NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation
625 Broadway, 12th Floor, Albany, New York 12233-7011
P: (518) 402-9706 | F: (518) 402-9020
www.dec.ny.gov

January 24, 2020

Mr. George Meyers, Supervisor
Town of New Windsor
555 Union Avenue
New Windsor, New York 12553

Re: New Windsor Public Water Supply Well Sample Results
Kroll Well, New Windsor (T), Orange County

Dear Supervisor Meyers:

The New York State Department of Environmental Conservation (DEC) is providing you with a copy of analytical results derived from the January 17, 2020 sampling of the granular activated carbon (GAC) water treatment system by DEC representatives that was installed on the Town of New Windsor (Town) Kroll Well located at 354 Mount Airy Road.

No PFOS or PFOA was detected in the Kroll Well GAC-treated water. The U.S. Environmental Protection Agency (EPA) lifetime health advisory level (HAL) is 70 parts per trillion (ppt) for PFOA, PFOS, or the combination of PFOA and PFOS. The proposed NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.

Specifically, the samples were analyzed for a total of six and twenty-one per- and polyfluoroalkyl substances (PFAS), including Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS). Data received for the 21 PFAS list analysis has been attached. Please note that the sampling data associated with the 6 PFAS list was provided to the Town under separate letter in December 2019 after receipt and review by DEC and the New York State Department of Health (DOH).

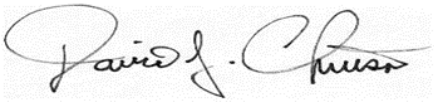
During this event, sampling for the 21 PFAS list was conducted at 9 locations:

- pre-treatment (raw untreated water), which has a “RAW WATER” identifier in the Client Sample ID;
- 25 % treatment – lead tank (A-25 identifier);
- 50 % treatment – lead tank (A-50 identifier);
- 75 % treatment – lead tank (A-75 identifier);
- mid-treatment (after the first GAC canister and prior to the second GAC canister), which has a “MID POINT” identifier in the Client Sample ID;
- 25 % treatment – lag tank (B-25 identifier);
- 50 % treatment – lag tank (B-50 identifier);
- 75 % treatment – lag tank (B-75 identifier); and
- post-treatment (after the entire treatment system), which has a “EFFLUENT” identifier in the Client Sample ID.

The 9 locations sampled (and their associated identifiers) are depicted in Figure 1.

If you have any technical questions regarding the analytical results or on the operation and performance of the GAC treatment system, please feel free to contact me or Jim Hayward, EA Science and Technology (DEC's Project Engineer) at (315) 431-4610 (ext.1857) or jhayward@eaest.com . For weekday or off hour / weekend emergency repair issues, please call DEC's contractor, Steven Phelps of Precision Environmental Services at (518) 528-1427. For questions regarding site-related health concerns, please contact Steve Gagnon of the Orange County DOH at (845) 291-2331 or Dr. Min-Sook Kim of the NYSDOH Bureau of Water Supply Protection at (518) 402-7650; email: min-sook.kim@health.ny.gov .

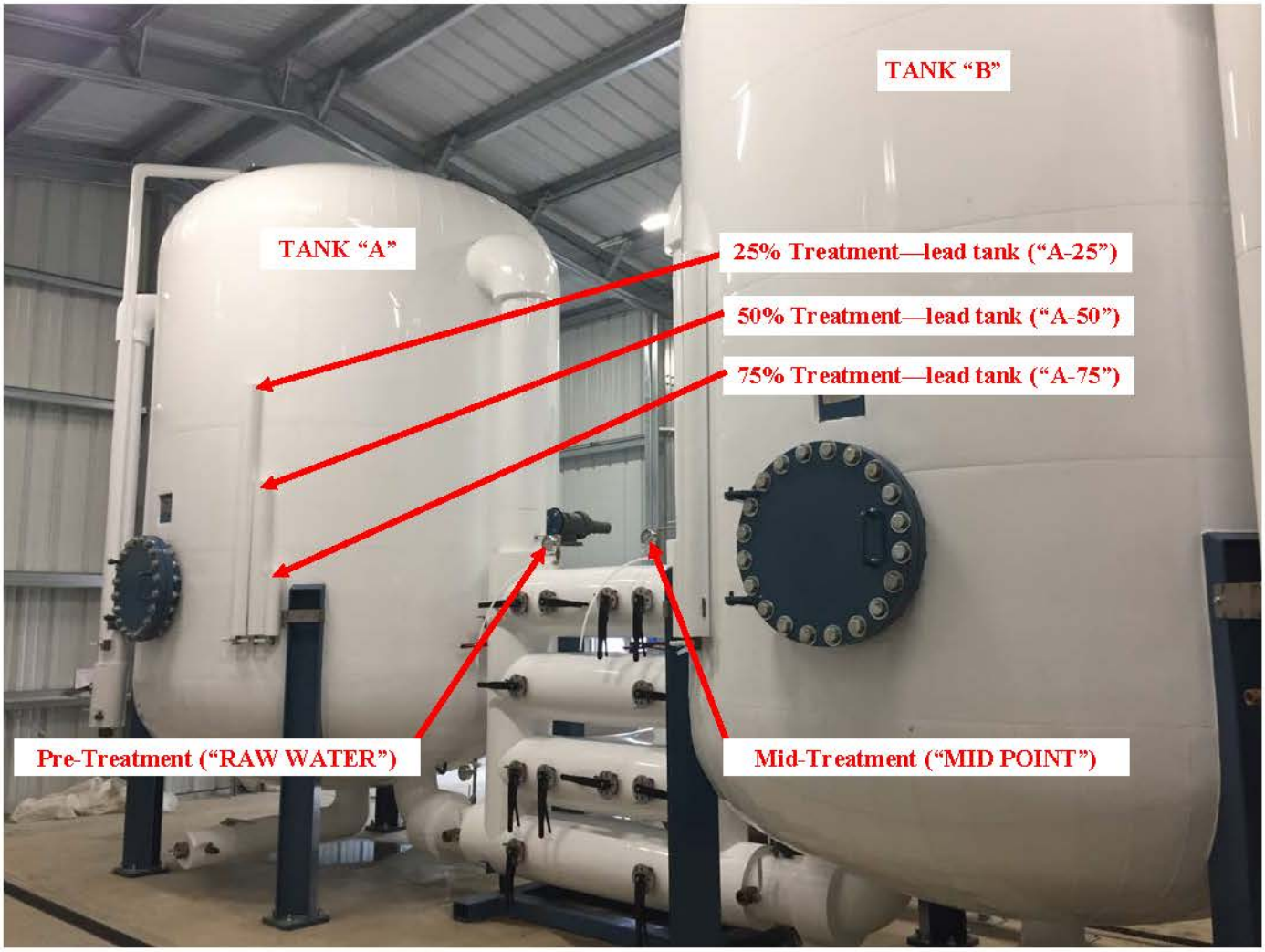
Sincerely,



David J. Chiusano
Environmental Engineer/Project Manager
Remedial Section A, Remedial Bureau E
Division of Environmental Remediation

Enclosures

ec: w/enclosures
D. Zagon, Town of New Windsor
J. Egitto, Town of New Windsor
M. Weeks, MHE
W. Gilday, NYSDOH
Dr. Kim, NYSDOH
S. Gladding, NYSDOH
S. Gagnon, OCDOH
M. Andersen, OCDOH
J. Hayward, EA Engineering
S. Phelps, PES
M. Cruden, NYSDEC
D. Bendell, Region 3 RHWRE
D. Harrington, NYSDEC



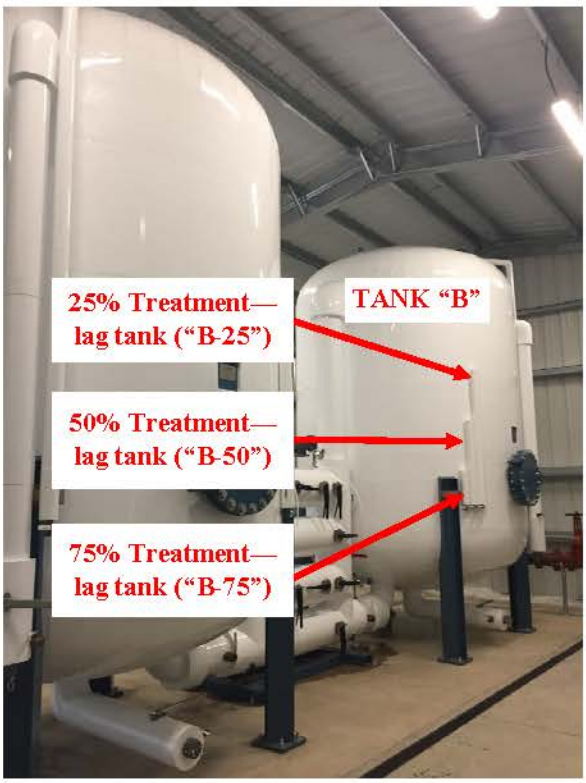


Figure 1—Kroll Well GAC Treatment System Sampling Locations

Town of New Windsor

Kroll Well GAC Operation and Maintenance PFOA and PFOS Sampling Results ** (Parts Per Trillion (PPT))

Date	Analyte	Result [1] Raw Water	Result A25	Result[2] A50	Result A75	Result Mid-Point	Result B25	Result B50	Result B75	Treated Effluent	USEPA Drinking Water Health Advisory Guidance Value	Proposed NYS MCLs
September 2019 (Based on 21 PFAS Analysis Data only)	PFOA	8.4	ND	6.1	ND	ND	ND	ND	ND	ND	70[4]	10[5]
	PFOS	14	ND	7.8	ND	ND	ND	ND	ND	ND	70[4]	10[5]
October 2019 (Based on 21 PFAS Analysis Data only)	PFOA	7.9	6.5	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
	PFOS	13	8.7	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
November 2019 (Based on 21 PFAS Analysis Data only)	PFOA	12	10	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
	PFOS	10	8.4	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
December 2019 (Based on 21 PFAS Analysis Data only)	PFOA	12	10	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
	PFOS	10	8.7	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]
January 2020 (Based on 21 PFAS Analysis Data only)	PFOA	11	10	2.2	ND	ND	ND	ND	ND	ND	70[4]	10[5]
	PFOS	10	8.7	ND	ND	ND	ND	ND	ND	ND	70[4]	10[5]

Notes:

** 21 PFAS List Analysis.

1. PFOS and PFOA results and comparison values are reported in parts per trillion (ppt, nanograms per liter, ng/l).
2. “ND” means non-detect. The analyte was not detected in the sample.
3. MCL (Maximum Contaminant Level, mg/l) is the maximum permissible level of a contaminant in water delivered by a public water system.
4. Guidance: USEPA Drinking Water Health Advisory guidance value is currently 70 ppt.
5. The proposed NYS maximum contaminant levels (MCLs) are 10 ppt for PFOS and 10 ppt for PFOA.

How to Read Your Laboratory Reports

PFOA and PFOS Results:

- Analyte is the term used to describe what the laboratory was testing for, in this case PFOS and PFOA.
- Conc. (ng/l) is your result for PFOS and PFOA. In your case, no PFOS and PFOA were detected, thus ND or "non-detect" or <2.0 ng/l was reported. (ng/l = ppt)
- RL = reporting limit or RDL = reportable detection limit is the lowest level at which this specific testing protocol and laboratory has confidence in measuring the given analyte.
- Qualifiers are added information to help understand the quality of the data. Often, if something about the results or the calibration of the testing equipment was irregular, it would be reported here.

All other columns represent laboratory quality control information. The laboratory calibrates its equipment against a precise quantity of the chemical in order to ensure that the equipment is functioning properly. Some laboratory reports may not have all this information.

- Labeled Standard or Surrogate is the lab's specific name for an individual control sample.
- %R is the percent of the control sample that was detected by the equipment. A 100% reading represents perfect equipment alignment.
- LCL-UCL is the lower concentration limit (LCL) and upper concentration limit (UCL). The LCL represents the lowest acceptable %R value and the UCL represent the highest acceptable %R value required to ensure your result is accurate.
- Qualifiers: If a result quality control variance is noted or I the %R value of any of the control samples were outside the allowable range that would have been noted in this last column. This gives the analyst less confidence in the measured value.

The analysis for PFOS and PFOA is performed using modified EPA Method 537. The laboratory may report a detection of PFOS and PFOA down to approximately 2.0 nanograms per liter (ng/l) or parts per trillion (ppt).

Inorganic Results:

- Parameter is the same as "analyte" above – it is the chemical being tested.
- Result is the concentration of that chemical detected.
- RL/PQL is the lowest level at which the specific laboratory test can reliably quantify the concentration. Below that number, the result is considered unreliable.
- DIL is the number of times the sample was diluted (necessary because the test has a certain range that it is accurate for).
- Units: mg/l is milligrams per liter or parts per million; ug/l is micrograms per liter or parts per billion.
- DW MCL stands for drinking water (DW) and "maximum contaminant level" (MCL). All chemicals that have a "maximum contaminant level" (MCL) established for drinking water (DW) have a level reported in this column.

- Sec Goal is the EPA nomenclature for all contaminants that have regulatory levels set based on aesthetics (for example, taste or color). DOH recognizes these EPA secondary goals as primary standards and enforces its drinking water quality program accordingly.
- Date/Time represents the date and time of the analysis at the lab.
- By refers to the technician who ran the test.
- Reference indicates the EPA method used in the test.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-52269-1
Client Project/Site: Stewart ANG Base #336089 Kroll Well

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, New York 12233-7017

Attn: Mr. Dave Chiusano

Judy Stone

Authorized for release by:
1/23/2020 4:18:13 PM

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Judy Stone
Senior Project Manager
1/23/2020 4:18:13 PM

Table of Contents

Definitions/Glossary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 200-52269-1

Laboratory: Eurofins TestAmerica, Burlington

Narrative

Job Narrative
200-52269-1

Receipt
The samples were received on 1/18/2020 9:54 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2º C.

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

Detection Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: EFFLUENT
Lab Sample ID: 200-52269-1

No Detections.

Client Sample ID: MID POINT
Lab Sample ID: 200-52269-2

No Detections.

Client Sample ID: RAW WATER
Lab Sample ID: 200-52269-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.3		1.9		ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.5		1.9		ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		1.9		ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.4		1.9		ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	11		1.9		ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.6		1.9		ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.3		1.9		ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	10		1.9		ng/L	1		537 (modified)	Total/NA

Client Sample ID: DUPLICATE
Lab Sample ID: 200-52269-4

No Detections.

Client Sample ID: A-25
Lab Sample ID: 200-52269-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.4		1.7		ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.7		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.3		1.7		ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.2		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	10		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.0		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.3		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.7		1.7		ng/L	1		537 (modified)	Total/NA

Client Sample ID: A-50
Lab Sample ID: 200-52269-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.7		1.7		ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	3.4		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		1.7		ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.6		1.7		ng/L	1		537 (modified)	Total/NA

Client Sample ID: A-75
Lab Sample ID: 200-52269-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.7		1.7		ng/L	1		537 (modified)	Total/NA

Client Sample ID: B-25
Lab Sample ID: 200-52269-8

No Detections.

Client Sample ID: B-50
Lab Sample ID: 200-52269-9

No Detections.

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: B-75
Lab Sample ID: 200-52269-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: EFFLUENT
Lab Sample ID: 200-52269-1

Date Collected: 01/17/20 11:10
Matrix: Water

Date Received: 01/18/20 09:54

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
Perfluorooctanesulfonamide (FOSA)	ND		8.7		ng/L		01/20/20 11:22	01/20/20 20:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 20:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 20:37	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 20:37	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 20:37	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*101*		*25 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C4 PFBA	*119*		*25 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C5-PFPeA DNU	*124*		*25 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C2 PFHxA	*114*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C4 PFHpA	*113*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C4 PFOA	*104*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C5 PFNA	*110*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C2 PFDA	*100*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C2 PFUnA	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C2 PFDoA	*92*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C2 PFTeDA	*100*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C3 PFBS	*113*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
18O2 PFHxS	*111*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
13C4 PFOS	*109*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
d3-NMeFOSAA	*81*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
d5-NEtFOSAA	*97*		*50 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
M2-6:2 FTS	*91*		*25 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*
M2-8:2 FTS	*100*		*25 - 150*	*01/20/20 11:22*	*01/20/20 20:37*	*1*

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: MID POINT
Lab Sample ID: 200-52269-2
Date Collected: 01/17/20 11:33
Matrix: Water
Date Received: 01/18/20 09:54

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:01	1
Perfluorooctanesulfonamide (FOSA)	ND		8.5		ng/L		01/20/20 11:22	01/20/20 21:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:01	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:01	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*91*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C4 PFBA	*117*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C5-PFPeA DNU	*121*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C2 PFHxA	*120*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C4 PFHpA	*113*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C4 PFOA	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C5 PFNA	*101*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C2 PFDA	*98*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C2 PFUnA	*91*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C2 PFDoA	*85*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C2 PFTeDA	*87*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C3 PFBS	*116*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
18O2 PFHxS	*113*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
13C4 PFOS	*107*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
d3-NMeFOSAA	*78*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
d5-NEtFOSAA	*80*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
M2-6:2 FTS	*97*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*
M2-8:2 FTS	*101*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:01*	*1*

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: RAW WATER
Lab Sample ID: 200-52269-3
Date Collected: 01/17/20 11:53
Matrix: Water
Date Received: 01/18/20 09:54

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.3**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluoropentanoic acid (PFPeA)	**4.5**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorohexanoic acid (PFHxA)	**4.4**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluoroheptanoic acid (PFHpA)	**3.4**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorooctanoic acid (PFOA)	**11**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorononanoic acid (PFNA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorodecanoic acid (PFDA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorobutanesulfonic acid (PFBS)	**6.6**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorohexanesulfonic acid (PFHxS)	**2.3**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorooctanesulfonic acid (PFOS)	**10**		1.9		ng/L		01/20/20 11:22	01/20/20 21:09	1
Perfluorooctanesulfonamide (FOSA)	ND		9.3		ng/L		01/20/20 11:22	01/20/20 21:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19		ng/L		01/20/20 11:22	01/20/20 21:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19		ng/L		01/20/20 11:22	01/20/20 21:09	1
6:2 FTS	ND		19		ng/L		01/20/20 11:22	01/20/20 21:09	1
8:2 FTS	ND		19		ng/L		01/20/20 11:22	01/20/20 21:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*99*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C4 PFBA	*122*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C5-PFPeA DNU	*124*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C2 PFHxA	*115*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C4 PFHpA	*119*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C4 PFOA	*107*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C5 PFNA	*110*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C2 PFDA	*102*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C2 PFUnA	*108*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C2 PFDoA	*97*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C2 PFTeDA	*98*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C3 PFBS	*114*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
18O2 PFHxS	*124*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
13C4 PFOS	*112*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
d3-NMeFOSAA	*80*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
d5-NEtFOSAA	*84*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
M2-6:2 FTS	*98*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*
M2-8:2 FTS	*101*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:09*	*1*

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: DUPLICATE
Lab Sample ID: 200-52269-4
Date Collected: 01/17/20 00:00
Matrix: Water
Date Received: 01/18/20 09:54

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
Perfluorooctanesulfonamide (FOSA)	ND		8.8		ng/L		01/20/20 11:22	01/20/20 21:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:18	1
6:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:18	1
8:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*85*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C4 PFBA	*118*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C5-PFPeA DNU	*126*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C2 PFHxA	*121*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C4 PFHpA	*123*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C4 PFOA	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C5 PFNA	*104*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C2 PFDA	*92*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C2 PFUnA	*89*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C2 PFDoA	*85*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C2 PFTeDA	*84*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C3 PFBS	*114*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
18O2 PFHxS	*111*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
13C4 PFOS	*107*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
d3-NMeFOSAA	*77*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
d5-NEtFOSAA	*86*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
M2-6:2 FTS	*93*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*
M2-8:2 FTS	*91*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:18*	*1*

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: A-25
Date Collected: 01/17/20 11:48
Date Received: 01/18/20 09:54

Lab Sample ID: 200-52269-5
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.4**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluoropentanoic acid (PFPeA)	**4.7**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorohexanoic acid (PFHxA)	**4.3**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluoroheptanoic acid (PFHpA)	**3.2**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorooctanoic acid (PFOA)	**10**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorobutanesulfonic acid (PFBS)	**6.0**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorohexanesulfonic acid (PFHxS)	**2.3**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorooctanesulfonic acid (PFOS)	**8.7**		1.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
Perfluorooctanesulfonamide (FOSA)	ND		8.7		ng/L		01/20/20 11:22	01/20/20 21:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:26	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:26	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*82*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C4 PFBA	*112*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C5-PFPeA DNU	*108*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C2 PFHxA	*108*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C4 PFHpA	*110*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C4 PFOA	*102*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C5 PFNA	*90*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C2 PFDA	*87*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C2 PFUnA	*89*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C2 PFDoA	*81*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C2 PFTeDA	*88*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C3 PFBS	*104*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
18O2 PFHxS	*105*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
13C4 PFOS	*105*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
d3-NMeFOSAA	*77*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
d5-NEtFOSAA	*85*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
M2-6:2 FTS	*89*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*
M2-8:2 FTS	*82*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:26*	*1*

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: A-50
Date Collected: 01/17/20 11:43
Date Received: 01/18/20 09:54

Lab Sample ID: 200-52269-6
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.7**		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluoropentanoic acid (PFPeA)	**3.4**		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorohexanoic acid (PFHxA)	**2.4**		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorooctanoic acid (PFOA)	**2.2**		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorobutanesulfonic acid (PFBS)	**2.6**		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:34	1
Perfluorooctanesulfonamide (FOSA)	ND		8.5		ng/L		01/20/20 11:22	01/20/20 21:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:34	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:34	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*92*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C4 PFBA	*111*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C5-PFPeA DNU	*122*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C2 PFHxA	*112*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C4 PFHpA	*114*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C4 PFOA	*99*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C5 PFNA	*95*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C2 PFDA	*92*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C2 PFUnA	*96*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C2 PFDoA	*87*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C2 PFTeDA	*91*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C3 PFBS	*110*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
18O2 PFHxS	*104*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
13C4 PFOS	*101*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
d3-NMeFOSAA	*84*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
d5-NEtFOSAA	*86*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
M2-6:2 FTS	*93*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*
M2-8:2 FTS	*93*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:34*	*1*

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: A-75
Date Collected: 01/17/20 11:38
Date Received: 01/18/20 09:54

Lab Sample ID: 200-52269-7
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.7**		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
Perfluorooctanesulfonamide (FOSA)	ND		8.7		ng/L		01/20/20 11:22	01/20/20 21:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 21:42	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:42	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 21:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*87*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C4 PFBA	*118*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C5-PFPeA DNU	*131*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C2 PFHxA	*122*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C4 PFHpA	*121*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C4 PFOA	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C5 PFNA	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C2 PFDA	*92*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C2 PFUnA	*92*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C2 PFDoA	*81*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C2 PFTeDA	*88*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C3 PFBS	*114*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
18O2 PFHxS	*111*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
13C4 PFOS	*107*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
d3-NMeFOSAA	*83*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
d5-NEtFOSAA	*82*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
M2-6:2 FTS	*105*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*
M2-8:2 FTS	*100*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:42*	*1*

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: B-25
Date Collected: 01/17/20 11:25
Date Received: 01/18/20 09:54

Lab Sample ID: 200-52269-8
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:50	1
Perfluorooctanesulfonamide (FOSA)	ND		9.0		ng/L		01/20/20 11:22	01/20/20 21:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:50	1
6:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:50	1
8:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*96*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C4 PFBA	*113*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C5-PFPeA DNU	*121*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C2 PFHxA	*117*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C4 PFHpA	*123*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C4 PFOA	*100*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C5 PFNA	*98*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C2 PFDA	*100*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C2 PFUnA	*88*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C2 PFDoA	*88*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C2 PFTeDA	*88*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C3 PFBS	*116*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
18O2 PFHxS	*109*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
13C4 PFOS	*109*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
d3-NMeFOSAA	*81*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
d5-NEtFOSAA	*84*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
M2-6:2 FTS	*96*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*
M2-8:2 FTS	*102*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:50*	*1*

Client Sample Results

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: B-50
Date Collected: 01/17/20 11:22
Date Received: 01/18/20 09:54

Lab Sample ID: 200-52269-9
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluoropentanoic acid (PFPeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorohexanoic acid (PFHxA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorooctanoic acid (PFOA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorononanoic acid (PFNA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorodecanoic acid (PFDA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8		ng/L		01/20/20 11:22	01/20/20 21:59	1
Perfluorooctanesulfonamide (FOSA)	ND		9.1		ng/L		01/20/20 11:22	01/20/20 21:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18		ng/L		01/20/20 11:22	01/20/20 21:59	1
6:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:59	1
8:2 FTS	ND		18		ng/L		01/20/20 11:22	01/20/20 21:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*80*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C4 PFBA	*105*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C5-PFPeA DNU	*115*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C2 PFHxA	*109*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C4 PFHpA	*110*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C4 PFOA	*100*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C5 PFNA	*95*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C2 PFDA	*84*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C2 PFUnA	*73*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C2 PFDoA	*80*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C2 PFTeDA	*80*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C3 PFBS	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
18O2 PFHxS	*106*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
13C4 PFOS	*96*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
d3-NMeFOSAA	*69*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
d5-NEtFOSAA	*74*		*50 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
M2-6:2 FTS	*90*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*
M2-8:2 FTS	*89*		*25 - 150*	*01/20/20 11:22*	*01/20/20 21:59*	*1*

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: B-75
Lab Sample ID: 200-52269-10
Date Collected: 01/17/20 11:17
Matrix: Water
Date Received: 01/18/20 09:54

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluoropentanoic acid (PFPeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorohexanoic acid (PFHxA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorooctanoic acid (PFOA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorononanoic acid (PFNA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorodecanoic acid (PFDA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorododecanoic acid (PFDoA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7		ng/L		01/20/20 11:22	01/20/20 22:07	1
Perfluorooctanesulfonamide (FOSA)	ND		8.4		ng/L		01/20/20 11:22	01/20/20 22:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 22:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17		ng/L		01/20/20 11:22	01/20/20 22:07	1
6:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 22:07	1
8:2 FTS	ND		17		ng/L		01/20/20 11:22	01/20/20 22:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*84*		*25 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C4 PFBA	*110*		*25 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C5-PFPeA DNU	*122*		*25 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C2 PFHxA	*111*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C4 PFHpA	*123*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C4 PFOA	*104*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C5 PFNA	*98*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C2 PFDA	*83*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C2 PFUnA	*86*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C2 PFDoA	*85*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C2 PFTeDA	*90*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C3 PFBS	*109*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
18O2 PFHxS	*111*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
13C4 PFOS	*107*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
d3-NMeFOSAA	*76*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
d5-NEtFOSAA	*77*		*50 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
M2-6:2 FTS	*92*		*25 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*
M2-8:2 FTS	*94*		*25 - 150*	*01/20/20 11:22*	*01/20/20 22:07*	*1*

Isotope Dilution Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFBA (25-150)	PFPeA (25-150)	PFHxA (50-150)	PFHpA (50-150)	PFOA (50-150)	PFNA (50-150)	PFDA (50-150)
200-52269-1	EFFLUENT	101	119	124	114	113	104	110	100
200-52269-1 MS	EFFLUENT	84	110	121	112	114	98	100	86
200-52269-1 MSD	EFFLUENT	84	119	128	120	120	107	103	97
200-52269-2	MID POINT	91	117	121	120	113	106	101	98
200-52269-3	RAW WATER	99	122	124	115	119	107	110	102
200-52269-4	DUPLICATE	85	118	126	121	123	106	104	92
200-52269-5	A-25	82	112	108	108	110	102	90	87
200-52269-6	A-50	92	111	122	112	114	99	95	92
200-52269-7	A-75	87	118	131	122	121	106	106	92
200-52269-8	B-25	96	113	121	117	123	100	98	100
200-52269-9	B-50	80	105	115	109	110	100	95	84
200-52269-10	B-75	84	110	122	111	123	104	98	83
LCS 200-151611/2-A	Lab Control Sample	70	127	128	124	120	109	107	106
MB 200-151611/1-A	Method Blank	88	124	132	118	124	115	106	103

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFUnA (50-150)	PFDoA (50-150)	PFTDA (50-150)	3C3-PFBS (50-150)	PFHxS (50-150)	PFOS (50-150)	-NMeFOSA (50-150)	-NEtFOSA (50-150)
200-52269-1	EFFLUENT	106	92	100	113	111	109	81	97
200-52269-1 MS	EFFLUENT	80	81	91	114	107	101	72	73
200-52269-1 MSD	EFFLUENT	86	76	86	118	116	108	72	72
200-52269-2	MID POINT	91	85	87	116	113	107	78	80
200-52269-3	RAW WATER	108	97	98	114	124	112	80	84
200-52269-4	DUPLICATE	89	85	84	114	111	107	77	86
200-52269-5	A-25	89	81	88	104	105	105	77	85
200-52269-6	A-50	96	87	91	110	104	101	84	86
200-52269-7	A-75	92	81	88	114	111	107	83	82
200-52269-8	B-25	88	88	88	116	109	109	81	84
200-52269-9	B-50	73	80	80	106	106	96	69	74
200-52269-10	B-75	86	85	90	109	111	107	76	77
LCS 200-151611/2-A	Lab Control Sample	91	79	74	120	119	112	82	82
MB 200-151611/1-A	Method Blank	102	85	99	121	115	111	92	84

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)						
200-52269-1	EFFLUENT	91	100						
200-52269-1 MS	EFFLUENT	86	85						
200-52269-1 MSD	EFFLUENT	99	89						
200-52269-2	MID POINT	97	101						
200-52269-3	RAW WATER	98	101						
200-52269-4	DUPLICATE	93	91						
200-52269-5	A-25	89	82						
200-52269-6	A-50	93	93						
200-52269-7	A-75	105	100						
200-52269-8	B-25	96	102						
200-52269-9	B-50	90	89						
200-52269-10	B-75	92	94						
LCS 200-151611/2-A	Lab Control Sample	102	96						
MB 200-151611/1-A	Method Blank	92	103						

Isotope Dilution Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Surrogate Legend

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

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 200-151611/1-A
Matrix: Water
Analysis Batch: 151657

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluoropentanoic acid (PFPeA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorohexanoic acid (PFHxA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorodecanoic acid (PFDA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorododecanoic acid (PFDoA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		01/20/20 11:22	01/21/20 16:49	1
Perfluorooctanesulfonamide (FOSA)	ND		10		ng/L		01/20/20 11:22	01/21/20 16:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20		ng/L		01/20/20 11:22	01/21/20 16:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20		ng/L		01/20/20 11:22	01/21/20 16:49	1
6:2 FTS	ND		20		ng/L		01/20/20 11:22	01/21/20 16:49	1
8:2 FTS	ND		20		ng/L		01/20/20 11:22	01/21/20 16:49	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*88*		*25 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C4 PFBA	*124*		*25 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C5-PFPeA DNU	*132*		*25 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C2 PFHxA	*118*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C4 PFHpA	*124*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C4 PFOA	*115*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C5 PFNA	*106*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C2 PFDA	*103*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C2 PFUnA	*102*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C2 PFDoA	*85*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C2 PFTeDA	*99*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C3 PFBS	*121*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
18O2 PFHxS	*115*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
13C4 PFOS	*111*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
d3-NMeFOSAA	*92*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
d5-NEtFOSAA	*84*		*50 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
M2-6:2 FTS	*92*		*25 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*
M2-8:2 FTS	*103*		*25 - 150*	*01/20/20 11:22*	*01/21/20 16:49*	*1*

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

Lab Sample ID: LCS 200-151611/2-A
Matrix: Water
Analysis Batch: 151622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	35.1		ng/L		88	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	32.3		ng/L		81	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	33.2		ng/L		83	70 - 130
Perfluoroheptanoic acid (PFHpA)	40.0	34.6		ng/L		86	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	38.0		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	40.0	40.3		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	40.0	36.4		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	40.0	37.7		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	40.0	39.0		ng/L		98	70 - 130
Perfluorotridecanoic acid (PFTriA)	40.0	32.0		ng/L		80	70 - 130
Perfluorotetradecanoic acid (PFTeA)	40.0	44.8		ng/L		112	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	32.5		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.5		ng/L		87	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	33.7		ng/L		88	50 - 150
Perfluorodecanesulfonic acid (PFDS)	38.6	30.8		ng/L		80	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	37.2		ng/L		100	70 - 130
Perfluorooctanesulfonamide (FOSA)	40.0	36.2		ng/L		90	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	42.1		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	35.5		ng/L		89	70 - 130
6:2 FTS	37.9	44.8		ng/L		118	50 - 150
8:2 FTS	38.3	36.5		ng/L		95	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C8 FOSA	*70*		*25 - 150*
13C4 PFBA	*127*		*25 - 150*
13C5-PFPeA DNU	*128*		*25 - 150*
13C2 PFHxA	*124*		*50 - 150*
13C4 PFHpA	*120*		*50 - 150*
13C4 PFOA	*109*		*50 - 150*
13C5 PFNA	*107*		*50 - 150*
13C2 PFDA	*106*		*50 - 150*
13C2 PFUnA	*91*		*50 - 150*
13C2 PFDoA	*79*		*50 - 150*
13C2 PFTeDA	*74*		*50 - 150*
13C3 PFBS	*120*		*50 - 150*
18O2 PFHxS	*119*		*50 - 150*
13C4 PFOS	*112*		*50 - 150*
d3-NMeFOSAA	*82*		*50 - 150*
d5-NEtFOSAA	*82*		*50 - 150*

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

Lab Sample ID: LCS 200-151611/2-A
Matrix: Water
Analysis Batch: 151622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151611

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-6:2 FTS	102		25 - 150
M2-8:2 FTS	96		25 - 150

Lab Sample ID: 200-52269-1 MS
Matrix: Water
Analysis Batch: 151622

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 151611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	ND		34.6	31.5		ng/L		91	40 - 160
Perfluoropentanoic acid (PFPeA)	ND		34.6	28.0		ng/L		81	40 - 160
Perfluorohexanoic acid (PFHxA)	ND		34.6	31.7		ng/L		92	40 - 160
Perfluoroheptanoic acid (PFHpA)	ND		34.6	30.3		ng/L		88	40 - 160
Perfluorooctanoic acid (PFOA)	ND		34.6	34.3		ng/L		99	40 - 160
Perfluorononanoic acid (PFNA)	ND		34.6	33.0		ng/L		96	40 - 160
Perfluorodecanoic acid (PFDA)	ND		34.6	33.2		ng/L		96	40 - 160
Perfluoroundecanoic acid (PFUnA)	ND		34.6	34.3		ng/L		99	40 - 160
Perfluorododecanoic acid (PFDoA)	ND		34.6	34.7		ng/L		100	40 - 160
Perfluorotridecanoic acid (PFTriA)	ND		34.6	31.1		ng/L		90	40 - 160
Perfluorotetradecanoic acid (PFTeA)	ND		34.6	36.6		ng/L		106	40 - 160
Perfluorobutanesulfonic acid (PFBS)	ND		30.5	28.5		ng/L		92	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	ND		31.4	32.1		ng/L		102	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	ND		32.9	32.4		ng/L		98	40 - 160
Perfluorodecanesulfonic acid (PFDS)	ND		33.3	28.5		ng/L		85	40 - 160
Perfluorooctanesulfonic acid (PFOS)	ND		32.1	29.6		ng/L		92	40 - 160
Perfluorooctanesulfonamide (FOSA)	ND		34.6	30.5		ng/L		88	40 - 160
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		34.6	37.2		ng/L		108	40 - 160
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		34.6	30.4		ng/L		88	40 - 160
6:2 FTS	ND		32.8	34.6		ng/L		106	40 - 160
8:2 FTS	ND		33.1	30.4		ng/L		92	40 - 160

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C8 FOSA	84		25 - 150
13C4 PFBA	110		25 - 150
13C5-PFPeA DNU	121		25 - 150
13C2 PFHxA	112		50 - 150
13C4 PFHpA	114		50 - 150
13C4 PFOA	98		50 - 150
13C5 PFNA	100		50 - 150
13C2 PFDA	86		50 - 150
13C2 PFUnA	80		50 - 150

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

Lab Sample ID: 200-52269-1 MS
Matrix: Water
Analysis Batch: 151622

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 151611

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2 PFDoA	*81*		*50 - 150*
13C2 PFTeDA	*91*		*50 - 150*
13C3 PFBS	*114*		*50 - 150*
18O2 PFHxS	*107*		*50 - 150*
13C4 PFOS	*101*		*50 - 150*
d3-NMeFOSAA	*72*		*50 - 150*
d5-NEtFOSAA	*73*		*50 - 150*
M2-6:2 FTS	*86*		*25 - 150*
M2-8:2 FTS	*85*		*25 - 150*

Lab Sample ID: 200-52269-1 MSD
Matrix: Water
Analysis Batch: 151622

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 151611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	ND		35.4	31.6		ng/L		89	40 - 160	0	30
Perfluoropentanoic acid (PFPeA)	ND		35.4	29.5		ng/L		83	40 - 160	5	30
Perfluorohexanoic acid (PFHxA)	ND		35.4	32.5		ng/L		92	40 - 160	3	20
Perfluoroheptanoic acid (PFHpA)	ND		35.4	32.9		ng/L		93	40 - 160	8	20
Perfluorooctanoic acid (PFOA)	ND		35.4	34.0		ng/L		96	40 - 160	1	20
Perfluorononanoic acid (PFNA)	ND		35.4	36.6		ng/L		103	40 - 160	10	20
Perfluorodecanoic acid (PFDA)	ND		35.4	30.2		ng/L		85	40 - 160	10	20
Perfluoroundecanoic acid (PFUnA)	ND		35.4	32.8		ng/L		93	40 - 160	4	20
Perfluorododecanoic acid (PFDoA)	ND		35.4	34.4		ng/L		97	40 - 160	1	20
Perfluorotridecanoic acid (PFTriA)	ND		35.4	29.2		ng/L		83	40 - 160	6	20
Perfluorotetradecanoic acid (PFTeA)	ND		35.4	38.9		ng/L		110	40 - 160	6	20
Perfluorobutanesulfonic acid (PFBS)	ND		31.3	29.2		ng/L		92	40 - 160	2	20
Perfluorohexanesulfonic acid (PFHxS)	ND		32.2	30.3		ng/L		94	40 - 160	6	20
Perfluoroheptanesulfonic Acid (PFHpS)	ND		33.7	33.5		ng/L		100	40 - 160	4	30
Perfluorodecanesulfonic acid (PFDS)	ND		34.1	25.0		ng/L		73	40 - 160	13	30
Perfluorooctanesulfonic acid (PFOS)	ND		32.8	30.8		ng/L		94	40 - 160	4	20
Perfluorooctanesulfonamide (FOSA)	ND		35.4	30.9		ng/L		87	40 - 160	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		35.4	36.2		ng/L		102	40 - 160	3	20
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		35.4	32.7		ng/L		92	40 - 160	7	20
6:2 FTS	ND		33.6	29.4		ng/L		87	40 - 160	16	30
8:2 FTS	ND		33.9	27.7		ng/L		82	40 - 160	9	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C8 FOSA	*84*		*25 - 150*
13C4 PFBA	*119*		*25 - 150*

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

Lab Sample ID: 200-52269-1 MSD
Matrix: Water
Analysis Batch: 151622

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 151611

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C5-PFPeA DNU	128		25 - 150
13C2 PFHxA	120		50 - 150
13C4 PFHpA	120		50 - 150
13C4 PFOA	107		50 - 150
13C5 PFNA	103		50 - 150
13C2 PFDA	97		50 - 150
13C2 PFUnA	86		50 - 150
13C2 PFDoA	76		50 - 150
13C2 PFTeDA	86		50 - 150
13C3 PFBS	118		50 - 150
18O2 PFHxS	116		50 - 150
13C4 PFOS	108		50 - 150
d3-NMeFOSAA	72		50 - 150
d5-NEtFOSAA	72		50 - 150
M2-6:2 FTS	99		25 - 150
M2-8:2 FTS	89		25 - 150

QC Association Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

LCMS

Prep Batch: 151611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-52269-1	EFFLUENT	Total/NA	Water	3535	
200-52269-2	MID POINT	Total/NA	Water	3535	
200-52269-3	RAW WATER	Total/NA	Water	3535	
200-52269-4	DUPLICATE	Total/NA	Water	3535	
200-52269-5	A-25	Total/NA	Water	3535	
200-52269-6	A-50	Total/NA	Water	3535	
200-52269-7	A-75	Total/NA	Water	3535	
200-52269-8	B-25	Total/NA	Water	3535	
200-52269-9	B-50	Total/NA	Water	3535	
200-52269-10	B-75	Total/NA	Water	3535	
MB 200-151611/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-151611/2-A	Lab Control Sample	Total/NA	Water	3535	
200-52269-1 MS	EFFLUENT	Total/NA	Water	3535	
200-52269-1 MSD	EFFLUENT	Total/NA	Water	3535	

Analysis Batch: 151622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-52269-1	EFFLUENT	Total/NA	Water	537 (modified)	151611
200-52269-2	MID POINT	Total/NA	Water	537 (modified)	151611
200-52269-3	RAW WATER	Total/NA	Water	537 (modified)	151611
200-52269-4	DUPLICATE	Total/NA	Water	537 (modified)	151611
200-52269-5	A-25	Total/NA	Water	537 (modified)	151611
200-52269-6	A-50	Total/NA	Water	537 (modified)	151611
200-52269-7	A-75	Total/NA	Water	537 (modified)	151611
200-52269-8	B-25	Total/NA	Water	537 (modified)	151611
200-52269-9	B-50	Total/NA	Water	537 (modified)	151611
200-52269-10	B-75	Total/NA	Water	537 (modified)	151611
LCS 200-151611/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	151611
200-52269-1 MS	EFFLUENT	Total/NA	Water	537 (modified)	151611
200-52269-1 MSD	EFFLUENT	Total/NA	Water	537 (modified)	151611

Analysis Batch: 151657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 200-151611/1-A	Method Blank	Total/NA	Water	537 (modified)	151611

Lab Chronicle

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: EFFLUENT
Lab Sample ID: 200-52269-1
Date Collected: 01/17/20 11:10
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 20:37	BWC	TAL BUR

Client Sample ID: MID POINT
Lab Sample ID: 200-52269-2
Date Collected: 01/17/20 11:33
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:01	BWC	TAL BUR

Client Sample ID: RAW WATER
Lab Sample ID: 200-52269-3
Date Collected: 01/17/20 11:53
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:09	BWC	TAL BUR

Client Sample ID: DUPLICATE
Lab Sample ID: 200-52269-4
Date Collected: 01/17/20 00:00
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:18	BWC	TAL BUR

Client Sample ID: A-25
Lab Sample ID: 200-52269-5
Date Collected: 01/17/20 11:48
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:26	BWC	TAL BUR

Client Sample ID: A-50
Lab Sample ID: 200-52269-6
Date Collected: 01/17/20 11:43
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:34	BWC	TAL BUR

Lab Chronicle

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: A-75
Lab Sample ID: 200-52269-7
Date Collected: 01/17/20 11:38
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:42	BWC	TAL BUR

Client Sample ID: B-25
Lab Sample ID: 200-52269-8
Date Collected: 01/17/20 11:25
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:50	BWC	TAL BUR

Client Sample ID: B-50
Lab Sample ID: 200-52269-9
Date Collected: 01/17/20 11:22
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 21:59	BWC	TAL BUR

Client Sample ID: B-75
Lab Sample ID: 200-52269-10
Date Collected: 01/17/20 11:17
Matrix: Water
Date Received: 01/18/20 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			151611	01/20/20 11:22	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	151622	01/20/20 22:07	BWC	TAL BUR

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: New York State D.E.C. Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Laboratory: Eurofins TestAmerica, Burlington

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10391	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	6:2 FTS
537 (modified)	3535	Water	8:2 FTS
537 (modified)	3535	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537 (modified)	3535	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid (PFBA)
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonamide (FOSA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-20 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL BUR
3535	Solid-Phase Extraction (SPE)	SW846	TAL BUR

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 BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: New York State D.E.C.
Job ID: 200-52269-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
200-52269-1	EFFLUENT	Water	01/17/20 11:10	01/18/20 09:54	
200-52269-2	MID POINT	Water	01/17/20 11:33	01/18/20 09:54	
200-52269-3	RAW WATER	Water	01/17/20 11:53	01/18/20 09:54	
200-52269-4	DUPLICATE	Water	01/17/20 00:00	01/18/20 09:54	
200-52269-5	A-25	Water	01/17/20 11:48	01/18/20 09:54	
200-52269-6	A-50	Water	01/17/20 11:43	01/18/20 09:54	
200-52269-7	A-75	Water	01/17/20 11:38	01/18/20 09:54	
200-52269-8	B-25	Water	01/17/20 11:25	01/18/20 09:54	
200-52269-9	B-50	Water	01/17/20 11:22	01/18/20 09:54	
200-52269-10	B-75	Water	01/17/20 11:17	01/18/20 09:54	

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

Albany #224

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Patrick Sokolowski	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-140159-31043.1
Client Contact: Stephen Phelps	Phone: 518-852-0597	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 1
Company: Precision Environmental Services Inc.				Job #:
Address: 831 State Route 67 Ste 38	Due Date Requested:			
City: Ballston Spa	TAT Requested (days): Standard (10-Day)			
State, Zip: NY, 12020				
Phone: 518-402-9813(Tel)	PO #: Callout ID: 137132			
Email: sphelps@pesnyinc.com	WO #:			
Project Name: Stewart ANG Base #336089 Kroll Well	Project #: 48020467			
Site:	SSOW#:			

Analysis Requested

200-52269 Chain of Custody

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes) - Burl	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N		
Effluent	1-17-20	1110	Grab	Water	Yes		X	6	
Mid Point		1137		Water				2	
Raw Water		1153		Water				2	
Duplicate				Water				2	
A-25		1148		Water				2	
A-50		1143		Water				2	
A-75		1139		Water				2	
B-25		1125		Water				2	
B-50		1122		Water				2	
B-75		1117		Water				2	
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Cat B Deliverables

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		1-17-20 1430	PES		1-17-20 1430	Eurofins
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 1/18/2020 0953	Company TABURL
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 954 SH 1/18/2020	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: 138143

Cooler Temperature(s) °C and Other Remarks: ~~4.2~~ 1.2 SH 1/18/2020

Ver: 01/16/2019

ORIGIN ID:SCHA (518) 438-8140
TIM KNOLLMEYER
TESTAMERICA LAB INC
25 KRAFT AVE

ALBANY, NY 12205
UNITED STATES US

SHIP DATE: 17JAN20
ACTWGT: 47.35 LB
CAD: 0439821/CAFE3211
DIMS: 26x15x14 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TESTAMERICA – BURLINGTON
30 COMMUNITY DRIVE, SUITE 11

BURLINGTON VT 05403
(802) 660 – 1990
REF: SREWART ANG

FedEx Express

TRK# 0201 1496 4445 4310

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO BTVA

05403
VT – US BTV

Part # 156148-434 RIT EXP 09/19

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 200-52269-1

Login Number: 52269 **List Source: Eurofins TestAmerica, Burlington**
List Number: 2
Creator: Hall, Samuel C

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1138143
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2ºC
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	PS
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	