeA)	5.7		1.8	0.44	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorohexanoic acid (PFHxA)	4.4		1.8	0.53	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorodecanoic acid (PFDA)	0.85	J	1.8	0.28	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/31/18 08:21	09/01/18 11:28	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/31/18 08:21	09/01/18 11:28	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/31/18 08:21	09/01/18 11:28	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		08/31/18 08:21	09/01/18 11:28	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/31/18 08:21	09/01/18 11:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	86		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C4-PFHpA	90		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C4 PFOA	90		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C4 PFOS	78		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C5 PFNA	87		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C4 PFBA	65		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C2 PFHxA	82		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C2 PFDA	77		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C2 PFUnA	64		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C2 PFDoA	54		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C8 FOSA	78		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C5-PFPeA	81		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C2-PFTeDA	49		25 - 150	08/31/18 08:21	09/01/18 11:28	1
d3-NMeFOSAA	65		25 - 150	08/31/18 08:21	09/01/18 11:28	1
d5-NEtFOSAA	60		25 - 150	08/31/18 08:21	09/01/18 11:28	1
M2-6:2FTS	84		25 - 150	08/31/18 08:21	09/01/18 11:28	1
M2-8:2FTS	75		25 - 150	08/31/18 08:21	09/01/18 11:28	1
13C3-PFBS	82		25 - 150	08/31/18 08:21	09/01/18 11:28	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: Equip Blank

Lab Sample ID: 320-42314-5

Date Collected: 08/20/18 16:50

Matrix: Water

Date Received: 08/21/18 09:10

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.74	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.24	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.31	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.43	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.51	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.96	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorotridecanoic Acid (PFTrIA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorotetradecanoic acid (PFTeA)	0.30	J B	1.7	0.25	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.31	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:36	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C4-PFHpA	97		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C4 PFOA	99		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C4 PFOS	93		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C5 PFNA	99		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C4 PFBA	96		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C2 PFHxA	97		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C2 PFDA	94		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C2 PFUnA	98		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C2 PFDoA	93		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C8 FOSA	89		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C5-PFPeA	96		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C2-PFTeDA	93		25 - 150	08/31/18 08:21	09/01/18 11:36	1
d3-NMeFOSAA	91		25 - 150	08/31/18 08:21	09/01/18 11:36	1
d5-NEtFOSAA	98		25 - 150	08/31/18 08:21	09/01/18 11:36	1
M2-6:2FTS	98		25 - 150	08/31/18 08:21	09/01/18 11:36	1
M2-8:2FTS	91		25 - 150	08/31/18 08:21	09/01/18 11:36	1
13C3-PFBS	92		25 - 150	08/31/18 08:21	09/01/18 11:36	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-10

Date Collected: 08/22/18 11:05

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.75	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorobutanoic acid (PFBA)	1.3	J	1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.43	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:40	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 19:40	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:40	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.9	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 19:40	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	93		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C4-PFHpA	100		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C4 PFOA	100		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C4 PFOS	92		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C5 PFNA	98		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C4 PFBA	85		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C2 PFHxA	94		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C2 PFDA	95		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C2 PFUnA	91		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C2 PFDoA	91		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C8 FOSA	92		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C5-PFPeA	93		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C2-PFTeDA	83		25 - 150	09/05/18 06:50	09/05/18 19:40	1
d3-NMeFOSAA	91		25 - 150	09/05/18 06:50	09/05/18 19:40	1
d5-NEtFOSAA	96		25 - 150	09/05/18 06:50	09/05/18 19:40	1
M2-6:2FTS	101		25 - 150	09/05/18 06:50	09/05/18 19:40	1
M2-8:2FTS	103		25 - 150	09/05/18 06:50	09/05/18 19:40	1
13C3-PFBS	91		25 - 150	09/05/18 06:50	09/05/18 19:40	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: EB-3

Date Collected: 08/22/18 15:45

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.23	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.77	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorobutanoic acid (PFBA)	0.37	J	1.8	0.32	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.45	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.53	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorotridecanoic Acid (PFTrIA)	ND		1.8	1.2	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:47	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		09/05/18 06:50	09/05/18 19:47	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:47	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:47	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:47	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	92		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C4-PFHpA	98		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C4 PFOA	95		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C4 PFOS	93		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C5 PFNA	96		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C4 PFBA	92		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C2 PFHxA	97		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C2 PFDA	93		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C2 PFUnA	85		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C2 PFDoA	84		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C8 FOSA	89		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C5-PFPeA	92		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C2-PFTeDA	82		25 - 150	09/05/18 06:50	09/05/18 19:47	1
d3-NMeFOSAA	85		25 - 150	09/05/18 06:50	09/05/18 19:47	1
d5-NEtFOSAA	91		25 - 150	09/05/18 06:50	09/05/18 19:47	1
M2-6:2FTS	109		25 - 150	09/05/18 06:50	09/05/18 19:47	1
M2-8:2FTS	106		25 - 150	09/05/18 06:50	09/05/18 19:47	1
13C3-PFBS	81		25 - 150	09/05/18 06:50	09/05/18 19:47	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-34

Date Collected: 08/22/18 13:15

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	56		1.8	0.22	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctanoic acid (PFOA)	44		1.8	0.74	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorononanoic acid (PFNA)	2.1		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorobutanesulfonic acid (PFBS)	2.1		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorohexanesulfonic acid (PFHxS)	1.6	J B	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctanesulfonic acid (PFOS)	1.7	J	1.8	0.47	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorobutanoic acid (PFBA)	290		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorohexanoic acid (PFHxA)	280		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.96	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.25	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:55	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 19:55	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:55	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	2.9	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 19:55	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4-PFHpA	102		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFOA	97		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFOS	98		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C5 PFNA	99		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFBA	79		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFHxA	92		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFDA	94		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFUnA	93		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C8 FOSA	98		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2-PFTeDA	84		25 - 150	09/05/18 06:50	09/05/18 19:55	1
d3-NMeFOSAA	94		25 - 150	09/05/18 06:50	09/05/18 19:55	1
d5-NEtFOSAA	100		25 - 150	09/05/18 06:50	09/05/18 19:55	1
M2-8:2FTS	113		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C3-PFBS	90		25 - 150	09/05/18 06:50	09/05/18 19:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	780		8.8	2.1	ng/L		09/05/18 06:50	09/08/18 08:58	5
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	630		88	8.8	ng/L		09/05/18 06:50	09/08/18 08:58	5

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-34

Date Collected: 08/22/18 13:15

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5-PFPeA	98		25 - 150	09/05/18 06:50	09/08/18 08:58	5
M2-6:2FTS	96		25 - 150	09/05/18 06:50	09/08/18 08:58	5

Client Sample ID: MW-36

Date Collected: 08/22/18 15:00

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.20	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctanoic acid (PFOA)	0.87	J	1.6	0.69	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.22	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.16	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B	1.6	0.14	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.44	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorobutanoic acid (PFBA)	4.1		1.6	0.28	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoropentanoic acid (PFPeA)	1.5	J	1.6	0.40	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.47	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.89	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.25	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.6	1.1	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.24	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.6	0.28	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.26	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.15	ng/L		09/05/18 06:50	09/05/18 20:03	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		16	2.5	ng/L		09/05/18 06:50	09/05/18 20:03	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		16	1.5	ng/L		09/05/18 06:50	09/05/18 20:03	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		16	1.6	ng/L		09/05/18 06:50	09/05/18 20:03	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		16	1.6	ng/L		09/05/18 06:50	09/05/18 20:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C4-PFHpA	98		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C4 PFOA	99		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C4 PFOS	95		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C5 PFNA	103		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C4 PFBA	82		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C2 PFHxA	95		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C2 PFDA	94		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C2 PFUnA	91		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C2 PFDoA	84		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C8 FOSA	94		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C5-PFPeA	98		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C2-PFTeDA	88		25 - 150	09/05/18 06:50	09/05/18 20:03	1
d3-NMeFOSAA	88		25 - 150	09/05/18 06:50	09/05/18 20:03	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-36

Date Collected: 08/22/18 15:00

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-4

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		25 - 150	09/05/18 06:50	09/05/18 20:03	1
M2-6:2FTS	96		25 - 150	09/05/18 06:50	09/05/18 20:03	1
M2-8:2FTS	109		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C3-PFBS	94		25 - 150	09/05/18 06:50	09/05/18 20:03	1

Client Sample ID: FB-3

Date Collected: 08/22/18 11:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-5

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B	1.7	0.15	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.30	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/05/18 06:50	09/05/18 20:11	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/05/18 06:50	09/05/18 20:11	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4-PFHpA	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFOA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFOS	94		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C5 PFNA	103		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFBA	91		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFHxA	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFDA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFUnA	94		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFDoA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C8 FOSA	92		25 - 150				09/05/18 06:50	09/05/18 20:11	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-3

Date Collected: 08/22/18 11:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-5

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5-PFPeA	91		25 - 150	09/05/18 06:50	09/05/18 20:11	1
13C2-PFTeDA	109		25 - 150	09/05/18 06:50	09/05/18 20:11	1
d3-NMeFOSAA	91		25 - 150	09/05/18 06:50	09/05/18 20:11	1
d5-NEtFOSAA	98		25 - 150	09/05/18 06:50	09/05/18 20:11	1
M2-6:2FTS	114		25 - 150	09/05/18 06:50	09/05/18 20:11	1
M2-8:2FTS	126		25 - 150	09/05/18 06:50	09/05/18 20:11	1
13C3-PFBS	86		25 - 150	09/05/18 06:50	09/05/18 20:11	1

Client Sample ID: MW-12

Date Collected: 08/22/18 11:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.70	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.22	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B	1.7	0.14	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorobutanoic acid (PFBA)	0.41	J	1.7	0.29	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.41	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.48	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.45	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/05/18 06:50	09/05/18 20:19	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		09/05/18 06:50	09/05/18 20:19	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/05/18 06:50	09/05/18 20:19	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:19	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4-PFHpA	95		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFOA	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFOS	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C5 PFNA	98		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFBA	91		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C2 PFHxA	99		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C2 PFDA	94		25 - 150				09/05/18 06:50	09/05/18 20:19	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-12

Date Collected: 08/22/18 11:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-6

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFUnA	91		25 - 150	09/05/18 06:50	09/05/18 20:19	1
13C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 20:19	1
13C8 FOSA	95		25 - 150	09/05/18 06:50	09/05/18 20:19	1
13C5-PFPeA	95		25 - 150	09/05/18 06:50	09/05/18 20:19	1
13C2-PFTeDA	86		25 - 150	09/05/18 06:50	09/05/18 20:19	1
d3-NMeFOSAA	93		25 - 150	09/05/18 06:50	09/05/18 20:19	1
d5-NEtFOSAA	96		25 - 150	09/05/18 06:50	09/05/18 20:19	1
M2-6:2FTS	99		25 - 150	09/05/18 06:50	09/05/18 20:19	1
M2-8:2FTS	105		25 - 150	09/05/18 06:50	09/05/18 20:19	1
13C3-PFBS	90		25 - 150	09/05/18 06:50	09/05/18 20:19	1

Client Sample ID: MW-36S

Date Collected: 08/22/18 16:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	2.9		2.0	0.25	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctanoic acid (PFOA)	5.6		2.0	0.85	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorononanoic acid (PFNA)	2.9		2.0	0.27	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorobutanesulfonic acid (PFBS)	1.1	J	2.0	0.20	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorohexanesulfonic acid (PFHxS)	0.74	J B	2.0	0.17	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctanesulfonic acid (PFOS)	16		2.0	0.54	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorobutanoic acid (PFBA)	2.9		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoropentanoic acid (PFPeA)	2.7		2.0	0.49	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	0.58	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorodecanoic acid (PFDA)	5.4		2.0	0.31	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorotetradecanoic acid (PFTeA)	0.95	J	2.0	0.29	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		09/05/18 06:50	09/05/18 20:27	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		09/05/18 06:50	09/05/18 20:27	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		09/05/18 06:50	09/05/18 20:27	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 20:27	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 20:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	73		25 - 150				09/05/18 06:50	09/05/18 20:27	1
13C4-PFHpA	76		25 - 150				09/05/18 06:50	09/05/18 20:27	1
13C4 PFOA	77		25 - 150				09/05/18 06:50	09/05/18 20:27	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-36S

Date Collected: 08/22/18 16:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	72		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C5 PFNA	83		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C4 PFBA	41		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFHxA	66		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFDA	73		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFUnA	65		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFDoA	62		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C8 FOSA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C5-PFPeA	60		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2-PFTeDA	38		25 - 150	09/05/18 06:50	09/05/18 20:27	1
d3-NMeFOSAA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
d5-NEtFOSAA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
M2-6:2FTS	134		25 - 150	09/05/18 06:50	09/05/18 20:27	1
M2-8:2FTS	104		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C3-PFBS	67		25 - 150	09/05/18 06:50	09/05/18 20:27	1

Client Sample ID: MW-8

Date Collected: 08/22/18 14:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-8

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.8	0.22	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctanoic acid (PFOA)	0.79	J	1.8	0.75	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorobutanoic acid (PFBA)	5.5		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoropentanoic acid (PFPeA)	4.6		1.8	0.43	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorohexanoic acid (PFHxA)	2.4		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorotetradecanoic acid (PFTeA)	0.42	J	1.8	0.26	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 20:34	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 20:34	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 20:34	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.3	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 20:34	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 20:34	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-8

Date Collected: 08/22/18 14:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-8

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4-PFHpA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFOA	97		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFOS	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C5 PFNA	102		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFBA	84		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFHxA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFDA	93		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFUnA	94		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C8 FOSA	93		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C5-PFPeA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2-PFTeDA	87		25 - 150	09/05/18 06:50	09/05/18 20:34	1
d3-NMeFOSAA	92		25 - 150	09/05/18 06:50	09/05/18 20:34	1
d5-NEtFOSAA	99		25 - 150	09/05/18 06:50	09/05/18 20:34	1
M2-6:2FTS	101		25 - 150	09/05/18 06:50	09/05/18 20:34	1
M2-8:2FTS	103		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C3-PFBS	97		25 - 150	09/05/18 06:50	09/05/18 20:34	1

Client Sample ID: MW-37

Date Collected: 08/23/18 11:05

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.5		1.8	0.22	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctanoic acid (PFOA)	7.4		1.8	0.75	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorononanoic acid (PFNA)	0.85	J	1.8	0.24	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.18	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B	1.8	0.15	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctanesulfonic acid (PFOS)	5.4		1.8	0.47	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorobutanoic acid (PFBA)	11		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoropentanoic acid (PFPeA)	12		1.8	0.43	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorohexanoic acid (PFHxA)	6.8		1.8	0.51	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.48	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.25	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/06/18 10:15	09/07/18 16:02	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/06/18 10:15	09/07/18 16:02	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/06/18 10:15	09/07/18 16:02	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.8	J	18	1.8	ng/L		09/06/18 10:15	09/07/18 16:02	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-37

Date Collected: 08/23/18 11:05

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4-PFHpA	101		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFOA	102		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFOS	95		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C5 PFNA	92		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFBA	76		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFHxA	100		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFDA	99		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFUnA	91		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFDoA	88		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C8 FOSA	92		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C5-PFPeA	91		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2-PFTeDA	86		25 - 150				09/06/18 10:15	09/07/18 16:02	1
d3-NMeFOSAA	99		25 - 150				09/06/18 10:15	09/07/18 16:02	1
d5-NEtFOSAA	98		25 - 150				09/06/18 10:15	09/07/18 16:02	1
M2-6:2FTS	112		25 - 150				09/06/18 10:15	09/07/18 16:02	1
M2-8:2FTS	105		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C3-PFBS	93		25 - 150				09/06/18 10:15	09/07/18 16:02	1

Client Sample ID: EB-4

Date Collected: 08/23/18 11:45

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.76	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	J B	1.8	0.15	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorobutanoic acid (PFBA)	0.46	J	1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/06/18 10:15	09/07/18 16:09	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		09/06/18 10:15	09/07/18 16:09	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: EB-4

Date Collected: 08/23/18 11:45

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethyl perfluorooctane	ND		18	1.7	ng/L		09/06/18 10:15	09/07/18 16:09	1
sulfonamidoacetic acid (NEtFOSAA)									
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:09	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4-PFHpa	91		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFOA	98		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFOS	96		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C5 PFNA	94		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFBA	91		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFHxA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFDA	98		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFUnA	97		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFDoA	90		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C8 FOSA	86		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C5-PFPeA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2-PFTeDA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
d3-NMeFOSAA	100		25 - 150				09/06/18 10:15	09/07/18 16:09	1
d5-NEtFOSAA	99		25 - 150				09/06/18 10:15	09/07/18 16:09	1
M2-6:2FTS	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
M2-8:2FTS	96		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C3-PFBS	86		25 - 150				09/06/18 10:15	09/07/18 16:09	1

Client Sample ID: FB-4

Date Collected: 08/23/18 11:10

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.74	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.24	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorohexanesulfonic acid (PFHxS)	0.27	J B	1.7	0.15	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.31	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.43	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.51	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.96	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.31	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		09/06/18 10:15	09/07/18 16:17	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-4

Date Collected: 08/23/18 11:10

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.17	ng/L		09/06/18 10:15	09/07/18 16:17	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	103		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4-PFHpA	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFOA	99		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFOS	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C5 PFNA	97		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFBA	99		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFHxA	98		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFDA	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFUnA	103		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFDoA	95		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C8 FOSA	90		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C5-PFPeA	96		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2-PFTeDA	94		25 - 150				09/06/18 10:15	09/07/18 16:17	1
d3-NMeFOSAA	105		25 - 150				09/06/18 10:15	09/07/18 16:17	1
d5-NEtFOSAA	106		25 - 150				09/06/18 10:15	09/07/18 16:17	1
M2-6:2FTS	106		25 - 150				09/06/18 10:15	09/07/18 16:17	1
M2-8:2FTS	104		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C3-PFBS	93		25 - 150				09/06/18 10:15	09/07/18 16:17	1

TestAmerica Sacramento

Isotope Dilution Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFHxS (25-150)	PFHpA (25-150)	PFOA (25-150)	PFOS (25-150)	PFNA (25-150)	PFBA (25-150)	PFHxA (25-150)	PFDA (25-150)
320-42314-1	MW-14	101	98	96	96	103	98	98	94
320-42314-2	FB-1	96	95	97	96	98	93	96	93
320-42314-3	MW-13	83	85	84	78	85	79	81	83
320-42314-4	MW-5S	86	90	90	78	87	65	82	77
320-42314-5	Equip Blank	94	97	99	93	99	96	97	94
320-42404-1	MW-10	93	100	100	92	98	85	94	95
320-42404-2	EB-3	92	98	95	93	96	92	97	93
320-42404-3	MW-34	96	102	97	98	99	79	92	94
320-42404-3 - DL	MW-34								
320-42404-4	MW-36	94	98	99	95	103	82	95	94
320-42404-5	FB-3	95	95	97	94	103	91	95	97
320-42404-6	MW-12	96	95	96	96	98	91	99	94
320-42404-7	MW-36S	73	76	77	72	83	41	66	73
320-42404-8	MW-8	98	98	97	98	102	84	98	93
320-42476-1	MW-37	98	101	102	95	92	76	100	99
320-42476-2	EB-4	93	91	98	96	94	91	93	98
320-42476-3	FB-4	103	100	99	100	97	99	98	100
LCS 320-243332/2-A	Lab Control Sample	94	94	97	93	95	92	96	89
LCS 320-243855/2-A	Lab Control Sample	97	102	100	100	101	96	97	97
LCS 320-244124/2-A	Lab Control Sample	98	98	97	98	96	95	97	102
LCSD 320-243332/3-A	Lab Control Sample Dup	101	101	100	101	102	98	97	95
LCSD 320-244124/3-A	Lab Control Sample Dup	99	102	99	99	100	97	100	104
MB 320-243332/1-A	Method Blank	94	96	92	93	96	93	96	93
MB 320-243855/1-A	Method Blank	94	101	102	99	100	94	98	98
MB 320-244124/1-A	Method Blank	102	100	100	100	100	97	98	109

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA (25-150)	PFDoA (25-150)	PFOA (25-150)	PFPeA (25-150)	PFTDA (25-150)	-NMeFOS/ (25-150)	-NEtFOS/ (25-150)	M262FTS (25-150)
320-42314-1	MW-14	95	92	94	99	97	91	97	95
320-42314-2	FB-1	95	95	87	94	126	88	98	103
320-42314-3	MW-13	64	54	77	82	55	110	67	76
320-42314-4	MW-5S	64	54	78	81	49	65	60	84
320-42314-5	Equip Blank	98	93	89	96	93	91	98	98
320-42404-1	MW-10	91	91	92	93	83	91	96	101
320-42404-2	EB-3	85	84	89	92	82	85	91	109
320-42404-3	MW-34	93	90	98		84	94	100	
320-42404-3 - DL	MW-34				98				96
320-42404-4	MW-36	91	84	94	98	88	88	93	96
320-42404-5	FB-3	94	97	92	91	109	91	98	114
320-42404-6	MW-12	91	90	95	95	86	93	96	99
320-42404-7	MW-36S	65	62	68	60	38	68	68	134
320-42404-8	MW-8	94	90	93	98	87	92	99	101
320-42476-1	MW-37	91	88	92	91	86	99	98	112
320-42476-2	EB-4	97	90	86	93	93	100	99	93
320-42476-3	FB-4	103	95	90	96	94	105	106	106
LCS 320-243332/2-A	Lab Control Sample	91	94	88	92	92	91	95	92
LCS 320-243855/2-A	Lab Control Sample	95	96	98	98	91	97	95	108
LCS 320-244124/2-A	Lab Control Sample	102	93	92	97	100	106	100	95
LCSD 320-243332/3-A	Lab Control Sample Dup	98	98	95	98	104	98	98	98

TestAmerica Sacramento

Isotope Dilution Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PfUnA (25-150)	PfDoA (25-150)	PfOSA (25-150)	PfPeA (25-150)	PfTDA (25-150)	-NMeFOS _A (25-150)	-NEtFOS _A (25-150)	M262FTS (25-150)
LCSD 320-244124/3-A	Lab Control Sample Dup	103	97	96	100	101	108	98	98
MB 320-243332/1-A	Method Blank	95	91	92	92	96	92	97	94
MB 320-243855/1-A	Method Blank	93	95	95	96	89	94	98	110
MB 320-244124/1-A	Method Blank	107	101	98	98	101	100	109	100
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M282FTS (25-150)	3C3-PFB _A (25-150)						
320-42314-1	MW-14	93	98						
320-42314-2	FB-1	103	89						
320-42314-3	MW-13	97	80						
320-42314-4	MW-5S	75	82						
320-42314-5	Equip Blank	91	92						
320-42404-1	MW-10	103	91						
320-42404-2	EB-3	106	81						
320-42404-3	MW-34	113	90						
320-42404-3 - DL	MW-34								
320-42404-4	MW-36	109	94						
320-42404-5	FB-3	126	86						
320-42404-6	MW-12	105	90						
320-42404-7	MW-36S	104	67						
320-42404-8	MW-8	103	97						
320-42476-1	MW-37	105	93						
320-42476-2	EB-4	96	86						
320-42476-3	FB-4	104	93						
LCS 320-243332/2-A	Lab Control Sample	91	90						
LCS 320-243855/2-A	Lab Control Sample	113	98						
LCS 320-244124/2-A	Lab Control Sample	84	97						
LCSD 320-243332/3-A	Lab Control Sample Dup	98	95						
LCSD 320-244124/3-A	Lab Control Sample Dup	100	94						
MB 320-243332/1-A	Method Blank	89	93						
MB 320-243855/1-A	Method Blank	106	93						
MB 320-244124/1-A	Method Blank	108	94						

Surrogate Legend

PFHxS = 18O2 PFHxS
PFHpA = 13C4-PFHpA
PFOA = 13C4 PFOA
PFOS = 13C4 PFOS
PFNA = 13C5 PFNA
PFBA = 13C4 PFBA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFOSA = 13C8 FOSA
PFPeA = 13C5-PFPeA
PFTDA = 13C2-PFTeDA
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA

TestAmerica Sacramento

Isotope Dilution Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

M262FTS = M2-6:2FTS
M282FTS = M2-8:2FTS
13C3-PFBS = 13C3-PFBS

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QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-243332/1-A

Matrix: Water

Analysis Batch: 243502

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 243332

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorohexanesulfonic acid (PFHxS)	0.305	J	2.0	0.17	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorotetradecanoic acid (PFTeA)	0.469	J	2.0	0.29	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		08/27/18 12:52	09/01/18 10:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		08/27/18 12:52	09/01/18 10:02	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		08/27/18 12:52	09/01/18 10:02	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		08/27/18 12:52	09/01/18 10:02	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		08/27/18 12:52	09/01/18 10:02	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		08/27/18 12:52	09/01/18 10:02	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C4-PFHpA	96		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C4 PFOA	92		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C4 PFOS	93		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C5 PFNA	96		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C4 PFBA	93		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C2 PFHxA	96		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C2 PFDA	93		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C2 PFUnA	95		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C2 PFDoA	91		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C8 FOSA	92		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C5-PFPeA	92		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C2-PFTeDA	96		25 - 150	08/27/18 12:52	09/01/18 10:02	1
d3-NMeFOSAA	92		25 - 150	08/27/18 12:52	09/01/18 10:02	1
d5-NEtFOSAA	97		25 - 150	08/27/18 12:52	09/01/18 10:02	1
M2-6:2FTS	94		25 - 150	08/27/18 12:52	09/01/18 10:02	1
M2-8:2FTS	89		25 - 150	08/27/18 12:52	09/01/18 10:02	1
13C3-PFBS	93		25 - 150	08/27/18 12:52	09/01/18 10:02	1

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCS 320-243332/2-A

Matrix: Water

Analysis Batch: 243502

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 243332

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA)	40.0	40.4		ng/L		101	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	38.1		ng/L		95	64 - 124
Perfluorononanoic acid (PFNA)	40.0	40.6		ng/L		101	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	36.6		ng/L		104	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.0		ng/L		96	63 - 123
Perfluorooctanesulfonic acid (PFOS)	37.1	36.2		ng/L		97	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	41.1		ng/L		103	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	40.4		ng/L		101	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	37.8		ng/L		94	66 - 126
Perfluoroundecanoic acid (PFUnA)	40.0	38.7		ng/L		97	60 - 120
Perfluorodecanoic acid (PFDA)	40.0	41.5		ng/L		104	69 - 129
Perfluorododecanoic acid (PFDoA)	40.0	40.8		ng/L		102	71 - 131
Perfluorotridecanoic Acid (PFTriA)	40.0	40.7		ng/L		102	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	39.2		ng/L		98	68 - 128
Perfluorooctane Sulfonamide (PFOSA)	40.0	39.6		ng/L		99	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	39.7		ng/L		103	68 - 128
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.3		ng/L		108	68 - 128
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	40.4		ng/L		101	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	39.6		ng/L		99	65 - 125
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	42.4		ng/L		112	66 - 126
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	38.3		ng/L		100	67 - 127

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	94		25 - 150
13C4-PFHxA	94		25 - 150
13C4 PFOA	97		25 - 150
13C4 PFOS	93		25 - 150
13C5 PFNA	95		25 - 150
13C4 PFBA	92		25 - 150
13C2 PFHxA	96		25 - 150
13C2 PFDA	89		25 - 150
13C2 PFUnA	91		25 - 150
13C2 PFDoA	94		25 - 150
13C8 FOSA	88		25 - 150
13C5-PFPeA	92		25 - 150
13C2-PFTeDA	92		25 - 150

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCS 320-243332/2-A

Matrix: Water

Analysis Batch: 243502

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 243332

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
d3-NMeFOSAA	91		25 - 150
d5-NEtFOSAA	95		25 - 150
M2-6:2FTS	92		25 - 150
M2-8:2FTS	91		25 - 150
13C3-PFBS	90		25 - 150

Lab Sample ID: LCSD 320-243332/3-A

Matrix: Water

Analysis Batch: 243502

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 243332

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	40.0	37.2		ng/L		93	66 - 126	8	30
Perfluorooctanoic acid (PFOA)	40.0	39.1		ng/L		98	64 - 124	3	30
Perfluorononanoic acid (PFNA)	40.0	38.2		ng/L		96	68 - 128	6	30
Perfluorobutanesulfonic acid (PFBS)	35.4	36.1		ng/L		102	73 - 133	1	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.5		ng/L		95	63 - 123	1	30
Perfluorooctanesulfonic acid (PFOS)	37.1	34.4		ng/L		93	67 - 127	5	30
Perfluorobutanoic acid (PFBA)	40.0	40.6		ng/L		102	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	40.0	38.8		ng/L		97	66 - 126	4	30
Perfluorohexanoic acid (PFHxA)	40.0	39.1		ng/L		98	66 - 126	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	33.9		ng/L		85	60 - 120	13	30
Perfluorodecanoic acid (PFDA)	40.0	40.8		ng/L		102	69 - 129	2	30
Perfluorododecanoic acid (PFDoA)	40.0	39.8		ng/L		100	71 - 131	2	30
Perfluorotridecanoic Acid (PFTriA)	40.0	37.9		ng/L		95	72 - 132	7	30
Perfluorotetradecanoic acid (PFTeA)	40.0	36.1		ng/L		90	68 - 128	8	30
Perfluorooctane Sulfonamide (PFOSA)	40.0	38.7		ng/L		97	70 - 130	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	37.1		ng/L		96	68 - 128	7	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.3		ng/L		103	68 - 128	5	30
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	39.1		ng/L		98	67 - 127	3	30
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	37.7		ng/L		94	65 - 125	5	30
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	39.6		ng/L		104	66 - 126	7	30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	38.2		ng/L		100	67 - 127	0	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
18O2 PFHxS	101		25 - 150
13C4-PFHpA	101		25 - 150

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCSD 320-243332/3-A

Matrix: Water

Analysis Batch: 243502

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 243332

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C4 PFOA	100		25 - 150
13C4 PFOS	101		25 - 150
13C5 PFNA	102		25 - 150
13C4 PFBA	98		25 - 150
13C2 PFHxA	97		25 - 150
13C2 PFDA	95		25 - 150
13C2 PFUnA	98		25 - 150
13C2 PFDoA	98		25 - 150
13C8 FOSA	95		25 - 150
13C5-PFPeA	98		25 - 150
13C2-PFTeDA	104		25 - 150
d3-NMeFOSAA	98		25 - 150
d5-NEtFOSAA	98		25 - 150
M2-6:2FTS	98		25 - 150
M2-8:2FTS	98		25 - 150
13C3-PFBS	95		25 - 150

Lab Sample ID: MB 320-243855/1-A

Matrix: Water

Analysis Batch: 244015

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 243855

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorohexanesulfonic acid (PFHxS)	0.365	J	2.0	0.17	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		09/05/18 06:50	09/05/18 19:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		09/05/18 06:50	09/05/18 19:24	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		09/05/18 06:50	09/05/18 19:24	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		09/05/18 06:50	09/05/18 19:24	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 19:24	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 19:24	1

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

<i>Isotope Dilution</i>	<i>MB</i> <i>%Recovery</i>	<i>MB</i> <i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
18O2 PFHxS	94		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C4-PFHpA	101		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C4 PFOA	102		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C4 PFOS	99		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C5 PFNA	100		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C4 PFBA	94		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C2 PFHxA	98		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C2 PFDA	98		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C2 PFUnA	93		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C2 PFDoA	95		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C8 FOSA	95		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C5-PFPeA	96		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C2-PFTeDA	89		25 - 150	09/05/18 06:50	09/05/18 19:24	1
d3-NMeFOSAA	94		25 - 150	09/05/18 06:50	09/05/18 19:24	1
d5-NEtFOSAA	98		25 - 150	09/05/18 06:50	09/05/18 19:24	1
M2-6:2FTS	110		25 - 150	09/05/18 06:50	09/05/18 19:24	1
M2-8:2FTS	106		25 - 150	09/05/18 06:50	09/05/18 19:24	1
13C3-PFBS	93		25 - 150	09/05/18 06:50	09/05/18 19:24	1

Lab Sample ID: LCS 320-243855/2-A
Matrix: Water
Analysis Batch: 244015

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 243855

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>
Perfluoroheptanoic acid (PFHpA)	40.0	36.8		ng/L		92	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	39.1		ng/L		98	64 - 124
Perfluorononanoic acid (PFNA)	40.0	39.3		ng/L		98	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	34.3		ng/L		97	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.5		ng/L		92	63 - 123
Perfluorooctanesulfonic acid (PFOS)	37.1	35.5		ng/L		96	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	41.6		ng/L		104	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	38.4		ng/L		96	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	41.0		ng/L		103	66 - 126
Perfluoroundecanoic acid (PFUnA)	40.0	34.1		ng/L		85	60 - 120
Perfluorodecanoic acid (PFDA)	40.0	39.0		ng/L		98	69 - 129
Perfluorododecanoic acid (PFDoA)	40.0	37.5		ng/L		94	71 - 131
Perfluorotridecanoic Acid (PFTriA)	40.0	38.3		ng/L		96	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	38.9		ng/L		97	68 - 128
Perfluorooctane Sulfonamide (PFOSA)	40.0	39.7		ng/L		99	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	35.7		ng/L		93	68 - 128
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	40.7		ng/L		107	68 - 128
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	38.5		ng/L		96	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	39.9		ng/L		100	65 - 125

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCS 320-243855/2-A

Matrix: Water

Analysis Batch: 244015

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 243855

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	41.4		ng/L		109	66 - 126
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	36.1		ng/L		94	67 - 127

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	97		25 - 150
13C4-PFHpA	102		25 - 150
13C4 PFOA	100		25 - 150
13C4 PFOS	100		25 - 150
13C5 PFNA	101		25 - 150
13C4 PFBA	96		25 - 150
13C2 PFHxA	97		25 - 150
13C2 PFDA	97		25 - 150
13C2 PFUnA	95		25 - 150
13C2 PFDoA	96		25 - 150
13C8 FOSA	98		25 - 150
13C5-PFPeA	98		25 - 150
13C2-PFTeDA	91		25 - 150
d3-NMeFOSAA	97		25 - 150
d5-NEtFOSAA	95		25 - 150
M2-6:2FTS	108		25 - 150
M2-8:2FTS	113		25 - 150
13C3-PFBS	98		25 - 150

Lab Sample ID: MB 320-244124/1-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 244124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorohexanesulfonic acid (PFHxS)	0.301	J	2.0	0.17	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorotetradecanoic acid (PFTeA)	0.332	J	2.0	0.29	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		09/06/18 10:15	09/07/18 14:24	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		09/06/18 10:15	09/07/18 14:24	1

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: MB 320-244124/1-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 244124

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		09/06/18 10:15	09/07/18 14:24	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		09/06/18 10:15	09/07/18 14:24	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		09/06/18 10:15	09/07/18 14:24	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		09/06/18 10:15	09/07/18 14:24	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	102		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C4-PFHpa	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C4 PFOA	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C4 PFOS	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C5 PFNA	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C4 PFBA	97		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C2 PFHxA	98		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C2 PFDA	109		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C2 PFUnA	107		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C2 PFDoA	101		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C8 FOSA	98		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C5-PFPeA	98		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C2-PFTeDA	101		25 - 150	09/06/18 10:15	09/07/18 14:24	1
d3-NMeFOSAA	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
d5-NEtFOSAA	109		25 - 150	09/06/18 10:15	09/07/18 14:24	1
M2-6:2FTS	100		25 - 150	09/06/18 10:15	09/07/18 14:24	1
M2-8:2FTS	108		25 - 150	09/06/18 10:15	09/07/18 14:24	1
13C3-PFBS	94		25 - 150	09/06/18 10:15	09/07/18 14:24	1

Lab Sample ID: LCS 320-244124/2-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 244124

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluoroheptanoic acid (PFHpA)	40.0	43.0		ng/L		108	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	44.1		ng/L		110	64 - 124
Perfluorononanoic acid (PFNA)	40.0	44.9		ng/L		112	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	35.7		ng/L		101	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.6		ng/L		101	63 - 123
Perfluorooctanesulfonic acid (PFOS)	37.1	37.5		ng/L		101	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	42.7		ng/L		107	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	41.4		ng/L		103	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	41.1		ng/L		103	66 - 126
Perfluoroundecanoic acid (PFUnA)	40.0	39.6		ng/L		99	60 - 120
Perfluorodecanoic acid (PFDA)	40.0	41.8		ng/L		105	69 - 129
Perfluorododecanoic acid (PFDoA)	40.0	45.8		ng/L		114	71 - 131

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCS 320-244124/2-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 244124

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorotridecanoic Acid (PFTriA)	40.0	43.7		ng/L		109	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	38.9		ng/L		97	68 - 128
Perfluorooctane Sulfonamide (PFOSA)	40.0	44.5		ng/L		111	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	43.0		ng/L		111	68 - 128
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	43.3		ng/L		114	68 - 128
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	39.0		ng/L		97	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	42.7		ng/L		107	65 - 125
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	43.5		ng/L		115	66 - 126
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	42.6		ng/L		111	67 - 127

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	98		25 - 150
13C4-PFHpA	98		25 - 150
13C4 PFOA	97		25 - 150
13C4 PFOS	98		25 - 150
13C5 PFNA	96		25 - 150
13C4 PFBA	95		25 - 150
13C2 PFHxA	97		25 - 150
13C2 PFDA	102		25 - 150
13C2 PFUnA	102		25 - 150
13C2 PFDoA	93		25 - 150
13C8 FOSA	92		25 - 150
13C5-PFPeA	97		25 - 150
13C2-PFTeDA	100		25 - 150
d3-NMeFOSAA	106		25 - 150
d5-NEtFOSAA	100		25 - 150
M2-6:2FTS	95		25 - 150
M2-8:2FTS	84		25 - 150
13C3-PFBS	97		25 - 150

Lab Sample ID: LCSD 320-244124/3-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 244124

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Perfluoroheptanoic acid (PFHpA)	40.0	43.9		ng/L		110	66 - 126	2	30
Perfluorooctanoic acid (PFOA)	40.0	44.6		ng/L		111	64 - 124	1	30
Perfluorononanoic acid (PFNA)	40.0	44.4		ng/L		111	68 - 128	1	30
Perfluorobutanesulfonic acid (PFBS)	35.4	37.6		ng/L		106	73 - 133	5	30

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

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

Lab Sample ID: LCSD 320-244124/3-A

Matrix: Water

Analysis Batch: 244464

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 244124

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	36.4	36.3		ng/L		100	63 - 123	1	30
Perfluorooctanesulfonic acid (PFOS)	37.1	36.1		ng/L		97	67 - 127	4	30
Perfluorobutanoic acid (PFBA)	40.0	42.2		ng/L		105	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	40.0	40.3		ng/L		101	66 - 126	3	30
Perfluorohexanoic acid (PFHxA)	40.0	39.9		ng/L		100	66 - 126	3	30
Perfluoroundecanoic acid (PFUnA)	40.0	39.0		ng/L		98	60 - 120	2	30
Perfluorodecanoic acid (PFDA)	40.0	42.8		ng/L		107	69 - 129	2	30
Perfluorododecanoic acid (PFDoA)	40.0	42.5		ng/L		106	71 - 131	7	30
Perfluorotridecanoic Acid (PFTriA)	40.0	42.7		ng/L		107	72 - 132	2	30
Perfluorotetradecanoic acid (PFTeA)	40.0	37.1		ng/L		93	68 - 128	5	30
Perfluorooctane Sulfonamide (PFOSA)	40.0	45.1		ng/L		113	70 - 130	1	30
Perfluorodecanesulfonic acid (PFDS)	38.6	43.1		ng/L		112	68 - 128	0	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.5		ng/L		104	68 - 128	9	30
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	38.9		ng/L		97	67 - 127	0	30
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	41.9		ng/L		105	65 - 125	2	30
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	39.9		ng/L		105	66 - 126	9	30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	37.9		ng/L		99	67 - 127	12	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
18O2 PFHxS	99		25 - 150
13C4-PFHpa	102		25 - 150
13C4 PFOA	99		25 - 150
13C4 PFOS	99		25 - 150
13C5 PFNA	100		25 - 150
13C4 PFBA	97		25 - 150
13C2 PFHxA	100		25 - 150
13C2 PFDA	104		25 - 150
13C2 PFUnA	103		25 - 150
13C2 PFDoA	97		25 - 150
13C8 FOSA	96		25 - 150
13C5-PFPeA	100		25 - 150
13C2-PFTeDA	101		25 - 150
d3-NMeFOSAA	108		25 - 150
d5-NEtFOSAA	98		25 - 150
M2-6:2FTS	98		25 - 150
M2-8:2FTS	100		25 - 150
13C3-PFBS	94		25 - 150

TestAmerica Sacramento

QC Association Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

LCMS

Prep Batch: 243332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42314-1	MW-14	Total/NA	Water	3535	
320-42314-2	FB-1	Total/NA	Water	3535	
320-42314-3	MW-13	Total/NA	Water	3535	
320-42314-4	MW-5S	Total/NA	Water	3535	
320-42314-5	Equip Blank	Total/NA	Water	3535	
MB 320-243332/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-243332/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-243332/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 243502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42314-1	MW-14	Total/NA	Water	537 (modified)	243332
320-42314-2	FB-1	Total/NA	Water	537 (modified)	243332
320-42314-3	MW-13	Total/NA	Water	537 (modified)	243332
320-42314-4	MW-5S	Total/NA	Water	537 (modified)	243332
320-42314-5	Equip Blank	Total/NA	Water	537 (modified)	243332
MB 320-243332/1-A	Method Blank	Total/NA	Water	537 (modified)	243332
LCS 320-243332/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	243332
LCSD 320-243332/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	243332

Prep Batch: 243855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42404-1	MW-10	Total/NA	Water	3535	
320-42404-2	EB-3	Total/NA	Water	3535	
320-42404-3	MW-34	Total/NA	Water	3535	
320-42404-3 - DL	MW-34	Total/NA	Water	3535	
320-42404-4	MW-36	Total/NA	Water	3535	
320-42404-5	FB-3	Total/NA	Water	3535	
320-42404-6	MW-12	Total/NA	Water	3535	
320-42404-7	MW-36S	Total/NA	Water	3535	
320-42404-8	MW-8	Total/NA	Water	3535	
MB 320-243855/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-243855/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 244015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42404-1	MW-10	Total/NA	Water	537 (modified)	243855
320-42404-2	EB-3	Total/NA	Water	537 (modified)	243855
320-42404-3	MW-34	Total/NA	Water	537 (modified)	243855
320-42404-4	MW-36	Total/NA	Water	537 (modified)	243855
320-42404-5	FB-3	Total/NA	Water	537 (modified)	243855
320-42404-6	MW-12	Total/NA	Water	537 (modified)	243855
320-42404-7	MW-36S	Total/NA	Water	537 (modified)	243855
320-42404-8	MW-8	Total/NA	Water	537 (modified)	243855
MB 320-243855/1-A	Method Blank	Total/NA	Water	537 (modified)	243855
LCS 320-243855/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	243855

Prep Batch: 244124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42476-1	MW-37	Total/NA	Water	3535	
320-42476-2	EB-4	Total/NA	Water	3535	

TestAmerica Sacramento

QC Association Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

LCMS (Continued)

Prep Batch: 244124 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42476-3	FB-4	Total/NA	Water	3535	
MB 320-244124/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-244124/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-244124/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 244464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42476-1	MW-37	Total/NA	Water	537 (modified)	244124
320-42476-2	EB-4	Total/NA	Water	537 (modified)	244124
320-42476-3	FB-4	Total/NA	Water	537 (modified)	244124
MB 320-244124/1-A	Method Blank	Total/NA	Water	537 (modified)	244124
LCS 320-244124/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	244124
LCSD 320-244124/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	244124

Analysis Batch: 244611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42404-3 - DL	MW-34	Total/NA	Water	537 (modified)	243855

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-14

Date Collected: 08/20/18 13:55

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			291 mL	10.00 mL	243332	08/31/18 08:21	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			243502	09/01/18 10:57	D1R	TAL SAC

Client Sample ID: FB-1

Date Collected: 08/20/18 14:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			297.4 mL	10.00 mL	243332	08/31/18 08:21	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			243502	09/01/18 11:05	D1R	TAL SAC

Client Sample ID: MW-13

Date Collected: 08/20/18 16:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			291.7 mL	10.00 mL	243332	08/31/18 08:21	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			243502	09/01/18 11:13	D1R	TAL SAC

Client Sample ID: MW-5S

Date Collected: 08/20/18 16:10

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			275.3 mL	10.00 mL	243332	08/31/18 08:21	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			243502	09/01/18 11:28	D1R	TAL SAC

Client Sample ID: Equip Blank

Date Collected: 08/20/18 16:50

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			286.3 mL	10.00 mL	243332	08/31/18 08:21	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			243502	09/01/18 11:36	D1R	TAL SAC

Client Sample ID: MW-10

Date Collected: 08/22/18 11:05

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			283 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 19:40	ABH	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: EB-3

Date Collected: 08/22/18 15:45

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			274.2 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 19:47	ABH	TAL SAC

Client Sample ID: MW-34

Date Collected: 08/22/18 13:15

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			285.4 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 19:55	ABH	TAL SAC
Total/NA	Prep	3535	DL		285.4 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)	DL	5			244611	09/08/18 08:58	S1M	TAL SAC

Client Sample ID: MW-36

Date Collected: 08/22/18 15:00

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			307.6 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 20:03	ABH	TAL SAC

Client Sample ID: FB-3

Date Collected: 08/22/18 11:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			289.4 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 20:11	ABH	TAL SAC

Client Sample ID: MW-12

Date Collected: 08/22/18 11:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			302.2 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 20:19	ABH	TAL SAC

Client Sample ID: MW-36S

Date Collected: 08/22/18 16:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			249.2 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-36S

Date Collected: 08/22/18 16:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 20:27	ABH	TAL SAC

Client Sample ID: MW-8

Date Collected: 08/22/18 14:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			283.5 mL	10.00 mL	243855	09/05/18 06:50	SK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244015	09/05/18 20:34	ABH	TAL SAC

Client Sample ID: MW-37

Date Collected: 08/23/18 11:05

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			284.9 mL	10.00 mL	244124	09/06/18 10:15	KMK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244464	09/07/18 16:02	S1M	TAL SAC

Client Sample ID: EB-4

Date Collected: 08/23/18 11:45

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.9 mL	10.00 mL	244124	09/06/18 10:15	KMK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244464	09/07/18 16:09	S1M	TAL SAC

Client Sample ID: FB-4

Date Collected: 08/23/18 11:10

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			286.4 mL	10.00 mL	244124	09/06/18 10:15	KMK	TAL SAC
Total/NA	Analysis	537 (modified)		1			244464	09/07/18 16:17	S1M	TAL SAC

Laboratory References:

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

TestAmerica Sacramento

Accreditation/Certification Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

TestAmerica Sacramento

Method Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	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 = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-42314-1	MW-14	Water	08/20/18 13:55	08/21/18 09:10
320-42314-2	FB-1	Water	08/20/18 14:05	08/21/18 09:10
320-42314-3	MW-13	Water	08/20/18 16:05	08/21/18 09:10
320-42314-4	MW-5S	Water	08/20/18 16:10	08/21/18 09:10
320-42314-5	Equip Blank	Water	08/20/18 16:50	08/21/18 09:10
320-42404-1	MW-10	Water	08/22/18 11:05	08/23/18 09:40
320-42404-2	EB-3	Water	08/22/18 15:45	08/23/18 09:40
320-42404-3	MW-34	Water	08/22/18 13:15	08/23/18 09:40
320-42404-4	MW-36	Water	08/22/18 15:00	08/23/18 09:40
320-42404-5	FB-3	Water	08/22/18 11:30	08/23/18 09:40
320-42404-6	MW-12	Water	08/22/18 11:20	08/23/18 09:40
320-42404-7	MW-36S	Water	08/22/18 16:20	08/23/18 09:40
320-42404-8	MW-8	Water	08/22/18 14:30	08/23/18 09:40
320-42476-1	MW-37	Water	08/23/18 11:05	08/24/18 09:30
320-42476-2	EB-4	Water	08/23/18 11:45	08/24/18 09:30
320-42476-3	FB-4	Water	08/23/18 11:10	08/24/18 09:30

TestAmerica Buffalo

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

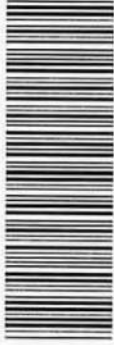
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: <u>Conner O'Brien</u> Company: <u>Woodard & Curran, Inc.</u> Address: <u>40 Shattuck Road Suite 110</u> City: <u>Andover</u> State: <u>MA</u> Zip: <u>01810</u> Phone: <u>203-699-6042(Tel)</u> Email: <u>coobrien@woodardcurran.com</u> Project Name: <u>Rouses Point</u> Site:		Sampler: <u>Conner O'Brien / San Taylor</u> Lab PM: <u>Mason, Becky C</u> Phone: <u>978-221-7768</u> E-Mail: <u>becky.mason@testamericainc.com</u>		COC No: <u>480-116864-26985 3</u> Page: <u>Page 3 of 3</u> Job #:		Carrier Tracking No(s):	
Analysis Requested				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Due Date Requested: TAT Requested (days): <u>7</u>		Field Filtered Sample (Yes or No) ☒		Perform MS/MSD (Yes or No) ☒		PFC, IDA - PFA's, Standard List (21 analytes) ☒	
Sample Identification <u>MW-14</u> <u>FB-1</u> <u>MW-13</u> <u>MW-5S</u> <u>Egip Blank</u>		Sample Date <u>8/20/18</u>	Sample Time <u>1355</u> <u>1405</u> <u>1605</u> <u>1610</u> <u>1650</u>	Sample Type (C=Comp, G=grab) <u>G</u> <u>G</u> <u>G</u> <u>G</u> <u>C</u>	Matrix (W=water, S=solid, O=oil, BT=tissue, A=air) <u>Water</u> <u>Water</u> <u>Water</u> <u>Water</u> <u>Water</u> <u>Water</u> <u>Water</u> <u>Water</u>	Total Number of containers: <u>1</u>	
Special Instructions/Note: 320-42314 Chain of Custody							
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological							
Deliverable Requested: ☒ I, II, III, IV, Other (specify) <u>Catalog B</u>							
Empty Kit Relinquished by:							
Relinquished by: <u>Conner O'Brien</u>		Date/Time: <u>8/20/18</u>		Company: <u>WTC</u>		Received by: <u>FedEx</u>	
Relinquished by:		Date/Time:		Company:		Received by: <u>Becky C</u>	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: ☒ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>2.1C</u>		Date/Time: <u>8/24/18</u>	
Company:		Date/Time:		Company:		Received by:	

Anherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.799

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact Company Name: <u>Woodward + Curran</u> Address: <u>40 Shattuck Road</u> City/State/Zip: <u>Andover, MA 01810</u> Phone: <u>978-221-7728</u> Fax: _____ Project Name: <u>Pfizer</u> Site: <u>Boyle's Point</u> PO #: <u>206910</u>		Project Manager: <u>Becky Mason</u> Tel/Fax: <u>bmason@testamerica.com</u> Analysis Turnaround Time ☐ CALENDAR DAYS ☐ WORKING DAYS TAT if different from Below ☒ 2 weeks ☒ 1 week ☐ 2 days ☐ 1 day		Site Contact: <u>Conner O'Brien</u> Lab Contact: _____ Perform MS / MSD (Y / N) _____ Filtered Sample (Y / N) _____		Date: <u>8/22/18</u> Carrier: <u>FedEx</u> COC No: <u>460-116864-285036</u> of <u>COCs</u> Sampler: <u>Mike O'Brien, Jan Taylor</u> For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.: Sample Specific Notes:							
Sample Identification MW-10 EB-3 MW-30 MW-36 FB-3 MW-12 MW-36S MW-8		Sample Date <u>8/22/18</u> <u>1545</u> <u>13:15</u> <u>1500</u> <u>1130</u> <u>1120</u> <u>1620</u> <u>1430</u>		Sample Time <u>11:05</u> <u>1545</u> <u>13:15</u> <u>1500</u> <u>1130</u> <u>1120</u> <u>1620</u> <u>1430</u>		Sample Type (G=Comp, G=Grab) <u>G</u> <u>G</u> <u>G</u> <u>G</u> <u>G</u> <u>G</u> <u>G</u> <u>G</u>		Matrix <u>GW</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>		# of Cont. <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u> <u>2</u>		Barcode  320-42404 Chain of Custody	
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other <u>7</u> 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: <u>Test America Project # 48003157</u> <u>under 2L of engine</u> <u>406001</u> Cooler Temp. (°C): <u>26</u> Obs'd: <u>26</u> Cor'd: <u>26</u> Therm ID No.: <u>A#2</u>													
Relinquished by: <u>[Signature]</u> Relinquished by: _____ Relinquished by: _____		Company: <u>WTC</u> Company: _____ Company: _____		Date/Time: <u>8/22/18</u> Date/Time: _____ Date/Time: _____		Received by: <u>FedEx</u> Received by: <u>[Signature]</u> Received in Laboratory by: _____		Company: _____ Company: <u>HP-San</u> Company: _____		Date/Time: <u>1735 8/22/18</u> Date/Time: <u>8/23/18</u> Date/Time: _____			

THE LEADER IN ENVIRONMENTAL TESTING

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 320-42314-1

Login Number: 42314

List Number: 1

Creator: Her, David A

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	406802
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?	True	
There are no discrepancies between the sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 320-42314-1

Login Number: 42404

List Source: TestAmerica Sacramento

List Number: 1

Creator: Nelson, Kym D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	406800
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?	True	
There are no discrepancies between the sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 320-42314-1

Login Number: 42476

List Source: TestAmerica Sacramento

List Number: 1

Creator: Turpen, Troy

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	406801
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?	True	
There are no discrepancies between the sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Tel: (916)373-5600

TestAmerica Job ID: 320-42375-1

Client Project/Site: Rouses Point

For:

Woodard & Curran, Inc.

213 Court St

4th Floor

Middletown, Connecticut 06457

Attn: Ms. Anne Proctor



Authorized for release by:

9/5/2018 12:42:30 PM

Anthony Strollo, Project Management Assistant I

anthony.strollo@testamericainc.com

Designee for

Becky Mason, Project Manager II

(413)572-4000

becky.mason@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
*	Isotope Dilution analyte is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Job ID: 320-42375-1

Laboratory: TestAmerica Sacramento

Narrative

Job Narrative 320-42375-1

Comments

No additional comments.

Receipt

The samples were received on 8/22/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4° C.

LCMS

Method(s) 537 (modified): Due to the high concentration of Perfluoropentanoic acid (PFPeA), the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-241889 and analytical batch 320-242577 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 537 (modified): Results for samples MW-30 (320-42375-8) were reported from the analysis of a diluted extract due to matrix issues in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2FTS in the following samples: MW-34S (320-42375-5) and DUP-1 (320-42375-6). Re-analysis were performed with concurring results. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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

Organic Prep

Method(s) 3535: The following samples are yellow: MW-33 (320-42375-1), MW-33 (320-42375-1[MS]), MW-33 (320-42375-1[MSD]) and MW-5 (320-42375-2).

Method code: 3535 PFC.

Method(s) 3535: The following sample have very fine black sediment at the bottom of the bottle: MW-33S (320-42375-7) and MW-30S (320-42375-9).

Method code: 3535 PFC.

Method(s) 3535: The following samples were yellow after extraction: MW-5 (320-42375-2).

Method code: 3535 PFC.

Method(s) 3535: The following sample had sediment at the bottom of the centrifuge tube after extraction: MW-30S (320-42375-9).

Method code: 3535 PFC

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

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33

Lab Sample ID: 320-42375-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	5.4		1.7	0.21	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.4		1.7	0.71	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.42	J	1.7	0.17	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.46	J B	1.7	0.14	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	88		1.7	0.29	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	170		1.7	0.41	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	42		1.7	0.49	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	22		17	1.7	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 320-42375-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	9.1		1.8	0.23	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		1.8	0.77	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.81	J	1.8	0.24	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.32	J	1.8	0.18	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.52	J B	1.8	0.15	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.2		1.8	0.49	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	64		1.8	0.32	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	110		1.8	0.44	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	28		1.8	0.52	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	10	J	18	1.8	ng/L	1			537 (modified)	Total/NA

Client Sample ID: FB-2

Lab Sample ID: 320-42375-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B	1.7	0.15	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.8	J	17	1.7	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 320-42375-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	4.2		1.7	0.21	ng/L	1			537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.71	ng/L	1			537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	4.4		1.7	0.22	ng/L	1			537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.37	J	1.7	0.17	ng/L	1			537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.0	J B	1.7	0.14	ng/L	1			537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	13		1.7	0.45	ng/L	1			537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	9.6		1.7	0.29	ng/L	1			537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	8.2		1.7	0.41	ng/L	1			537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.1		1.7	0.48	ng/L	1			537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.26	ng/L	1			537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.29	J	1.7	0.16	ng/L	1			537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J	17	1.7	ng/L	1			537 (modified)	Total/NA

Client Sample ID: MW-34S

Lab Sample ID: 320-42375-5

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-34S (Continued)

Lab Sample ID: 320-42375-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	6.6		1.8	0.23	ng/L		1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	10		1.8	0.77	ng/L		1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	6.3		1.8	0.25	ng/L		1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.68	J	1.8	0.18	ng/L		1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	J B	1.8	0.15	ng/L		1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.49	ng/L		1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L		1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.8		1.8	0.45	ng/L		1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.2		1.8	0.53	ng/L		1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.1	J	1.8	1.0	ng/L		1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	3.7		1.8	0.28	ng/L		1		537 (modified)	Total/NA
Perfluorooctane Sulfonamide (PFOSA)	3.8		1.8	0.32	ng/L		1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.41	J	1.8	0.17	ng/L		1		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J	18	1.8	ng/L		1		537 (modified)	Total/NA

Client Sample ID: DUP-1

Lab Sample ID: 320-42375-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	6.4		1.8	0.22	ng/L		1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	10		1.8	0.75	ng/L		1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	6.4		1.8	0.24	ng/L		1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.53	J	1.8	0.18	ng/L		1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B	1.8	0.15	ng/L		1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.48	ng/L		1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.31	ng/L		1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.6		1.8	0.43	ng/L		1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.4		1.8	0.51	ng/L		1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.99	J	1.8	0.98	ng/L		1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	3.6		1.8	0.27	ng/L		1		537 (modified)	Total/NA
Perfluorooctane Sulfonamide (PFOSA)	3.6		1.8	0.31	ng/L		1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	1.8	0.17	ng/L		1		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J	18	1.8	ng/L		1		537 (modified)	Total/NA

Client Sample ID: MW-33S

Lab Sample ID: 320-42375-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	4.3		1.7	0.21	ng/L		1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		1.7	0.71	ng/L		1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.0	J	1.7	0.23	ng/L		1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.95	J	1.7	0.17	ng/L		1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.50	J B	1.7	0.14	ng/L		1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.3		1.7	0.45	ng/L		1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	8.0		1.7	0.29	ng/L		1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	10		1.7	0.41	ng/L		1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.8		1.7	0.49	ng/L		1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.34	J	1.7	0.26	ng/L		1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33S (Continued)

Lab Sample ID: 320-42375-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J	17	1.7	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-30

Lab Sample ID: 320-42375-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	73		1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	57		1.7	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	3.2		1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.3	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J B	1.7	0.15	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.1		1.7	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	240		1.7	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	300		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.34	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	5.2	J	17	1.7	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA) - DL	730		17	4.2	ng/L	10		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2) - DL	740		170	17	ng/L	10		537 (modified)	Total/NA

Client Sample ID: MW-30S

Lab Sample ID: 320-42375-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoroheptanoic acid (PFHpA)	7.2		1.7	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	16		1.7	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.6	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.51	J	1.7	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.3	B	1.7	0.15	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.5		1.7	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	7.3		1.7	0.30	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	7.4		1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.7		1.7	0.50	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L	1		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	3.0	J	17	1.7	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EB-2

Lab Sample ID: 320-42375-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B	1.8	0.15	ng/L	1		537 (modified)	Total/NA
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.9	J	18	1.8	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33
Date Collected: 08/21/18 12:40
Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-1
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.4		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctanoic acid (PFOA)	2.4		1.7	0.71	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorobutanesulfonic acid (PFBS)	0.42	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorohexanesulfonic acid (PFHxS)	0.46	J B	1.7	0.14	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorobutanoic acid (PFBA)	88		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoropentanoic acid (PFPeA)	170		1.7	0.41	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorohexanoic acid (PFHxA)	42		1.7	0.49	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/28/18 12:42	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/28/18 12:42	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 12:42	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	22		17	1.7	ng/L		08/24/18 11:32	08/28/18 12:42	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 12:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C4-PFHpA	99		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C4 PFOA	96		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C4 PFOS	88		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C5 PFNA	89		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C4 PFBA	90		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C2 PFHxA	100		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C2 PFDA	87		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C2 PFUnA	87		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C2 PFDoA	93		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C8 FOSA	87		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C5-PFPeA	96		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C2-PFTeDA	104		25 - 150	08/24/18 11:32	08/28/18 12:42	1
d3-NMeFOSAA	97		25 - 150	08/24/18 11:32	08/28/18 12:42	1
d5-NEtFOSAA	105		25 - 150	08/24/18 11:32	08/28/18 12:42	1
M2-6:2FTS	117		25 - 150	08/24/18 11:32	08/28/18 12:42	1
M2-8:2FTS	83		25 - 150	08/24/18 11:32	08/28/18 12:42	1
13C3-PFBS	96		25 - 150	08/24/18 11:32	08/28/18 12:42	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-5

Date Collected: 08/21/18 10:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	9.1		1.8	0.23	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctanoic acid (PFOA)	7.7		1.8	0.77	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorononanoic acid (PFNA)	0.81	J	1.8	0.24	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorobutanesulfonic acid (PFBS)	0.32	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorohexanesulfonic acid (PFHxS)	0.52	J B	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctanesulfonic acid (PFOS)	5.2		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorobutanoic acid (PFBA)	64		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoropentanoic acid (PFPeA)	110		1.8	0.44	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorohexanoic acid (PFHxA)	28		1.8	0.52	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.99	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:05	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 13:05	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:05	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	10	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:05	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:05	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C4-PFHxA	98		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C4 PFOA	95		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C4 PFOS	87		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C5 PFNA	91		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C4 PFBA	84		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C2 PFHxA	98		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C2 PFDA	84		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C2 PFUnA	85		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C2 PFDoA	93		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C8 FOSA	86		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C5-PFPeA	96		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C2-PFTeDA	102		25 - 150	08/24/18 11:32	08/28/18 13:05	1
d3-NMeFOSAA	97		25 - 150	08/24/18 11:32	08/28/18 13:05	1
d5-NEtFOSAA	105		25 - 150	08/24/18 11:32	08/28/18 13:05	1
M2-6:2FTS	119		25 - 150	08/24/18 11:32	08/28/18 13:05	1
M2-8:2FTS	88		25 - 150	08/24/18 11:32	08/28/18 13:05	1
13C3-PFBS	89		25 - 150	08/24/18 11:32	08/28/18 13:05	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: FB-2

Date Collected: 08/21/18 10:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.94	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/28/18 13:13	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 13:13	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 13:13	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.8	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 13:13	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 13:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C4-PFHpA	101		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C4 PFOA	97		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C4 PFOS	91		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C5 PFNA	91		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C4 PFBA	99		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C2 PFHxA	107		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C2 PFDA	86		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C2 PFUnA	91		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C2 PFDoA	92		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C8 FOSA	85		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C5-PFPeA	98		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C2-PFTeDA	99		25 - 150	08/24/18 11:32	08/28/18 13:13	1
d3-NMeFOSAA	96		25 - 150	08/24/18 11:32	08/28/18 13:13	1
d5-NEtFOSAA	100		25 - 150	08/24/18 11:32	08/28/18 13:13	1
M2-6:2FTS	120		25 - 150	08/24/18 11:32	08/28/18 13:13	1
M2-8:2FTS	84		25 - 150	08/24/18 11:32	08/28/18 13:13	1
13C3-PFBS	98		25 - 150	08/24/18 11:32	08/28/18 13:13	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-7

Date Collected: 08/21/18 14:55

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.2		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.71	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorononanoic acid (PFNA)	4.4		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorobutanesulfonic acid (PFBS)	0.37	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	J B	1.7	0.14	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctanesulfonic acid (PFOS)	13		1.7	0.45	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorobutanoic acid (PFBA)	9.6		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoropentanoic acid (PFPeA)	8.2		1.7	0.41	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorohexanoic acid (PFHxA)	4.1		1.7	0.48	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.26	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.29	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 13:21	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/28/18 13:21	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 13:21	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 13:21	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 13:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	91		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4-PFHpa	105		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFOA	95		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFOS	83		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C5 PFNA	89		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFBA	77		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFHxA	100		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFDA	81		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFUnA	85		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFDoA	90		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C8 FOSA	82		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C5-PFPeA	95		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2-PFTeDA	97		25 - 150	08/24/18 11:32	08/28/18 13:21	1
d3-NMeFOSAA	91		25 - 150	08/24/18 11:32	08/28/18 13:21	1
d5-NEtFOSAA	100		25 - 150	08/24/18 11:32	08/28/18 13:21	1
M2-6:2FTS	109		25 - 150	08/24/18 11:32	08/28/18 13:21	1
M2-8:2FTS	82		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C3-PFBS	86		25 - 150	08/24/18 11:32	08/28/18 13:21	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-34S

Lab Sample ID: 320-42375-5

Date Collected: 08/21/18 11:35

Matrix: Water

Date Received: 08/22/18 09:30

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.6		1.8	0.23	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctanoic acid (PFOA)	10		1.8	0.77	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorononanoic acid (PFNA)	6.3		1.8	0.25	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorobutanesulfonic acid (PFBS)	0.68	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J B	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoropentanoic acid (PFPeA)	5.8		1.8	0.45	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorohexanoic acid (PFHxA)	5.2		1.8	0.53	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoroundecanoic acid (PFUnA)	1.1	J	1.8	1.0	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorodecanoic acid (PFDA)	3.7		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctane Sulfonamide (PFOSA)	3.8		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.41	J	1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:29	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:29	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	79		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4-PFHxA	87		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFOA	91		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFOS	79		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C5 PFNA	89		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFBA	48		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFHxA	82		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFDA	83		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFUnA	78		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFDoA	82		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C8 FOSA	75		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C5-PFPeA	74		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2-PFTeDA	81		25 - 150				08/24/18 11:32	08/28/18 13:29	1
d3-NMeFOSAA	99		25 - 150				08/24/18 11:32	08/28/18 13:29	1
d5-NEtFOSAA	94		25 - 150				08/24/18 11:32	08/28/18 13:29	1
M2-6:2FTS	185	*	25 - 150				08/24/18 11:32	08/28/18 13:29	1
M2-8:2FTS	94		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C3-PFBS	75		25 - 150				08/24/18 11:32	08/28/18 13:29	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: DUP-1

Date Collected: 08/21/18 00:00

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.4		1.8	0.22	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctanoic acid (PFOA)	10		1.8	0.75	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorononanoic acid (PFNA)	6.4		1.8	0.24	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorobutanesulfonic acid (PFBS)	0.53	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.48	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoropentanoic acid (PFPeA)	5.6		1.8	0.43	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorohexanoic acid (PFHxA)	5.4		1.8	0.51	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoroundecanoic acid (PFUnA)	0.99	J	1.8	0.98	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorodecanoic acid (PFDA)	3.6		1.8	0.27	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctane Sulfonamide (PFOSA)	3.6		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:36	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		08/24/18 11:32	08/28/18 13:36	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:36	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:36	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	77		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4-PFHxA	87		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFOA	92		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFOS	81		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C5 PFNA	89		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFBA	48		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFHxA	81		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFDA	83		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFUnA	79		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFDoA	82		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C8 FOSA	76		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C5-PFPeA	75		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2-PFTeDA	91		25 - 150				08/24/18 11:32	08/28/18 13:36	1
d3-NMeFOSAA	94		25 - 150				08/24/18 11:32	08/28/18 13:36	1
d5-NEtFOSAA	93		25 - 150				08/24/18 11:32	08/28/18 13:36	1
M2-6:2FTS	183	*	25 - 150				08/24/18 11:32	08/28/18 13:36	1
M2-8:2FTS	101		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C3-PFBS	79		25 - 150				08/24/18 11:32	08/28/18 13:36	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33S

Lab Sample ID: 320-42375-7

Date Collected: 08/21/18 10:40

Matrix: Water

Date Received: 08/22/18 09:30

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.3		1.7	0.21	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctanoic acid (PFOA)	3.9		1.7	0.71	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorononanoic acid (PFNA)	1.0	J	1.7	0.23	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorobutanesulfonic acid (PFBS)	0.95	J	1.7	0.17	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorohexanesulfonic acid (PFHxS)	0.50	J B	1.7	0.14	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctanesulfonic acid (PFOS)	2.3		1.7	0.45	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorobutanoic acid (PFBA)	8.0		1.7	0.29	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoropentanoic acid (PFPeA)	10		1.7	0.41	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorohexanoic acid (PFHxA)	5.8		1.7	0.49	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorodecanoic acid (PFDA)	0.34	J	1.7	0.26	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/29/18 10:08	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/29/18 10:08	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/29/18 10:08	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J	17	1.7	ng/L		08/24/18 11:32	08/29/18 10:08	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/29/18 10:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	82		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C4-PFHpA	89		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C4 PFOA	95		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C4 PFOS	81		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C5 PFNA	87		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C4 PFBA	43		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C2 PFHxA	81		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C2 PFDA	89		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C2 PFUnA	84		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C2 PFDoA	82		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C8 FOSA	75		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C5-PFPeA	72		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C2-PFTeDA	96		25 - 150	08/24/18 11:32	08/29/18 10:08	1
d3-NMeFOSAA	146		25 - 150	08/24/18 11:32	08/29/18 10:08	1
d5-NEtFOSAA	98		25 - 150	08/24/18 11:32	08/29/18 10:08	1
M2-6:2FTS	149		25 - 150	08/24/18 11:32	08/29/18 10:08	1
M2-8:2FTS	118		25 - 150	08/24/18 11:32	08/29/18 10:08	1
13C3-PFBS	79		25 - 150	08/24/18 11:32	08/29/18 10:08	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30

Date Collected: 08/21/18 16:10

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-8

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	73		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctanoic acid (PFOA)	57		1.7	0.74	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorononanoic acid (PFNA)	3.2		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorobutanesulfonic acid (PFBS)	1.3	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J B	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctanesulfonic acid (PFOS)	2.1		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorobutanoic acid (PFBA)	240		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorohexanoic acid (PFHxA)	300		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.34	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 14:00	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 14:00	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 14:00	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	5.2	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 14:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4-PFHpA	97		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFOA	92		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFOS	90		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C5 PFNA	92		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFBA	81		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFHxA	93		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFDA	85		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFUnA	86		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFDoA	91		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C8 FOSA	89		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2-PFTeDA	101		25 - 150	08/24/18 11:32	08/28/18 14:00	1
d3-NMeFOSAA	99		25 - 150	08/24/18 11:32	08/28/18 14:00	1
d5-NEtFOSAA	102		25 - 150	08/24/18 11:32	08/28/18 14:00	1
M2-8:2FTS	84		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C3-PFBS	87		25 - 150	08/24/18 11:32	08/28/18 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	730		17	4.2	ng/L		08/24/18 11:32	08/29/18 10:16	10
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	740		170	17	ng/L		08/24/18 11:32	08/29/18 10:16	10

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30

Date Collected: 08/21/18 16:10

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-8

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5-PFPeA	94		25 - 150	08/24/18 11:32	08/29/18 10:16	10
M2-6:2FTS	118		25 - 150	08/24/18 11:32	08/29/18 10:16	10

Client Sample ID: MW-30S

Date Collected: 08/21/18 16:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-9

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7.2		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctanoic acid (PFOA)	16		1.7	0.73	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorononanoic acid (PFNA)	1.6	J	1.7	0.23	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorobutanesulfonic acid (PFBS)	0.51	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorohexanesulfonic acid (PFHxS)	4.3	B	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctanesulfonic acid (PFOS)	5.5		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorobutanoic acid (PFBA)	7.3		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoropentanoic acid (PFPeA)	7.4		1.7	0.42	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorohexanoic acid (PFHxA)	5.7		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 14:08	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 14:08	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	3.0	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	79		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4-PFHpa	89		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFOA	86		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFOS	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C5 PFNA	83		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFBA	53		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFHxA	85		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFDA	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFUnA	78		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFDoA	80		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C8 FOSA	75		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C5-PFPeA	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2-PFTeDA	87		25 - 150				08/24/18 11:32	08/28/18 14:08	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30S

Date Collected: 08/21/18 16:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-9

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	87		25 - 150	08/24/18 11:32	08/28/18 14:08	1
d5-NEtFOSAA	91		25 - 150	08/24/18 11:32	08/28/18 14:08	1
M2-6:2FTS	137		25 - 150	08/24/18 11:32	08/28/18 14:08	1
M2-8:2FTS	76		25 - 150	08/24/18 11:32	08/28/18 14:08	1
13C3-PFBS	77		25 - 150	08/24/18 11:32	08/28/18 14:08	1

Client Sample ID: EB-2

Date Collected: 08/21/18 16:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-10

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.76	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorobutanoic acid (PFBA)	ND		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/24/18 11:32	08/28/18 14:15	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 14:15	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.9	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	84		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4-PFHxS	92		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFOA	91		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFOS	81		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C5 PFNA	88		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFBA	93		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFHxA	94		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFDA	84		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFUnA	86		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFDoA	91		25 - 150				08/24/18 11:32	08/28/18 14:15	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: EB-2

Date Collected: 08/21/18 16:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-10

Matrix: Water

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 FOSA	81		25 - 150	08/24/18 11:32	08/28/18 14:15	1
13C5-PFPeA	92		25 - 150	08/24/18 11:32	08/28/18 14:15	1
13C2-PFTeDA	120		25 - 150	08/24/18 11:32	08/28/18 14:15	1
d3-NMeFOSAA	92		25 - 150	08/24/18 11:32	08/28/18 14:15	1
d5-NEtFOSAA	103		25 - 150	08/24/18 11:32	08/28/18 14:15	1
M2-6:2FTS	121		25 - 150	08/24/18 11:32	08/28/18 14:15	1
M2-8:2FTS	89		25 - 150	08/24/18 11:32	08/28/18 14:15	1
13C3-PFBS	87		25 - 150	08/24/18 11:32	08/28/18 14:15	1

TestAmerica Sacramento

Isotope Dilution Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxS (25-150)	PFHpA (25-150)	PFOA (25-150)	PFOS (25-150)	PFNA (25-150)	PFBA (25-150)	PFHxA (25-150)	PFDA (25-150)
320-42375-1	MW-33	90	99	96	88	89	90	100	87
320-42375-1 MS	MW-33	89	102	94	89	89	89	97	81
320-42375-1 MSD	MW-33	95	100	95	91	93	93	98	83
320-42375-2	MW-5	90	98	95	87	91	84	98	84
320-42375-3	FB-2	94	101	97	91	91	99	107	86
320-42375-4	MW-7	91	105	95	83	89	77	100	81
320-42375-5	MW-34S	79	87	91	79	89	48	82	83
320-42375-6	DUP-1	77	87	92	81	89	48	81	83
320-42375-7	MW-33S	82	89	95	81	87	43	81	89
320-42375-8	MW-30	90	97	92	90	92	81	93	85
320-42375-8 - DL	MW-30								
320-42375-9	MW-30S	79	89	86	77	83	53	85	77
320-42375-10	EB-2	84	92	91	81	88	93	94	84
LCS 320-241889/2-A	Lab Control Sample	89	96	89	85	87	96	94	82
MB 320-241889/1-A	Method Blank	91	92	95	89	90	96	97	84

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (25-150)	PFDaA (25-150)	PFOSA (25-150)	PFPeA (25-150)	PFTDA (25-150)	-NMeFOS, (25-150)	-NEtFOS/ (25-150)	M262FTS (25-150)
320-42375-1	MW-33	87	93	87	96	104	97	105	117
320-42375-1 MS	MW-33	84	88	84	94	100	101	105	112
320-42375-1 MSD	MW-33	87	94	86	101	100	97	103	105
320-42375-2	MW-5	85	93	86	96	102	97	105	119
320-42375-3	FB-2	91	92	85	98	99	96	100	120
320-42375-4	MW-7	85	90	82	95	97	91	100	109
320-42375-5	MW-34S	78	82	75	74	81	99	94	185 *
320-42375-6	DUP-1	79	82	76	75	91	94	93	183 *
320-42375-7	MW-33S	84	82	75	72	96	146	98	149
320-42375-8	MW-30	86	91	89		101	99	102	
320-42375-8 - DL	MW-30				94				118
320-42375-9	MW-30S	78	80	75	77	87	87	91	137
320-42375-10	EB-2	86	91	81	92	120	92	103	121
LCS 320-241889/2-A	Lab Control Sample	85	88	82	99	89	94	99	103
MB 320-241889/1-A	Method Blank	84	89	82	99	98	94	100	122

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (25-150)	3C3-PFB: (25-150)
320-42375-1	MW-33	83	96
320-42375-1 MS	MW-33	84	92
320-42375-1 MSD	MW-33	80	93
320-42375-2	MW-5	88	89
320-42375-3	FB-2	84	98
320-42375-4	MW-7	82	86
320-42375-5	MW-34S	94	75
320-42375-6	DUP-1	101	79
320-42375-7	MW-33S	118	79
320-42375-8	MW-30	84	87
320-42375-8 - DL	MW-30		
320-42375-9	MW-30S	76	77

TestAmerica Sacramento

Isotope Dilution Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)	
		M282FTS (25-150)	3C3-PFBs (25-150)
320-42375-10	EB-2	89	87
LCS 320-241889/2-A	Lab Control Sample	81	90
MB 320-241889/1-A	Method Blank	85	89

Surrogate Legend

PFHxS = 18O2 PFHxS
PFHpA = 13C4-PFHpA
PFOA = 13C4 PFOA
PFOS = 13C4 PFOS
PFNA = 13C5 PFNA
PFBA = 13C4 PFBA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDaA = 13C2 PFDaA
PFOSA = 13C8 FOSA
PFPeA = 13C5-PFPeA
PFTDA = 13C2-PFTeDA
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M262FTS = M2-6:2FTS
M282FTS = M2-8:2FTS
13C3-PFBS = 13C3-PFBS

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-241889/1-A

Matrix: Water

Analysis Batch: 242577

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 241889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorohexanesulfonic acid (PFHxS)	0.333	J	2.0	0.17	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorobutanoic acid (PFBA)	ND		2.0	0.35	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		08/24/18 08:53	08/28/18 12:26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		08/24/18 08:53	08/28/18 12:26	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		08/24/18 08:53	08/28/18 12:26	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		08/24/18 08:53	08/28/18 12:26	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		08/24/18 08:53	08/28/18 12:26	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		08/24/18 08:53	08/28/18 12:26	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	91		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C4-PFHpa	92		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C4 PFOA	95		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C4 PFOS	89		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C5 PFNA	90		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C4 PFBA	96		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C2 PFHxA	97		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C2 PFDA	84		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C2 PFUnA	84		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C2 PFDoA	89		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C8 FOSA	82		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C5-PFPeA	99		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C2-PFTeDA	98		25 - 150	08/24/18 08:53	08/28/18 12:26	1
d3-NMeFOSAA	94		25 - 150	08/24/18 08:53	08/28/18 12:26	1
d5-NEtFOSAA	100		25 - 150	08/24/18 08:53	08/28/18 12:26	1
M2-6:2FTS	122		25 - 150	08/24/18 08:53	08/28/18 12:26	1
M2-8:2FTS	85		25 - 150	08/24/18 08:53	08/28/18 12:26	1
13C3-PFBS	89		25 - 150	08/24/18 08:53	08/28/18 12:26	1

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

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

Lab Sample ID: LCS 320-241889/2-A

Matrix: Water

Analysis Batch: 242577

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 241889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluoroheptanoic acid (PFHpA)	40.0	39.6		ng/L		99	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	41.0		ng/L		102	64 - 124
Perfluorononanoic acid (PFNA)	40.0	39.7		ng/L		99	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	37.0		ng/L		105	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.5		ng/L		95	63 - 123
Perfluorooctanesulfonic acid (PFOS)	37.1	39.4		ng/L		106	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	40.1		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	38.0		ng/L		95	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	38.7		ng/L		97	66 - 126
Perfluoroundecanoic acid (PFUnA)	40.0	40.9		ng/L		102	60 - 120
Perfluorodecanoic acid (PFDA)	40.0	41.1		ng/L		103	69 - 129
Perfluorododecanoic acid (PFDoA)	40.0	38.0		ng/L		95	71 - 131
Perfluorotridecanoic Acid (PFTriA)	40.0	41.2		ng/L		103	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	39.1		ng/L		98	68 - 128
Perfluorooctane Sulfonamide (PFOSA)	40.0	40.7		ng/L		102	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	41.9		ng/L		109	68 - 128
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.1		ng/L		108	68 - 128
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	39.6		ng/L		99	67 - 127
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	40.4		ng/L		101	65 - 125
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	39.8		ng/L		105	66 - 126
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	41.5		ng/L		108	67 - 127

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	89		25 - 150
13C4-PFHxA	96		25 - 150
13C4 PFOA	89		25 - 150
13C4 PFOS	85		25 - 150
13C5 PFNA	87		25 - 150
13C4 PFBA	96		25 - 150
13C2 PFHxA	94		25 - 150
13C2 PFDA	82		25 - 150
13C2 PFUnA	85		25 - 150
13C2 PFDoA	88		25 - 150
13C8 FOSA	82		25 - 150
13C5-PFPeA	99		25 - 150
13C2-PFTeDA	89		25 - 150

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

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

Lab Sample ID: LCS 320-241889/2-A

Matrix: Water

Analysis Batch: 242577

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 241889

<i>Isotope Dilution</i>	<i>LCS %Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>
d3-NMeFOSAA	94		25 - 150
d5-NEtFOSAA	99		25 - 150
M2-6:2FTS	103		25 - 150
M2-8:2FTS	81		25 - 150
13C3-PFBS	90		25 - 150

Lab Sample ID: 320-42375-1 MS

Matrix: Water

Analysis Batch: 242577

Client Sample ID: MW-33

Prep Type: Total/NA

Prep Batch: 241889

Top Bottom 24700										
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Perfluoroheptanoic acid (PFHpA)	5.4		34.3	39.9		ng/L		101	66 - 126	
Perfluorooctanoic acid (PFOA)	2.4		34.4	36.9		ng/L		100	64 - 124	
Perfluorononanoic acid (PFNA)	ND		34.3	34.4		ng/L		100	68 - 128	
Perfluorobutanesulfonic acid (PFBS)	0.42	J	30.3	32.2		ng/L		105	73 - 133	
Perfluorohexanesulfonic acid (PFHxS)	0.46	J B	31.2	30.3		ng/L		96	63 - 123	
Perfluorooctanesulfonic acid (PFOS)	ND		31.8	33.0		ng/L		104	67 - 127	
Perfluorobutanoic acid (PFBA)	88		34.3	123		ng/L		103	70 - 130	
Perfluoropentanoic acid (PFPeA)	170		34.3	209	4	ng/L		107	66 - 126	
Perfluorohexanoic acid (PFHxA)	42		34.3	76.1		ng/L		99	66 - 126	
Perfluoroundecanoic acid (PFUnA)	ND		34.3	37.0		ng/L		108	60 - 120	
Perfluorodecanoic acid (PFDA)	ND		34.3	37.6		ng/L		109	69 - 129	
Perfluorododecanoic acid (PFDoA)	ND		34.3	35.4		ng/L		103	71 - 131	
Perfluorotridecanoic Acid (PFTriA)	ND		34.3	37.2		ng/L		108	72 - 132	
Perfluorotetradecanoic acid (PFTeA)	ND		34.3	34.4		ng/L		100	68 - 128	
Perfluorooctane Sulfonamide (PFOSA)	ND		34.3	35.8		ng/L		104	70 - 130	
Perfluorodecanesulfonic acid (PFDS)	ND		33.1	34.1		ng/L		103	68 - 128	
Perfluoroheptanesulfonic Acid (PFHpS)	ND		32.7	35.0		ng/L		107	68 - 128	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		34.3	32.9		ng/L		96	67 - 127	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		34.3	33.6		ng/L		98	65 - 125	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	22		32.5	54.5		ng/L		100	66 - 126	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		32.9	32.1		ng/L		98	67 - 127	
	MS	MS								
Isotope Dilution	%Recovery	Qualifier	Limits							
18O2 PFHxS	89		25 - 150							
13C4-PFHpA	102		25 - 150							

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

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

Lab Sample ID: 320-42375-1 MS

Matrix: Water

Analysis Batch: 242577

Client Sample ID: MW-33

Prep Type: Total/NA

Prep Batch: 241889

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFOA	94		25 - 150
13C4 PFOS	89		25 - 150
13C5 PFNA	89		25 - 150
13C4 PFBA	89		25 - 150
13C2 PFHxA	97		25 - 150
13C2 PFDA	81		25 - 150
13C2 PFUnA	84		25 - 150
13C2 PFDoA	88		25 - 150
13C8 FOSA	84		25 - 150
13C5-PFPeA	94		25 - 150
13C2-PFTeDA	100		25 - 150
d3-NMeFOSAA	101		25 - 150
d5-NEtFOSAA	105		25 - 150
M2-6:2FTS	112		25 - 150
M2-8:2FTS	84		25 - 150
13C3-PFBS	92		25 - 150

Lab Sample ID: 320-42375-1 MSD

Matrix: Water

Analysis Batch: 242577

Client Sample ID: MW-33

Prep Type: Total/NA

Prep Batch: 241889

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluoroheptanoic acid (PFHpA)	5.4		34.3	39.3		ng/L		99	66 - 126	2	30
Perfluorooctanoic acid (PFOA)	2.4		34.3	36.6		ng/L		100	64 - 124	1	30
Perfluorononanoic acid (PFNA)	ND		34.3	34.2		ng/L		100	68 - 128	1	30
Perfluorobutanesulfonic acid (PFBS)	0.42	J	30.3	33.6		ng/L		109	73 - 133	4	30
Perfluorohexanesulfonic acid (PFHxS)	0.46	J B	31.2	30.1		ng/L		95	63 - 123	0	30
Perfluorooctanesulfonic acid (PFOS)	ND		31.8	32.3		ng/L		102	67 - 127	2	30
Perfluorobutanoic acid (PFBA)	88		34.3	118		ng/L		88	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	170		34.3	191	4	ng/L		56	66 - 126	9	30
Perfluorohexanoic acid (PFHxA)	42		34.3	74.5		ng/L		95	66 - 126	2	30
Perfluoroundecanoic acid (PFUnA)	ND		34.3	35.6		ng/L		104	60 - 120	4	30
Perfluorodecanoic acid (PFDA)	ND		34.3	37.5		ng/L		109	69 - 129	0	30
Perfluorododecanoic acid (PFDoA)	ND		34.3	32.8		ng/L		96	71 - 131	8	30
Perfluorotridecanoic Acid (PFTriA)	ND		34.3	34.8		ng/L		102	72 - 132	7	30
Perfluorotetradecanoic acid (PFTeA)	ND		34.3	33.7		ng/L		98	68 - 128	2	30
Perfluorooctane Sulfonamide (PFOSA)	ND		34.3	37.3		ng/L		109	70 - 130	4	30
Perfluorodecanesulfonic acid (PFDS)	ND		33.0	36.0		ng/L		109	68 - 128	6	30
Perfluoroheptanesulfonic Acid (PFHpS)	ND		32.6	35.1		ng/L		108	68 - 128	0	30

TestAmerica Sacramento

QC Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

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

Lab Sample ID: 320-42375-1 MSD

Matrix: Water

Analysis Batch: 242577

Client Sample ID: MW-33

Prep Type: Total/NA

Prep Batch: 241889

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		34.3	36.0		ng/L		105	67 - 127	9	30
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		34.3	34.4		ng/L		100	65 - 125	2	30
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	22		32.5	54.6		ng/L		100	66 - 126	0	30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		32.8	36.3		ng/L		110	67 - 127	12	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
18O2 PFHxS	95		25 - 150
13C4-PFHpA	100		25 - 150
13C4 PFOA	95		25 - 150
13C4 PFOS	91		25 - 150
13C5 PFNA	93		25 - 150
13C4 PFBA	93		25 - 150
13C2 PFHxA	98		25 - 150
13C2 PFDA	83		25 - 150
13C2 PFUnA	87		25 - 150
13C2 PFDoA	94		25 - 150
13C8 FOSA	86		25 - 150
13C5-PFPeA	101		25 - 150
13C2-PFTeDA	100		25 - 150
d3-NMeFOSAA	97		25 - 150
d5-NEtFOSAA	103		25 - 150
M2-6:2FTS	105		25 - 150
M2-8:2FTS	80		25 - 150
13C3-PFBS	93		25 - 150

TestAmerica Sacramento

QC Association Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

LCMS

Prep Batch: 241889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42375-1	MW-33	Total/NA	Water	3535	
320-42375-2	MW-5	Total/NA	Water	3535	
320-42375-3	FB-2	Total/NA	Water	3535	
320-42375-4	MW-7	Total/NA	Water	3535	
320-42375-5	MW-34S	Total/NA	Water	3535	
320-42375-6	DUP-1	Total/NA	Water	3535	
320-42375-7	MW-33S	Total/NA	Water	3535	
320-42375-8	MW-30	Total/NA	Water	3535	
320-42375-8 - DL	MW-30	Total/NA	Water	3535	
320-42375-9	MW-30S	Total/NA	Water	3535	
320-42375-10	EB-2	Total/NA	Water	3535	
MB 320-241889/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-241889/2-A	Lab Control Sample	Total/NA	Water	3535	
320-42375-1 MS	MW-33	Total/NA	Water	3535	
320-42375-1 MSD	MW-33	Total/NA	Water	3535	

Analysis Batch: 242577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42375-1	MW-33	Total/NA	Water	537 (modified)	241889
320-42375-2	MW-5	Total/NA	Water	537 (modified)	241889
320-42375-3	FB-2	Total/NA	Water	537 (modified)	241889
320-42375-4	MW-7	Total/NA	Water	537 (modified)	241889
320-42375-5	MW-34S	Total/NA	Water	537 (modified)	241889
320-42375-6	DUP-1	Total/NA	Water	537 (modified)	241889
320-42375-8	MW-30	Total/NA	Water	537 (modified)	241889
320-42375-9	MW-30S	Total/NA	Water	537 (modified)	241889
320-42375-10	EB-2	Total/NA	Water	537 (modified)	241889
MB 320-241889/1-A	Method Blank	Total/NA	Water	537 (modified)	241889
LCS 320-241889/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	241889
320-42375-1 MS	MW-33	Total/NA	Water	537 (modified)	241889
320-42375-1 MSD	MW-33	Total/NA	Water	537 (modified)	241889

Analysis Batch: 242792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-42375-7	MW-33S	Total/NA	Water	537 (modified)	241889
320-42375-8 - DL	MW-30	Total/NA	Water	537 (modified)	241889

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33

Date Collected: 08/21/18 12:40

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			297.4 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 12:42	S1M	TAL SAC

Client Sample ID: MW-5

Date Collected: 08/21/18 10:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			277.4 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 13:05	S1M	TAL SAC

Client Sample ID: FB-2

Date Collected: 08/21/18 10:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			291.8 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 13:13	S1M	TAL SAC

Client Sample ID: MW-7

Date Collected: 08/21/18 14:55

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			300.7 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 13:21	S1M	TAL SAC

Client Sample ID: MW-34S

Date Collected: 08/21/18 11:35

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			275.1 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 13:29	S1M	TAL SAC

Client Sample ID: DUP-1

Date Collected: 08/21/18 00:00

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			282 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 13:36	S1M	TAL SAC

TestAmerica Sacramento

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33S

Date Collected: 08/21/18 10:40

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			297.3 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242792	08/29/18 10:08	S1M	TAL SAC

Client Sample ID: MW-30

Date Collected: 08/21/18 16:10

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			289 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 14:00	S1M	TAL SAC
Total/NA	Prep	3535	DL		289 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)	DL	10			242792	08/29/18 10:16	S1M	TAL SAC

Client Sample ID: MW-30S

Date Collected: 08/21/18 16:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			290.3 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 14:08	S1M	TAL SAC

Client Sample ID: EB-2

Date Collected: 08/21/18 16:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			280.4 mL	10.00 mL	241889	08/24/18 11:32	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			242577	08/28/18 14:15	S1M	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	10-31-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	11-06-18
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-19

TestAmerica Sacramento

Method Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	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 = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-42375-1	MW-33	Water	08/21/18 12:40	08/22/18 09:30
320-42375-2	MW-5	Water	08/21/18 10:20	08/22/18 09:30
320-42375-3	FB-2	Water	08/21/18 10:50	08/22/18 09:30
320-42375-4	MW-7	Water	08/21/18 14:55	08/22/18 09:30
320-42375-5	MW-34S	Water	08/21/18 11:35	08/22/18 09:30
320-42375-6	DUP-1	Water	08/21/18 00:00	08/22/18 09:30
320-42375-7	MW-33S	Water	08/21/18 10:40	08/22/18 09:30
320-42375-8	MW-30	Water	08/21/18 16:10	08/22/18 09:30
320-42375-9	MW-30S	Water	08/21/18 16:20	08/22/18 09:30
320-42375-10	EB-2	Water	08/21/18 16:50	08/22/18 09:30

TestAmerica Buffalo

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Connor O'Brien Company: Woodward & Curran, Inc. Address: 40 Shattuck Road Suite 110 City: Andover State, Zip: MA, 01810 Phone: 203-699-6042(Tel) Email: cobrien@woodwardcurran.com Project Name: Rouses Point Site:		Sampler: Connor O'Brien / San Taylor Lab PM: Mason, Becky C E-Mail: becky.mason@testamericainc.com Phone: 978-221-7768		Carrier Tracking No(s): COC No: 480-116864-26985 3 Page: Page 3 of 3 Job #:	
Due Date Requested: TAT Requested (days): 7 PO #: 206910 WO #: 48003157 Project #: 48003157 SSOW #:		Analysis Requested			
Sample Identification MW-14 FB-1 MW-13 MW-5S Equip Blank		Sample Date 8/20/18	Sample Time 1355 1405 1605 1610 1650	Sample Type (C=Comp, G=grab) G G G G C	Matrix (W=water, S=solid, O=oil, BT=tissue, A=air) Water Water Water Water Water
Field Filtered Sample (Yes or No) ☒ No Perform MS/MSD (Yes or No) ☒ No PFC, IDA - PFA's, Standard List (21 analytes) ☒ No		Total Number of containers: ☒			
Special Instructions/Note: 320-42314 Chain of Custody		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: (I,II,III, IV, Other (specify)) Category B		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For Months			
Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Special Instructions/OC Requirements: NUSEC 294 L RLS Method of Shipment:			
Date: 8/20/18 Date/Time: 1705 Date/Time: 1730 Date/Time: 8/24/18 910 Date/Time:		Received by: FedEx Received by: [Signature] Received by: [Signature] Received by: [Signature]			
Company: WTC Company: [Signature] Company: [Signature] Company: [Signature]		Cooler Temperature(s) °C and Other Remarks: 2.1C			

Anherst, NY 14228
Phone: 716.691.2600 Fax: 716.691.799

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (07/13)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact Company Name: Woodard + Curran Address: 40 Shattuck Rd City/State/Zip: Andover, MA 01810 Phone: 978-221-7768 Fax: Project Name: Rouse's Point Site: 48003157 PO #: 206910		Project Manager: Anne Procter Tel/Fax:		Site Contact: Becky Nelson Date: 8/21/18 Carrier: FedEx		COC No: 480-116864-216985-1 of 1 COCs	
Analysis Turnaround Time ☐ CALENDAR DAYS ☐ WORKING DAYS TAT if different from Below _____ ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
MW-33	8/21/18	1240	G	GW		6	ms/msd
MW-5		1020				2	
FB-2		1050					Field Blank
MW-7		1455					
MW-345		1135					
DUP-1							Duplicate
MW-33S		1040					
MW-30		1610					
MW-30S		1620					
EB-Z		1650					Eggs blank
Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
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.		Return to Client ☐ Disposal by Lab ☒ Archive for _____ Months					
Special Instructions/QC Requirements & Comments: Category B - 14 DEC PFA RL's							
Custody Seal No.:		Cooler Temp. (°C): Obs'd: 5.4 Cor'd: 5.4		Therm ID No.: AX-3		Date/Time: 8/21/18 1700	
Relinquished by: [Signature]		Received by: FedEx		Company:		Date/Time: 8/21/18	
Relinquished by: [Signature]		Received by: [Signature]		Company: TH-Sac		Date/Time: 8/22/18 930	
Relinquished by:		Received in Laboratory by:		Company:		Date/Time:	

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 320-42375-1

Login Number: 42375

List Number: 1

Creator: Her, David A

List Source: TestAmerica Sacramento

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	406803
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?	True	
There are no discrepancies between the sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	



APPENDIX B
Data Usability Summary Reports



Geology

Hydrology

Remediation

Water Supply

September 28, 2018

Ms. Anne E. Proctor
Sr. Project Manager
Woodard & Curran
Middlesex Corporate Center, 4th Floor
213 Court Street
Middletown, CT 06457

Re: Data Validation Report
Rouses Point, NY
August 2018 Ground Water Samples

Dear Ms. Proctor:

The data usability summary reports (DUSRs) and QA/QC reviews are attached to this letter for the above referenced project. The data for TestAmerica Sacramento job numbers: 320-42314-1 and 320-42375-1 were acceptable with some minor issues that are identified and discussed in the validation summary. There were no data that were qualified as unusable (R) in the data packs.

A list of common data validation acronyms is attached to this letter to assist you in interpreting the validation summaries. If you have any questions concerning the work to be performed, please contact me at (518) 348-6995. Thank you for providing us an opportunity with Woodard & Curran.

Sincerely,
Alpha Geoscience

Donald Anne
Senior Chemist

DCA:dca

Data Validation Qualifiers Used in the QA/QC Reviews

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high and associated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA	Perfluorotridecanoic acid
PFTeA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid



Geology

Hydrology

Remediation

Water Supply

**Data Usability Summary Report for
TestAmerica Sacramento, Job No: 320-42314-1**

**10 Ground Water Samples, 3 Field Blanks,
and 3 Equipment Blanks
Collected August 20-23, 2018**

Prepared by: Donald Anné
September 28, 2018

The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results for 10 ground water samples, 3 field blanks, and 3 equipment blanks analyzed for polyfluorinated alkyl substances (PFAS) method 537 (modified).

The overall performances of the analyses are acceptable. TestAmerica Saramento did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The positive PFAS results for PFPeA and 6:2 were qualified as “estimated, biased high” (J+) for sample MW-34 DL because the internal standard used for quantitation was below QC limits.
- Positive PFAS results for PFHxS were qualified as “not detected” (U) for the following samples because the level reported in the samples were not significantly greater than (more than 5 times) the associated method blank level.

MW-14	FB-1	MW-13	MW-5S
Equip Blank	MW-10	EB-3	MW-36
FB-3	MW-12	MW-36S	MW-8
MW-37	EB-4	FB-4	

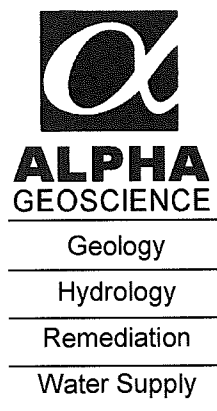
- Positive PFAS results for PFTeA was qualified as “not detected” (U) for sample Equip Blank because the level reported in the sample was not significantly greater than (more than 5 times) the associated method blank level.

DUSR

Job No: 320-42314-1

- Positive PFAS results for PFBA were qualified as “not detected” (U) for samples MW-10 and MW-12, because the level reported in the samples were not significantly greater than (more than 5 times) the associated equipment blank level.

All data considered usable with estimated (J+) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.



**QA/QC Review of Method 537 (Modified) PFAS Data
for TestAmerica Sacramento, Job No: 320-42314-1**

**10 Ground Water Samples, 3 Field Blanks,
and 3 Equipment Blanks
Collected August 20-23, 2018**

Prepared by: Donald Anné
September 28, 2018

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximums, as required.

Continuing Calibration: The %Ds for applicable PFASs were below the method maximums, as required

Blanks: Method blank MB 320-242332/1-A contained traces of PFHxS (0.305 ng/L) and PFTeA (0.469 ng/L). Method blank MB 320-243855/1-A contained a trace of PFHxS (0.365 ng/L). Method blank MB 320-2441242/1-A contained traces of PFHxS (0.301 ng/L) and PFTeA (0.332 ng/L). Equipment blank EB-3 contained trace of PFBA (0.37 ng/L). Equipment blank EB-4 contained a trace of PFBA (0.46 ng/L). Positive results for these compounds that are less than five times the highest blank level should be reported as not detected (U) in associated samples

Internal Standard Area Summary: The internal standard area retention times were within control limits.

The internal standard area for sample MW-34 DL was below QC limits. Positive results for sample MW-34 DL should be estimated, biased high (J+) and “not detected” results estimated (UJ).

Surrogate Recovery: The surrogate recoveries were within QC limits for the ground water samples, field blanks, and equipment blanks.

Method 537 (Modified) PFAS Data

Job No: 320-42314-1

Laboratory Control Sample: The relative percent differences for spiked compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for aqueous samples LCS 320-242332/2-A, LCSD 320-242332/3-A, LCS 320-244124/2-A, and LCSD 320-244124/3-A. The %Rs for spiked compounds were within QC limits for aqueous sample LCS 320-243855/2-A.

Compound ID: Checked compounds and surrogates were within LC quantitation limits.

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Sample No.: IC 320-244549/5 Date Analyzed: 09/08/2018 04:20
 Instrument ID: A8_N GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 2018.09.07ICAL_005. Heated Purge: (Y/N) N
 Calibration ID: 41045

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		3369610	2.63				
UPPER LIMIT		5054415	2.83				
LOWER LIMIT		1684805	2.43				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 320-244549/9		3661403	2.62				
ICV 320-244549/10		3611135	2.63				
CCV 320-244611/1		3579113	2.63				
320-42404-3 DL	MW-34 DL	768902*	2.63				
CCV 320-244611/12		3769008	2.62				

13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area
 RT Limit = $\pm$ 0.2 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-243332/1-A
 Matrix: Water Lab File ID: 2018.08.31LLC_022.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 08/27/2018 12:52
 Sample wt/vol: 250 (mL) Date Analyzed: 09/01/2018 10:02
 Con. Extract Vol.: 10.00 (mL) Dilution Factor: 1
 Injection Volume: 2 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 243502 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25
335-67-1	Perfluorooctanoic acid (PFOA)	ND		2.0	0.85
375-95-1	Perfluorononanoic acid (PFNA)	ND		2.0	0.27
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.305	J	2.0	0.17
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	0.35
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.31
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3
376-06-7	Perfluorotetradecanoic acid (PFTeA)	0.469	J	2.0	0.29
754-91-6	Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-243332/1-A
 Matrix: Water Lab File ID: 2018.08.31LLC_022.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 08/27/2018 12:52
 Sample wt/vol: 250(mL) Date Analyzed: 09/01/2018 10:02
 Con. Extract Vol.: 10.00(mL) Dilution Factor: 1
 Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 243502 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	94		25-150
STL01892	13C4-PFHpA	96		25-150
STL00990	13C4 PFOA	92		25-150
STL00991	13C4 PFOS	93		25-150
STL00995	13C5 PFNA	96		25-150
STL00992	13C4 PFBA	93		25-150
STL00993	13C2 PFHxA	96		25-150
STL00996	13C2 PFDA	93		25-150
STL00997	13C2 PFUnA	95		25-150
STL00998	13C2 PFDoA	91		25-150
STL01056	13C8 FOSA	92		25-150
STL01893	13C5-PFPeA	92		25-150
STL02116	13C2-PFTeDA	96		25-150
STL02118	d3-NMeFOSAA	92		25-150
STL02117	d5-NEtFOSAA	97		25-150
STL02279	M2-6:2FTS	94		25-150
STL02280	M2-8:2FTS	89		25-150
STL02337	13C3-PFBS	93		25-150

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-243855/1-A
 Matrix: Water Lab File ID: 2018.09.05LLB_006.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 09/05/2018 06:50
 Sample wt/vol: 250(mL) Date Analyzed: 09/05/2018 19:24
 Con. Extract Vol.: 10.00(mL) Dilution Factor: 1
 Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 244015 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25
335-67-1	Perfluorooctanoic acid (PFOA)	ND		2.0	0.85
375-95-1	Perfluorononanoic acid (PFNA)	ND		2.0	0.27
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.365		2.0	0.17
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	0.35
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.31
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29
754-91-6	Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-243855/1-A
 Matrix: Water Lab File ID: 2018.09.05LLB_006.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 09/05/2018 06:50
 Sample wt/vol: 250 (mL) Date Analyzed: 09/05/2018 19:24
 Con. Extract Vol.: 10.00 (mL) Dilution Factor: 1
 Injection Volume: 2 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 244015 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	94		25-150
STL01892	13C4-PFHpA	101		25-150
STL00990	13C4 PFOA	102		25-150
STL00991	13C4 PFOS	99		25-150
STL00995	13C5 PFNA	100		25-150
STL00992	13C4 PFBA	94		25-150
STL00993	13C2 PFHxA	98		25-150
STL00996	13C2 PFDA	98		25-150
STL00997	13C2 PFUnA	93		25-150
STL00998	13C2 PFDoA	95		25-150
STL01056	13C8 FOSA	95		25-150
STL01893	13C5-PFPeA	96		25-150
STL02116	13C2-PFTeDA	89		25-150
STL02118	d3-NMeFOSAA	94		25-150
STL02117	d5-NEtFOSAA	98		25-150
STL02279	M2-6:2FTS	110		25-150
STL02280	M2-8:2FTS	106		25-150
STL02337	13C3-PFBS	93		25-150

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-244124/1-A
 Matrix: Water Lab File ID: 2018.09.07LLA_037.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 09/06/2018 10:15
 Sample wt/vol: 250 (mL) Date Analyzed: 09/07/2018 14:24
 Con. Extract Vol.: 10.00 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: Acquity ID: 2.1 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 244464 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25
335-67-1	Perfluorooctanoic acid (PFOA)	ND		2.0	0.85
375-95-1	Perfluorononanoic acid (PFNA)	ND		2.0	0.27
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.301	J	2.0	0.17
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	0.35
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.31
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3
376-06-7	Perfluorotetradecanoic acid (PFTeA)	0.332	J	2.0	0.29
754-91-6	Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9
27619-97-2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0
39108-34-4	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42314-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-244124/1-A
 Matrix: Water Lab File ID: 2018.09.07LLA_037.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 09/06/2018 10:15
 Sample wt/vol: 250(mL) Date Analyzed: 09/07/2018 14:24
 Con. Extract Vol.: 10.00(mL) Dilution Factor: 1
 Injection Volume: 20(uL) GC Column: Acquity ID: 2.1 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 244464 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	102		25-150
STL01892	13C4-PFHpA	100		25-150
STL00990	13C4 PFOA	100		25-150
STL00991	13C4 PFOS	100		25-150
STL00995	13C5 PFNA	100		25-150
STL00992	13C4 PFBA	97		25-150
STL00993	13C2 PFHxA	98		25-150
STL00996	13C2 PFDA	109		25-150
STL00997	13C2 PFUnA	107		25-150
STL00998	13C2 PFDoA	101		25-150
STL01056	13C8 FOSA	98		25-150
STL01893	13C5-PFPeA	98		25-150
STL02116	13C2-PFTeDA	101		25-150
STL02118	d3-NMeFOSAA	100		25-150
STL02117	d5-NEtFOSAA	109		25-150
STL02279	M2-6:2FTS	100		25-150
STL02280	M2-8:2FTS	108		25-150
STL02337	13C3-PFBS	94		25-150

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-14

Date Collected: 08/20/18 13:55

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B U	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorobutanoic acid (PFBA)	0.31	J	1.7	0.30	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 10:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 10:57	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 10:57	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 10:57	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 10:57	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 10:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	101		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C4-PFHpA	98		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C4 PFOA	96		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C4 PFOS	96		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C5 PFNA	103		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C4 PFBA	98		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C2 PFHxA	98		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C2 PFDA	94		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C2 PFUnA	95		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C2 PFDoA	92		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C8 FOSA	94		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C5-PFPeA	99		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C2-PFTeDA	97		25 - 150	08/31/18 08:21	09/01/18 10:57	1
d3-NMeFOSAA	91		25 - 150	08/31/18 08:21	09/01/18 10:57	1
d5-NEtFOSAA	97		25 - 150	08/31/18 08:21	09/01/18 10:57	1
M2-6:2FTS	95		25 - 150	08/31/18 08:21	09/01/18 10:57	1
M2-8:2FTS	93		25 - 150	08/31/18 08:21	09/01/18 10:57	1
13C3-PFBS	98		25 - 150	08/31/18 08:21	09/01/18 10:57	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-1

Date Collected: 08/20/18 14:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.71	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorohexanesulfonic acid (PFHxS)	0.19	J B U	1.7	0.14	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.29	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.41	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.49	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 11:05	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/31/18 08:21	09/01/18 11:05	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 11:05	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:05	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:05	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C4-PFHpA	95		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C4 PFOA	97		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C4 PFOS	96		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C5 PFNA	98		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C4 PFBA	93		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C2 PFHxA	96		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C2 PFDA	93		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C2 PFUnA	95		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C2 PFDoA	95		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C8 FOSA	87		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C5-PFPeA	94		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C2-PFTeDA	126		25 - 150				08/31/18 08:21	09/01/18 11:05	1
d3-NMeFOSAA	88		25 - 150				08/31/18 08:21	09/01/18 11:05	1
d5-NEtFOSAA	98		25 - 150				08/31/18 08:21	09/01/18 11:05	1
M2-6:2FTS	103		25 - 150				08/31/18 08:21	09/01/18 11:05	1
M2-8:2FTS	103		25 - 150				08/31/18 08:21	09/01/18 11:05	1
13C3-PFBS	89		25 - 150				08/31/18 08:21	09/01/18 11:05	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-13

Date Collected: 08/20/18 16:05

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B U	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorobutanoic acid (PFBA)	0.63	J	1.7	0.30	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.94	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/31/18 08:21	09/01/18 11:13	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 11:13	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/31/18 08:21	09/01/18 11:13	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:13	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	83		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C4-PFHpA	85		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C4 PFOA	84		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C4 PFOS	78		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C5 PFNA	85		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C4 PFBA	79		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C2 PFHxA	81		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C2 PFDA	83		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C2 PFUnA	64		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C2 PFDoA	54		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C8 FOSA	77		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C5-PFPeA	82		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C2-PFTeDA	55		25 - 150				08/31/18 08:21	09/01/18 11:13	1
d3-NMeFOSAA	110		25 - 150				08/31/18 08:21	09/01/18 11:13	1
d5-NEtFOSAA	67		25 - 150				08/31/18 08:21	09/01/18 11:13	1
M2-6:2FTS	76		25 - 150				08/31/18 08:21	09/01/18 11:13	1
M2-8:2FTS	97		25 - 150				08/31/18 08:21	09/01/18 11:13	1
13C3-PFBS	80		25 - 150				08/31/18 08:21	09/01/18 11:13	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-5S

Date Collected: 08/20/18 16:10

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	3.6		1.8	0.23	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctanoic acid (PFOA)	3.3		1.8	0.77	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorononanoic acid (PFNA)	1.4	J	1.8	0.25	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorobutanesulfonic acid (PFBS)	0.98	J	1.8	0.18	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorohexanesulfonic acid (PFHxS)	0.45	J B U	1.8	0.15	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctanesulfonic acid (PFOS)	1.4	J	1.8	0.49	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoropentanoic acid (PFPeA)	5.7		1.8	0.44	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorohexanoic acid (PFHxA)	4.4		1.8	0.53	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorodecanoic acid (PFDA)	0.85	J	1.8	0.28	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/31/18 08:21	09/01/18 11:28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/31/18 08:21	09/01/18 11:28	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/31/18 08:21	09/01/18 11:28	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/31/18 08:21	09/01/18 11:28	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		08/31/18 08:21	09/01/18 11:28	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/31/18 08:21	09/01/18 11:28	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	86		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C4-PFHxA	90		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C4 PFOA	90		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C4 PFOS	78		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C5 PFNA	87		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C4 PFBA	65		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C2 PFHxA	82		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C2 PFDA	77		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C2 PFUnA	64		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C2 PFDoA	54		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C8 FOSA	78		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C5-PFPeA	81		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C2-PFTeA	49		25 - 150				08/31/18 08:21	09/01/18 11:28	1
d3-NMeFOSAA	65		25 - 150				08/31/18 08:21	09/01/18 11:28	1
d5-NEtFOSAA	60		25 - 150				08/31/18 08:21	09/01/18 11:28	1
M2-6:2FTS	84		25 - 150				08/31/18 08:21	09/01/18 11:28	1
M2-8:2FTS	75		25 - 150				08/31/18 08:21	09/01/18 11:28	1
13C3-PFBS	82		25 - 150				08/31/18 08:21	09/01/18 11:28	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: Equip Blank

Date Collected: 08/20/18 16:50

Date Received: 08/21/18 09:10

Lab Sample ID: 320-42314-5

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.74	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.24	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorohexanesulfonic acid (PFHxS)	0.30	J B U	1.7	0.15	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.31	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.43	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.51	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.96	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorotetradecanoic acid (PFTeA)	0.30	J B U	1.7	0.25	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.31	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/31/18 08:21	09/01/18 11:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.17	ng/L		08/31/18 08:21	09/01/18 11:36	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/31/18 08:21	09/01/18 11:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C4-PFHpA	97		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C4 PFOA	99		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C4 PFOS	93		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C5 PFNA	99		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C4 PFBA	96		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C2 PFHxA	97		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C2 PFDA	94		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C2 PFUnA	98		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C2 PFDoA	93		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C8 FOSA	89		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C5-PFPeA	96		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C2-PFTeDA	93		25 - 150				08/31/18 08:21	09/01/18 11:36	1
d3-NMeFOSAA	91		25 - 150				08/31/18 08:21	09/01/18 11:36	1
d5-NEtFOSAA	98		25 - 150				08/31/18 08:21	09/01/18 11:36	1
M2-6:2FTS	98		25 - 150				08/31/18 08:21	09/01/18 11:36	1
M2-8:2FTS	91		25 - 150				08/31/18 08:21	09/01/18 11:36	1
13C3-PFBS	92		25 - 150				08/31/18 08:21	09/01/18 11:36	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-10

Date Collected: 08/22/18 11:05

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.75	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B U	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorobutanoic acid (PFBA)	1.3	J U	1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.43	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:40	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 19:40	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:40	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.9	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 19:40	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:40	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	93		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C4-PFHpA	100		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C4 PFOA	100		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C4 PFOS	92		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C5 PFNA	98		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C4 PFBA	85		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C2 PFHxA	94		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C2 PFDA	95		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C2 PFUnA	91		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C2 PFDoA	91		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C8 FOSA	92		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C5-PFPeA	93		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C2-PFTeDA	83		25 - 150				09/05/18 06:50	09/05/18 19:40	1
d3-NMeFOSAA	91		25 - 150				09/05/18 06:50	09/05/18 19:40	1
d5-NEtFOSAA	96		25 - 150				09/05/18 06:50	09/05/18 19:40	1
M2-6:2FTS	101		25 - 150				09/05/18 06:50	09/05/18 19:40	1
M2-8:2FTS	103		25 - 150				09/05/18 06:50	09/05/18 19:40	1
13C3-PFBS	91		25 - 150				09/05/18 06:50	09/05/18 19:40	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: EB-3

Date Collected: 08/22/18 15:45

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.23	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.77	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B U	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorobutanoic acid (PFBA)	0.37	J	1.8	0.32	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.45	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.53	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		09/05/18 06:50	09/05/18 19:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:47	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		09/05/18 06:50	09/05/18 19:47	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:47	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:47	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 19:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	92		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C4-PFHpA	98		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C4 PFOA	95		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C4 PFOS	93		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C5 PFNA	96		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C4 PFBA	92		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C2 PFHxA	97		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C2 PFDA	93		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C2 PFUnA	85		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C2 PFDoA	84		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C8 FOSA	89		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C5-PFPeA	92		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C2-PFTeDA	82		25 - 150				09/05/18 06:50	09/05/18 19:47	1
d3-NMeFOSAA	85		25 - 150				09/05/18 06:50	09/05/18 19:47	1
d5-NEtFOSAA	91		25 - 150				09/05/18 06:50	09/05/18 19:47	1
M2-6:2FTS	109		25 - 150				09/05/18 06:50	09/05/18 19:47	1
M2-8:2FTS	106		25 - 150				09/05/18 06:50	09/05/18 19:47	1
13C3-PFBS	81		25 - 150				09/05/18 06:50	09/05/18 19:47	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-34

Date Collected: 08/22/18 13:15

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	56		1.8	0.22	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctanoic acid (PFOA)	44		1.8	0.74	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorononanoic acid (PFNA)	2.1		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorobutanesulfonic acid (PFBS)	2.1		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorohexanesulfonic acid (PFHxS)	1.6	J B	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctanesulfonic acid (PFOS)	1.7	J	1.8	0.47	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorobutanoic acid (PFBA)	290		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorohexanoic acid (PFHxA)	280		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.96	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.25	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 19:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 19:55	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 19:55	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 19:55	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	2.9	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 19:55	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4-PFHxA	102		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFOA	97		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFOS	98		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C5 PFNA	99		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C4 PFBA	79		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFHxA	92		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFDA	94		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFUnA	93		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C8 FOSA	98		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C2-PFTeDA	84		25 - 150	09/05/18 06:50	09/05/18 19:55	1
d3-NMeFOSAA	94		25 - 150	09/05/18 06:50	09/05/18 19:55	1
d5-NEtFOSAA	100		25 - 150	09/05/18 06:50	09/05/18 19:55	1
M2-8:2FTS	113		25 - 150	09/05/18 06:50	09/05/18 19:55	1
13C3-PFBS	90		25 - 150	09/05/18 06:50	09/05/18 19:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	780	J+	8.8	2.1	ng/L		09/05/18 06:50	09/08/18 08:58	5
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	630	J+	88	8.8	ng/L		09/05/18 06:50	09/08/18 08:58	5

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-34

Date Collected: 08/22/18 13:15

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
¹³ C5-PFPeA	98		25 - 150	09/05/18 06:50	09/08/18 08:58	5
M2-6:2FTS	96		25 - 150	09/05/18 06:50	09/08/18 08:58	5

Client Sample ID: MW-36

Date Collected: 08/22/18 15:00

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.20	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctanoic acid (PFOA)	0.87	J	1.6	0.69	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorononanoic acid (PFNA)	ND		1.6	0.22	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.6	0.16	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B U	1.6	0.14	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.44	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorobutanoic acid (PFBA)	4.1		1.6	0.28	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoropentanoic acid (PFPeA)	1.5	J	1.6	0.40	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.47	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.89	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.25	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.45	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.6	1.1	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.24	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.6	0.28	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.26	ng/L		09/05/18 06:50	09/05/18 20:03	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.15	ng/L		09/05/18 06:50	09/05/18 20:03	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		16	2.5	ng/L		09/05/18 06:50	09/05/18 20:03	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		16	1.5	ng/L		09/05/18 06:50	09/05/18 20:03	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		16	1.6	ng/L		09/05/18 06:50	09/05/18 20:03	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		16	1.6	ng/L		09/05/18 06:50	09/05/18 20:03	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C4-PFHpA	98		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C4 PFOA	99		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C4 PFOS	95		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C5 PFNA	103		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C4 PFBA	82		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C2 PFHxA	95		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C2 PFDA	94		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C2 PFUnA	91		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C2 PFDoA	84		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C8 FOSA	94		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C5-PFPeA	98		25 - 150				09/05/18 06:50	09/05/18 20:03	1
13C2-PFTeDA	88		25 - 150				09/05/18 06:50	09/05/18 20:03	1
d3-NMeFOSAA	88		25 - 150				09/05/18 06:50	09/05/18 20:03	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-36

Date Collected: 08/22/18 15:00

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-4

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		25 - 150	09/05/18 06:50	09/05/18 20:03	1
M2-6:2FTS	96		25 - 150	09/05/18 06:50	09/05/18 20:03	1
M2-8:2FTS	109		25 - 150	09/05/18 06:50	09/05/18 20:03	1
13C3-PFBS	94		25 - 150	09/05/18 06:50	09/05/18 20:03	1

Client Sample ID: FB-3

Date Collected: 08/22/18 11:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-5

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Method: 537 (modified) - Fluorinated Alkyl Substances									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorohexanesulfonic acid (PFHxS)	0.26	J B U	1.7	0.15	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.30	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		09/05/18 06:50	09/05/18 20:11	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/05/18 06:50	09/05/18 20:11	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/05/18 06:50	09/05/18 20:11	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4-PFHpA	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFOA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFOS	94		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C5 PFNA	103		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C4 PFBA	91		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFHxA	95		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFDA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFUnA	94		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C2 PFDoA	97		25 - 150				09/05/18 06:50	09/05/18 20:11	1
13C8 FOSA	92		25 - 150				09/05/18 06:50	09/05/18 20:11	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-3

Date Collected: 08/22/18 11:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-5

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5-PFPeA	91		25 - 150	09/05/18 06:50	09/05/18 20:11	1
13C2-PFTeDA	109		25 - 150	09/05/18 06:50	09/05/18 20:11	1
d3-NMeFOSAA	91		25 - 150	09/05/18 06:50	09/05/18 20:11	1
d5-NEtFOSAA	98		25 - 150	09/05/18 06:50	09/05/18 20:11	1
M2-6:2FTS	114		25 - 150	09/05/18 06:50	09/05/18 20:11	1
M2-8:2FTS	126		25 - 150	09/05/18 06:50	09/05/18 20:11	1
13C3-PFBS	86		25 - 150	09/05/18 06:50	09/05/18 20:11	1

Client Sample ID: MW-12

Date Collected: 08/22/18 11:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.70	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.22	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorohexanesulfonic acid (PFHxS)	0.24	J B U	1.7	0.14	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorobutanoic acid (PFBA)	0.41	J U	1.7	0.29	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.41	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.48	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.45	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.26	ng/L		09/05/18 06:50	09/05/18 20:19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		09/05/18 06:50	09/05/18 20:19	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		09/05/18 06:50	09/05/18 20:19	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		09/05/18 06:50	09/05/18 20:19	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:19	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/05/18 06:50	09/05/18 20:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4-PFHpA	95		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFOA	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFOS	96		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C5 PFNA	98		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C4 PFBA	91		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C2 PFHxA	99		25 - 150				09/05/18 06:50	09/05/18 20:19	1
13C2 PFDA	94		25 - 150				09/05/18 06:50	09/05/18 20:19	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-12
Date Collected: 08/22/18 11:20
Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-6
Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
¹³ C2 PFUnA	91		25 - 150	09/05/18 06:50	09/05/18 20:19	1
¹³ C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 20:19	1
¹³ C8 FOSA	95		25 - 150	09/05/18 06:50	09/05/18 20:19	1
¹³ C5-PFPeA	95		25 - 150	09/05/18 06:50	09/05/18 20:19	1
¹³ C2-PFTeDA	86		25 - 150	09/05/18 06:50	09/05/18 20:19	1
d3-NMeFOSAA	93		25 - 150	09/05/18 06:50	09/05/18 20:19	1
d5-NEtFOSAA	96		25 - 150	09/05/18 06:50	09/05/18 20:19	1
M2-6:2FTS	99		25 - 150	09/05/18 06:50	09/05/18 20:19	1
M2-8:2FTS	105		25 - 150	09/05/18 06:50	09/05/18 20:19	1
¹³ C3-PFBS	90		25 - 150	09/05/18 06:50	09/05/18 20:19	1

Client Sample ID: MW-36S
Date Collected: 08/22/18 16:20
Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	2.9		2.0	0.25	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctanoic acid (PFOA)	5.6		2.0	0.85	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorononanoic acid (PFNA)	2.9		2.0	0.27	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorobutanesulfonic acid (PFBS)	1.1	J	2.0	0.20	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorohexanesulfonic acid (PFHxS)	0.74	J B U	2.0	0.17	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctanesulfonic acid (PFOS)	16		2.0	0.54	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorobutanoic acid (PFBA)	2.9		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoropentanoic acid (PFPeA)	2.7		2.0	0.49	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	0.58	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorodecanoic acid (PFDA)	5.4		2.0	0.31	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorotetradecanoic acid (PFTeA)	0.95	J	2.0	0.29	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		09/05/18 06:50	09/05/18 20:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		09/05/18 06:50	09/05/18 20:27	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		09/05/18 06:50	09/05/18 20:27	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		09/05/18 06:50	09/05/18 20:27	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 20:27	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0	ng/L		09/05/18 06:50	09/05/18 20:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	73		25 - 150				09/05/18 06:50	09/05/18 20:27	1
13C4-PFHpA	76		25 - 150				09/05/18 06:50	09/05/18 20:27	1
13C4 PFOA	77		25 - 150				09/05/18 06:50	09/05/18 20:27	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-36S

Date Collected: 08/22/18 16:20

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-7

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	72		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C5 PFNA	83		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C4 PFBA	41		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFHxA	66		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFDA	73		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFUnA	65		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2 PFDoA	62		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C8 FOSA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C5-PFPeA	60		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C2-PFTeDA	38		25 - 150	09/05/18 06:50	09/05/18 20:27	1
d3-NMeFOSAA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
d5-NEtFOSAA	68		25 - 150	09/05/18 06:50	09/05/18 20:27	1
M2-6:2FTS	134		25 - 150	09/05/18 06:50	09/05/18 20:27	1
M2-8:2FTS	104		25 - 150	09/05/18 06:50	09/05/18 20:27	1
13C3-PFBS	67		25 - 150	09/05/18 06:50	09/05/18 20:27	1

Client Sample ID: MW-8

Date Collected: 08/22/18 14:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-8

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	1.4	J	1.8	0.22	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctanoic acid (PFOA)	0.79	J	1.8	0.75	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorohexanesulfonic acid (PFHxS)	0.31	J B U	1.8	0.15	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorobutanoic acid (PFBA)	5.5		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoropentanoic acid (PFPeA)	4.6		1.8	0.43	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorohexanoic acid (PFHxA)	2.4		1.8	0.51	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorotetradecanoic acid (PFTeA)	0.42	J	1.8	0.26	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/05/18 06:50	09/05/18 20:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/05/18 06:50	09/05/18 20:34	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/05/18 06:50	09/05/18 20:34	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/05/18 06:50	09/05/18 20:34	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.3	J	18	1.8	ng/L		09/05/18 06:50	09/05/18 20:34	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/05/18 06:50	09/05/18 20:34	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-8

Date Collected: 08/22/18 14:30

Date Received: 08/23/18 09:40

Lab Sample ID: 320-42404-8

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4-PFHpA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFOA	97		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFOS	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C5 PFNA	102		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C4 PFBA	84		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFHxA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFDA	93		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFUnA	94		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2 PFDoA	90		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C8 FOSA	93		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C5-PFPeA	98		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C2-PFTeDA	87		25 - 150	09/05/18 06:50	09/05/18 20:34	1
d3-NMeFOSAA	92		25 - 150	09/05/18 06:50	09/05/18 20:34	1
d5-NEtFOSAA	99		25 - 150	09/05/18 06:50	09/05/18 20:34	1
M2-6:2FTS	101		25 - 150	09/05/18 06:50	09/05/18 20:34	1
M2-8:2FTS	103		25 - 150	09/05/18 06:50	09/05/18 20:34	1
13C3-PFBS	97		25 - 150	09/05/18 06:50	09/05/18 20:34	1

Client Sample ID: MW-37

Date Collected: 08/23/18 11:05

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.5		1.8	0.22	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctanoic acid (PFOA)	7.4		1.8	0.75	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorononanoic acid (PFNA)	0.85	J	1.8	0.24	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorobutanesulfonic acid (PFBS)	1.4	J	1.8	0.18	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B U	1.8	0.15	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctanesulfonic acid (PFOS)	5.4		1.8	0.47	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorobutanoic acid (PFBA)	11		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoropentanoic acid (PFPeA)	12		1.8	0.43	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorohexanoic acid (PFHxA)	6.8		1.8	0.51	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.97	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.27	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.48	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.1	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.25	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:02	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/06/18 10:15	09/07/18 16:02	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		09/06/18 10:15	09/07/18 16:02	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/06/18 10:15	09/07/18 16:02	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.8	J	18	1.8	ng/L		09/06/18 10:15	09/07/18 16:02	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: MW-37

Date Collected: 08/23/18 11:05

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:02	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4-PFHpA	101		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFOA	102		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFOS	95		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C5 PFNA	92		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C4 PFBA	76		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFHxA	100		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFDA	99		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFUnA	91		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2 PFDoA	88		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C8 FOSA	92		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C5-PFPeA	91		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C2-PFTeDA	86		25 - 150				09/06/18 10:15	09/07/18 16:02	1
d3-NMeFOSAA	99		25 - 150				09/06/18 10:15	09/07/18 16:02	1
d5-NEtFOSAA	98		25 - 150				09/06/18 10:15	09/07/18 16:02	1
M2-6:2FTS	112		25 - 150				09/06/18 10:15	09/07/18 16:02	1
M2-8:2FTS	105		25 - 150				09/06/18 10:15	09/07/18 16:02	1
13C3-PFBS	93		25 - 150				09/06/18 10:15	09/07/18 16:02	1

Client Sample ID: EB-4

Date Collected: 08/23/18 11:45

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.76	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorohexanesulfonic acid (PFHxS)	0.20	J B	1.8	0.15	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorobutanoic acid (PFBA)	0.46	J	1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		09/06/18 10:15	09/07/18 16:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		09/06/18 10:15	09/07/18 16:09	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		09/06/18 10:15	09/07/18 16:09	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: EB-4

Date Collected: 08/23/18 11:45

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		09/06/18 10:15	09/07/18 16:09	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:09	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		09/06/18 10:15	09/07/18 16:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4-PFHpA	91		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFOA	98		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFOS	96		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C5 PFNA	94		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C4 PFBA	91		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFHxA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFDA	98		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFUnA	97		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2 PFDaA	90		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C8 FOSA	86		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C5-PFPeA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C2-PFTeDA	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
d3-NMeFOSAA	100		25 - 150				09/06/18 10:15	09/07/18 16:09	1
d5-NEtFOSAA	99		25 - 150				09/06/18 10:15	09/07/18 16:09	1
M2-6:2FTS	93		25 - 150				09/06/18 10:15	09/07/18 16:09	1
M2-8:2FTS	96		25 - 150				09/06/18 10:15	09/07/18 16:09	1
13C3-PFBS	86		25 - 150				09/06/18 10:15	09/07/18 16:09	1

Client Sample ID: FB-4

Date Collected: 08/23/18 11:10

Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.22	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.74	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.24	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorohexanesulfonic acid (PFHxS)	0.27	J B U	1.7	0.15	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.47	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.31	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.43	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.51	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.96	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorododecanoic acid (PFDaA)	ND		1.7	0.48	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.31	ng/L		09/06/18 10:15	09/07/18 16:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		09/06/18 10:15	09/07/18 16:17	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42314-1

Client Sample ID: FB-4

Date Collected: 08/23/18 11:10

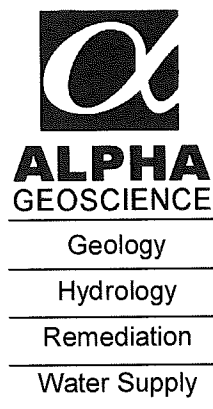
Date Received: 08/24/18 09:30

Lab Sample ID: 320-42476-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.17	ng/L		09/06/18 10:15	09/07/18 16:17	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		09/06/18 10:15	09/07/18 16:17	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	103		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4-PFHpA	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFOA	99		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFOS	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C5 PFNA	97		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C4 PFBA	99		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFHxA	98		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFDA	100		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFUnA	103		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2 PFDoA	95		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C8 FOSA	90		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C5-PFPeA	96		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C2-PFTeDA	94		25 - 150				09/06/18 10:15	09/07/18 16:17	1
d3-NMeFOSAA	105		25 - 150				09/06/18 10:15	09/07/18 16:17	1
d5-NEtFOSAA	106		25 - 150				09/06/18 10:15	09/07/18 16:17	1
M2-6:2FTS	106		25 - 150				09/06/18 10:15	09/07/18 16:17	1
M2-8:2FTS	104		25 - 150				09/06/18 10:15	09/07/18 16:17	1
13C3-PFBS	93		25 - 150				09/06/18 10:15	09/07/18 16:17	1



**Data Usability Summary Report for
TestAmerica Sacramento, Job No: 320-42375-1**

**7 Ground Water Samples, 1 Field Duplicate
Field Blank, and 1 Equipment Blank
Collected August 21, 2018**

Prepared by: Donald Anné
September 28, 2018

The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results for 7 ground water sample, 1 field duplicate, 1 field blank, and 1 equipment blank analyzed for polyfluorinated alkyl substances (PFAS) method 537 (modified).

The overall performances of the analyses are acceptable. TestAmerica Saramento did fulfill the requirements of the analytical methods.

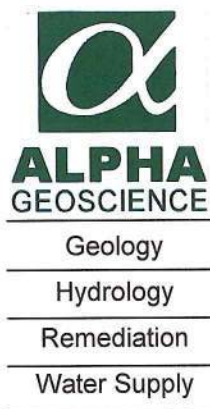
The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The positive PFAS results for PFPeA and 6:2 were qualified as “estimated, biased high” (J+) for sample MW-30 DL because the internal standard used for quantitation was below QC limits.
- Positive PFAS results for PFHxS were qualified as “not detected” (U) for the following samples because the level reported in the samples were not significantly greater than (more than 5 times) the associated method blank level.

MW-33	MW-5	FB-2	MW-7
MW-34S	DUP-1	MW-33S	MW-30
EB-2			

- Positive PFAS results for 6:2 were qualified as “not detected” (U) for samples MW-7, MW-34S, DUP-1, MW-33S, and MW-30S because the level reported in the samples were not significantly greater than (more than 5 times) the associated equipment and field blank levels.

All data considered usable with estimated (J+) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.



**QA/QC Review of Method 537 (Modified) PFAS Data
for TestAmerica Sacramento, Job No: 320-42375-1**

**7 Ground Water Samples, 1 Field Duplicate
1 Field Blank, and 1 Equipment Blank
Collected August 21, 2018**

Prepared by: Donald Anné
September 28, 2018

Holding Times: The samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFASs were below the method maximums, as required.

Continuing Calibration: The %Ds for applicable PFASs were below the method maximums, as required

Blanks: Method blank MB 320-241889/1-A contained a trace of PFHxS (0.333 ng/L). Field blank FB-2 contained trace of 6:2 (1.8 ng/L). Equipment blank EB-2 contained a trace of 6:2 (1.9 ng/L). Positive results for these compounds that are less than five times the highest blank level should be reported as not detected (U) in associated samples

Internal Standard Area Summary: The internal standard area retention times were within control limits.

The internal standard area for sample MW-30 DL was below QC limits. Positive results for sample MW-30 DL should be estimated, biased high (J+) and “not detected” results estimated (UJ).

Surrogate Recovery: The surrogate recoveries for M262FTS in samples MW-34S and DUP-1 were above QC limits. Positive results for compounds associated with M262FTS should be considered estimated, biased high (J+) in these samples.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for spiked compounds were below the allowable maximum and the applicable percent recoveries were within QC limits for aqueous MS/MSD sample MW-33.

Laboratory Control Sample: The percent recoveries for spiked compounds were within QC limits for aqueous sample LCS 320-241889/2-A.

Field Duplicates: The relative percent differences for applicable PFAS compounds were below the allowable maximum (20%) for aqueous field duplicate pair MW-34S/DUP-1 (attached table), as required.

Compound ID: Checked compounds and surrogates were within LC quantitation limits.

Polyfluorinated Alkyl Substances (PFAS)

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. 320-42375-1

S1= MW-34S

S2= DUP-1

<u>Analyte</u>	<u>S1</u>	<u>S2</u>	<u>RPD (%)</u>
PFHpA	6.6	6.4	3%
PFOA	10	10	0%
PFNA	6.3	6.4	2%
PFBS	0.68	0.53	NC
PFHxS	1.2	1.1	NC
PFOS	28	28	0%
PFBA	7.2	7.2	0%
PFPeA	5.8	5.6	4%
PFHxA	5.2	5.4	4%
PFUnA	1.1	0.99	NC
PFDA	3.7	3.6	3%
PFOSA	3.8	3.6	5%
PFHpS	0.41	0.31	NC
6:2 FTS	2.0	2.0	NC

* RPD is above the allowable maximum waters 20%.

Results are in units of ng/L.

Bold numbers were values that below the CRQL.

ND - Not detected.

NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento

Job No.: 320-42375-1

SDG No.: _____

Matrix: Water

Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	PFBS #	PFHxA #	PFHpA #	PFHxS #	M262FTS #	PFOA #
MW-33	320-42375-1	90	96	96	100	99	90	117	96
MW-5	320-42375-2	84	96	89	98	98	90	119	95
FB-2	320-42375-3	99	98	98	107	101	94	120	97
MW-7	320-42375-4	77	95	86	100	105	91	109	95
MW-34S	320-42375-5	48	74	75	82	87	79	185 *	91
DUP-1	320-42375-6	48	75	79	81	87	77	183 *	92
MW-33S	320-42375-7	43	72	79	81	89	82	149	95
MW-30S	320-42375-9	53	77	77	85	89	79	137	86
EB-2	320-42375-10	93	92	87	94	92	84	121	91
	MB 320-241889/1-A	96	99	89	97	92	91	122	95
	LCS 320-241889/2-A	96	99	90	94	96	89	103	89
MW-33 MS	320-42375-1 MS	89	94	92	97	102	89	112	94
MW-33 MSD	320-42375-1 MSD	93	101	93	98	100	95	105	95

PFBA = 13C4 PFBA

PFPeA = 13C5-PFPeA

PFBS = 13C3-PFBS

PFHxA = 13C2 PFHxA

PFHpA = 13C4-PFHpA

PFHxS = 18O2 PFHxS

M262FTS = M2-6:2FTS

PFOA = 13C4 PFOA

QC LIMITS

25-150

25-150

25-150

25-150

25-150

25-150

25-150

25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-42375-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFNA #	PFOS #	M282FTS #	PFOSA #	PFDA #	d3NMFOS #	d5NEFOS #	PFUnA #
MW-33	320-42375-1	89	88	83	87	87	97	105	87
MW-5	320-42375-2	91	87	88	86	84	97	105	85
FB-2	320-42375-3	91	91	84	85	86	96	100	91
MW-7	320-42375-4	89	83	82	82	81	91	100	85
MW-34S	320-42375-5	89	79	94	75	83	99	94	78
DUP-1	320-42375-6	89	81	101	76	83	94	93	79
MW-33S	320-42375-7	87	81	118	75	89	146	98	84
MW-30S	320-42375-9	83	77	76	75	77	87	91	78
EB-2	320-42375-10	88	81	89	81	84	92	103	86
	MB 320-241889/1-A	90	89	85	82	84	94	100	84
	LCS 320-241889/2-A	87	85	81	82	82	94	99	85
MW-33 MS	320-42375-1 MS	89	89	84	84	81	101	105	84
MW-33 MSD	320-42375-1 MSD	93	91	80	86	83	97	103	87

QC LIMITS

PFNA = 13C5 PFNA	25-150
PFOS = 13C4 PFOS	25-150
M282FTS = M2-8:2FTS	25-150
PFOSA = 13C8 FOSA	25-150
PFDA = 13C2 PFDA	25-150
d3NMFOS = d3-NMeFOSAA	25-150
d5NEFOS = d5-NEtFOSAA	25-150
PFUnA = 13C2 PFUnA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 320-42375-1
 SDG No.: _____
 Matrix: Water Level: Low
 GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFDa #	PFTDA #
MW-33	320-42375-1	93	104
MW-5	320-42375-2	93	102
FB-2	320-42375-3	92	99
MW-7	320-42375-4	90	97
MW-34S	320-42375-5	82	81
DUP-1	320-42375-6	82	91
MW-33S	320-42375-7	82	96
MW-30S	320-42375-9	80	87
EB-2	320-42375-10	91	120
	MB 320-241889/1-A	89	98
	LCS 320-241889/2-A	88	89
MW-33 MS	320-42375-1 MS	88	100
MW-33 MSD	320-42375-1 MSD	94	100

PFDa = 13C2 PFDa
 PFTDA = 13C2-PFTeDA

QC LIMITS
 25-150
 25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 320-42375-1
 SDG No.: _____
 Sample No.: CCV 320-242789/3 Date Analyzed: 08/29/2018 09:14
 Instrument ID: A8_N GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 2018.08.29LLAA_036. Heated Purge: (Y/N) N
 Calibration ID: 40630

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		3552931	2.63				
UPPER LIMIT		5329397	2.83				
LOWER LIMIT		1776466	2.43				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCB 320-242789/1		3896010	2.61				
CCVL 320-242789/2		3971421	2.63				
CCV 320-242792/1		3234612	2.62				
320-42375-7	MW-33S	4872257	2.64				
320-42375-8 DL	MW-30 DL	459004*	2.63				
CCV 320-242792/12		3490835	2.63				

13PFOA = 13C2-PFOA
 13PFOA = 13C2-PFOA

Area Limit = 50%-150% of internal standard area
 RT Limit = $\pm$ 0.2 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 320-42375-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 320-241889/1-A
 Matrix: Water Lab File ID: 2018.08.27LLC_015.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 08/24/2018 08:53
 Sample wt/vol: 250(mL) Date Analyzed: 08/28/2018 12:26
 Con. Extract Vol.: 10.00(mL) Dilution Factor: 1
 Injection Volume: 2(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 242577 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25
335-67-1	Perfluorooctanoic acid (PFOA)	ND		2.0	0.85
375-95-1	Perfluorononanoic acid (PFNA)	ND		2.0	0.27
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.333	J	2.0	0.17
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	0.35
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.31
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	ND		2.0	1.3
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29
754-91-6	Perfluorooctane Sulfonamide (PFOSA)	ND		2.0	0.35
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	2.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Sacramento</u>	Job No.: <u>320-42375-1</u>
SDG No.: _____	
Client Sample ID: _____	Lab Sample ID: <u>MB 320-241889/1-A</u>
Matrix: <u>Water</u>	Lab File ID: <u>2018.08.27LLC_015.d</u>
Analysis Method: <u>537 (modified)</u>	Date Collected: _____
Extraction Method: <u>3535</u>	Date Extracted: <u>08/24/2018 08:53</u>
Sample wt/vol: <u>250(mL)</u>	Date Analyzed: <u>08/28/2018 12:26</u>
Con. Extract Vol.: <u>10.00(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>2(uL)</u>	GC Column: <u>GeminiC18 3x100 ID: 3(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>242577</u>	Units: <u>ng/L</u>

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	91		25-150
STL01892	13C4-PFHpA	92		25-150
STL00990	13C4 PFOA	95		25-150
STL00991	13C4 PFOS	89		25-150
STL00995	13C5 PFNA	90		25-150
STL00992	13C4 PFBA	96		25-150
STL00993	13C2 PFHxA	97		25-150
STL00996	13C2 PFDA	84		25-150
STL00997	13C2 PFUnA	84		25-150
STL00998	13C2 PFDoA	89		25-150
STL01056	13C8 FOSA	82		25-150
STL01893	13C5-PFPeA	99		25-150
STL02116	13C2-PFTeDA	98		25-150
STL02118	d3-NMeFOSAA	94		25-150
STL02117	d5-NEtFOSAA	100		25-150
STL02279	M2-6:2FTS	122		25-150
STL02280	M2-8:2FTS	85		25-150
STL02337	13C3-PFBS	89		25-150

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33

Date Collected: 08/21/18 12:40

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	5.4		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctanoic acid (PFOA)	2.4		1.7	0.71	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorobutanesulfonic acid (PFBS)	0.42	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorohexanesulfonic acid (PFHxS)	0.46	J B U	1.7	0.14	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.45	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorobutanoic acid (PFBA)	88		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoropentanoic acid (PFPeA)	170		1.7	0.41	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorohexanoic acid (PFHxA)	42		1.7	0.49	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.26	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 12:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/28/18 12:42	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/28/18 12:42	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 12:42	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	22		17	1.7	ng/L		08/24/18 11:32	08/28/18 12:42	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 12:42	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C4-PFHpA	99		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C4 PFOA	96		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C4 PFOS	88		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C5 PFNA	89		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C4 PFBA	90		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C2 PFHxA	100		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C2 PFDA	87		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C2 PFUnA	87		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C2 PFDoA	93		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C8 FOSA	87		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C5-PFPeA	96		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C2-PFTeDA	104		25 - 150				08/24/18 11:32	08/28/18 12:42	1
d3-NMeFOSAA	97		25 - 150				08/24/18 11:32	08/28/18 12:42	1
d5-NEtFOSAA	105		25 - 150				08/24/18 11:32	08/28/18 12:42	1
M2-6:2FTS	117		25 - 150				08/24/18 11:32	08/28/18 12:42	1
M2-8:2FTS	83		25 - 150				08/24/18 11:32	08/28/18 12:42	1
13C3-PFBS	96		25 - 150				08/24/18 11:32	08/28/18 12:42	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-5

Date Collected: 08/21/18 10:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	9.1		1.8	0.23	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctanoic acid (PFOA)	7.7		1.8	0.77	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorononanoic acid (PFNA)	0.81	J	1.8	0.24	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorobutanesulfonic acid (PFBS)	0.32	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorohexanesulfonic acid (PFHxS)	0.52	J B U	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctanesulfonic acid (PFOS)	5.2		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorobutanoic acid (PFBA)	64		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoropentanoic acid (PFPeA)	110		1.8	0.44	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorohexanoic acid (PFHxA)	28		1.8	0.52	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.99	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 13:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:05	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 13:05	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:05	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	10	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:05	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:05	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C4-PFHpA	98		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C4 PFOA	95		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C4 PFOS	87		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C5 PFNA	91		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C4 PFBA	84		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C2 PFHxA	98		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C2 PFDA	84		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C2 PFUnA	85		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C2 PFDoA	93		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C8 FOSA	86		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C5-PFPeA	96		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C2-PFTeDA	102		25 - 150				08/24/18 11:32	08/28/18 13:05	1
d3-NMeFOSAA	97		25 - 150				08/24/18 11:32	08/28/18 13:05	1
d5-NEtFOSAA	105		25 - 150				08/24/18 11:32	08/28/18 13:05	1
M2-6:2FTS	119		25 - 150				08/24/18 11:32	08/28/18 13:05	1
M2-8:2FTS	88		25 - 150				08/24/18 11:32	08/28/18 13:05	1
13C3-PFBS	89		25 - 150				08/24/18 11:32	08/28/18 13:05	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: FB-2

Date Collected: 08/21/18 10:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.73	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.17	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorohexanesulfonic acid (PFHxS)	0.22	J B U	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorobutanoic acid (PFBA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.42	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.94	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:13	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/28/18 13:13	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 13:13	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 13:13	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.8	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 13:13	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 13:13	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	94		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C4-PFHpa	101		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C4 PFOA	97		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C4 PFOS	91		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C5 PFNA	91		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C4 PFBA	99		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C2 PFHxA	107		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C2 PFDA	86		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C2 PFUnA	91		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C2 PFDoA	92		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C8 FOSA	85		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C5-PFPeA	98		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C2-PFTeDA	99		25 - 150				08/24/18 11:32	08/28/18 13:13	1
d3-NMeFOSAA	96		25 - 150				08/24/18 11:32	08/28/18 13:13	1
d5-NEtFOSAA	100		25 - 150				08/24/18 11:32	08/28/18 13:13	1
M2-6:2FTS	120		25 - 150				08/24/18 11:32	08/28/18 13:13	1
M2-8:2FTS	84		25 - 150				08/24/18 11:32	08/28/18 13:13	1
13C3-PFBS	98		25 - 150				08/24/18 11:32	08/28/18 13:13	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-7

Date Collected: 08/21/18 14:55

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.2		1.7	0.21	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctanoic acid (PFOA)	7.7		1.7	0.71	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorononanoic acid (PFNA)	4.4		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorobutanesulfonic acid (PFBS)	0.37	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorohexanesulfonic acid (PFHxS)	1.0	J B U	1.7	0.14	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctanesulfonic acid (PFOS)	13		1.7	0.45	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorobutanoic acid (PFBA)	9.6		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoropentanoic acid (PFPeA)	8.2		1.7	0.41	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorohexanoic acid (PFHxA)	4.1		1.7	0.48	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.91	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorodecanoic acid (PFDA)	0.43	J	1.7	0.26	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 13:21	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.29	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 13:21	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/28/18 13:21	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 13:21	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J U	17	1.7	ng/L		08/24/18 11:32	08/28/18 13:21	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 13:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	91		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4-PFHpA	105		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFOA	95		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFOS	83		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C5 PFNA	89		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C4 PFBA	77		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFHxA	100		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFDA	81		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFUnA	85		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2 PFDoA	90		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C8 FOSA	82		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C5-PFPeA	95		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C2-PFTeDA	97		25 - 150	08/24/18 11:32	08/28/18 13:21	1
d3-NMeFOSAA	91		25 - 150	08/24/18 11:32	08/28/18 13:21	1
d5-NEtFOSAA	100		25 - 150	08/24/18 11:32	08/28/18 13:21	1
M2-6:2FTS	109		25 - 150	08/24/18 11:32	08/28/18 13:21	1
M2-8:2FTS	82		25 - 150	08/24/18 11:32	08/28/18 13:21	1
13C3-PFBS	86		25 - 150	08/24/18 11:32	08/28/18 13:21	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-34S

Date Collected: 08/21/18 11:35

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-5

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.6		1.8	0.23	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctanoic acid (PFOA)	10		1.8	0.77	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorononanoic acid (PFNA)	6.3		1.8	0.25	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorobutanesulfonic acid (PFBS)	0.68	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorohexanesulfonic acid (PFHxS)	1.2	J B U	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoropentanoic acid (PFPeA)	5.8		1.8	0.45	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorohexanoic acid (PFHxA)	5.2		1.8	0.53	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoroundecanoic acid (PFUnA)	1.1	J	1.8	1.0	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorodecanoic acid (PFDA)	3.7		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorooctane Sulfonamide (PFOSA)	3.8		1.8	0.32	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 13:29	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.41	J	1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:29	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:29	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J U	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	79		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4-PFHpA	87		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFOA	91		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFOS	79		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C5 PFNA	89		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C4 PFBA	48		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFHxA	82		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFDA	83		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFUnA	78		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2 PFDoA	82		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C8 FOSA	75		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C5-PFPeA	74		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C2-PFTeDA	81		25 - 150				08/24/18 11:32	08/28/18 13:29	1
d3-NMeFOSAA	99		25 - 150				08/24/18 11:32	08/28/18 13:29	1
d5-NEtFOSAA	94		25 - 150				08/24/18 11:32	08/28/18 13:29	1
M2-6:2FTS	185 *		25 - 150				08/24/18 11:32	08/28/18 13:29	1
M2-8:2FTS	94		25 - 150				08/24/18 11:32	08/28/18 13:29	1
13C3-PFBS	75		25 - 150				08/24/18 11:32	08/28/18 13:29	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: DUP-1
Date Collected: 08/21/18 00:00
Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-6
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	6.4		1.8	0.22	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctanoic acid (PFOA)	10		1.8	0.75	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorononanoic acid (PFNA)	6.4		1.8	0.24	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorobutanesulfonic acid (PFBS)	0.53	J	1.8	0.18	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorohexanesulfonic acid (PFHxS)	1.1	J B U	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctanesulfonic acid (PFOS)	28		1.8	0.48	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorobutanoic acid (PFBA)	7.2		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoropentanoic acid (PFPeA)	5.6		1.8	0.43	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorohexanoic acid (PFHxA)	5.4		1.8	0.51	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoroundecanoic acid (PFUnA)	0.99	J	1.8	0.98	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorodecanoic acid (PFDA)	3.6		1.8	0.27	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorooctane Sulfonamide (PFOSA)	3.6		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 13:36	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.31	J	1.8	0.17	ng/L		08/24/18 11:32	08/28/18 13:36	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.7	ng/L		08/24/18 11:32	08/28/18 13:36	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 13:36	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	2.0	J U	18	1.8	ng/L		08/24/18 11:32	08/28/18 13:36	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 13:36	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	77		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4-PFHpA	87		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFOA	92		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFOS	81		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C5 PFNA	89		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C4 PFBA	48		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFHxA	81		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFDA	83		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFUnA	79		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2 PFDoA	82		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C8 FOSA	76		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C5-PFPeA	75		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C2-PFTeDA	91		25 - 150				08/24/18 11:32	08/28/18 13:36	1
d3-NMeFOSAA	94		25 - 150				08/24/18 11:32	08/28/18 13:36	1
d5-NEtFOSAA	93		25 - 150				08/24/18 11:32	08/28/18 13:36	1
M2-6:2FTS	183	*	25 - 150				08/24/18 11:32	08/28/18 13:36	1
M2-8:2FTS	101		25 - 150				08/24/18 11:32	08/28/18 13:36	1
13C3-PFBS	79		25 - 150				08/24/18 11:32	08/28/18 13:36	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-33S

Date Collected: 08/21/18 10:40

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-7

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	4.3		1.7	0.21	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctanoic acid (PFOA)	3.9		1.7	0.71	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorononanoic acid (PFNA)	1.0	J	1.7	0.23	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorobutanesulfonic acid (PFBS)	0.95	J	1.7	0.17	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorohexanesulfonic acid (PFHxS)	0.50	J B U	1.7	0.14	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctanesulfonic acid (PFOS)	2.3		1.7	0.45	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorobutanoic acid (PFBA)	8.0		1.7	0.29	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoropentanoic acid (PFPeA)	10		1.7	0.41	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorohexanoic acid (PFHxA)	5.8		1.7	0.49	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.92	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorodecanoic acid (PFDA)	0.34	J	1.7	0.26	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.46	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.24	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.29	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/29/18 10:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.16	ng/L		08/24/18 11:32	08/29/18 10:08	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.6	ng/L		08/24/18 11:32	08/29/18 10:08	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/29/18 10:08	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.7	J U	17	1.7	ng/L		08/24/18 11:32	08/29/18 10:08	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/29/18 10:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	82		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C4-PFHxA	89		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C4 PFOA	95		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C4 PFOS	81		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C5 PFNA	87		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C4 PFBA	43		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C2 PFHxA	81		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C2 PFDA	89		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C2 PFUnA	84		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C2 PFDoA	82		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C8 FOSA	75		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C5-PFPeA	72		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C2-PFTeDA	96		25 - 150				08/24/18 11:32	08/29/18 10:08	1
d3-NMeFOSAA	146		25 - 150				08/24/18 11:32	08/29/18 10:08	1
d5-NEtFOSAA	98		25 - 150				08/24/18 11:32	08/29/18 10:08	1
M2-6:2FTS	149		25 - 150				08/24/18 11:32	08/29/18 10:08	1
M2-8:2FTS	118		25 - 150				08/24/18 11:32	08/29/18 10:08	1
13C3-PFBS	79		25 - 150				08/24/18 11:32	08/29/18 10:08	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30
Date Collected: 08/21/18 16:10
Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-8
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	73		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctanoic acid (PFOA)	57		1.7	0.74	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorononanoic acid (PFNA)	3.2		1.7	0.23	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorobutanesulfonic acid (PFBS)	1.3	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J B U	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctanesulfonic acid (PFOS)	2.1		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorobutanoic acid (PFBA)	240		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorohexanoic acid (PFHxA)	300		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.48	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/24/18 11:32	08/28/18 14:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.34	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 14:00	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 14:00	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 14:00	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	5.2	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 14:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	90		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4-PFHpA	97		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFOA	92		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFOS	90		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C5 PFNA	92		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C4 PFBA	81		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFHxA	93		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFDA	85		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFUnA	86		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2 PFDoA	91		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C8 FOSA	89		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C2-PFTeDA	101		25 - 150	08/24/18 11:32	08/28/18 14:00	1
d3-NMeFOSAA	99		25 - 150	08/24/18 11:32	08/28/18 14:00	1
d5-NEtFOSAA	102		25 - 150	08/24/18 11:32	08/28/18 14:00	1
M2-8:2FTS	84		25 - 150	08/24/18 11:32	08/28/18 14:00	1
13C3-PFBS	87		25 - 150	08/24/18 11:32	08/28/18 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	730	J+	17	4.2	ng/L		08/24/18 11:32	08/29/18 10:16	10
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	740	J+	170	17	ng/L		08/24/18 11:32	08/29/18 10:16	10

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30
Date Collected: 08/21/18 16:10
Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-8
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5-PFPeA	94		25 - 150	08/24/18 11:32	08/29/18 10:16	10
M2-6:2FTS	118		25 - 150	08/24/18 11:32	08/29/18 10:16	10

Client Sample ID: MW-30S
Date Collected: 08/21/18 16:20
Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-9
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	7.2		1.7	0.22	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctanoic acid (PFOA)	16		1.7	0.73	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorononanoic acid (PFNA)	1.6	J	1.7	0.23	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorobutanesulfonic acid (PFBS)	0.51	J	1.7	0.17	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorohexanesulfonic acid (PFHxS)	4.3	B	1.7	0.15	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctanesulfonic acid (PFOS)	5.5		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorobutanoic acid (PFBA)	7.3		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoropentanoic acid (PFPeA)	7.4		1.7	0.42	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorohexanoic acid (PFHxA)	5.7		1.7	0.50	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.95	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.27	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.47	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.7	1.1	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.25	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.7	0.30	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.28	ng/L		08/24/18 11:32	08/28/18 14:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.35	J	1.7	0.16	ng/L		08/24/18 11:32	08/28/18 14:08	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		17	2.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		17	1.6	ng/L		08/24/18 11:32	08/28/18 14:08	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	3.0	J	17	1.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	1.7	ng/L		08/24/18 11:32	08/28/18 14:08	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	79		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4-PFHpA	89		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFOA	86		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFOS	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C5 PFNA	83		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C4 PFBA	53		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFHxA	85		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFDA	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFUnA	78		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2 PFDoA	80		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C8 FOSA	75		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C5-PFPeA	77		25 - 150				08/24/18 11:32	08/28/18 14:08	1
13C2-PFTeA	87		25 - 150				08/24/18 11:32	08/28/18 14:08	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: MW-30S

Date Collected: 08/21/18 16:20

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-9

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	87		25 - 150	08/24/18 11:32	08/28/18 14:08	1
d5-NEtFOSAA	91		25 - 150	08/24/18 11:32	08/28/18 14:08	1
M2-6:2FTS	137		25 - 150	08/24/18 11:32	08/28/18 14:08	1
M2-8:2FTS	76		25 - 150	08/24/18 11:32	08/28/18 14:08	1
13C3-PFBS	77		25 - 150	08/24/18 11:32	08/28/18 14:08	1

Client Sample ID: EB-2

Date Collected: 08/21/18 16:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-10

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.22	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.76	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorohexanesulfonic acid (PFHxS)	0.25	J B U	1.8	0.15	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorobutanoic acid (PFBA)	ND		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.52	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorotridecanoic Acid (PFTriA)	ND		1.8	1.2	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.26	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorooctane Sulfonamide (PFOSA)	ND		1.8	0.31	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/24/18 11:32	08/28/18 14:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/24/18 11:32	08/28/18 14:15	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	ND		18	2.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	ND		18	1.7	ng/L		08/24/18 11:32	08/28/18 14:15	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.9	J	18	1.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	1.8	ng/L		08/24/18 11:32	08/28/18 14:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	84		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4-PFHxA	92		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFOA	91		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFOS	81		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C5 PFNA	88		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C4 PFBA	93		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFHxA	94		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFDA	84		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFUnA	86		25 - 150				08/24/18 11:32	08/28/18 14:15	1
13C2 PFDoA	91		25 - 150				08/24/18 11:32	08/28/18 14:15	1

TestAmerica Sacramento

Client Sample Results

Client: Woodard & Curran, Inc.
Project/Site: Rouses Point

TestAmerica Job ID: 320-42375-1

Client Sample ID: EB-2

Date Collected: 08/21/18 16:50

Date Received: 08/22/18 09:30

Lab Sample ID: 320-42375-10

Matrix: Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
¹³ C8 FOSA	81		25 - 150	08/24/18 11:32	08/28/18 14:15	1
¹³ C5-PFPeA	92		25 - 150	08/24/18 11:32	08/28/18 14:15	1
¹³ C2-PFTeDA	120		25 - 150	08/24/18 11:32	08/28/18 14:15	1
d3-NMeFOSAA	92		25 - 150	08/24/18 11:32	08/28/18 14:15	1
d5-NEtFOSAA	103		25 - 150	08/24/18 11:32	08/28/18 14:15	1
M2-6:2FTS	121		25 - 150	08/24/18 11:32	08/28/18 14:15	1
M2-8:2FTS	89		25 - 150	08/24/18 11:32	08/28/18 14:15	1
¹³ C3-PFBS	87		25 - 150	08/24/18 11:32	08/28/18 14:15	1