

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation

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www.dec.ny.gov

February 20, 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 February 14, 2020 sampling of the granular activated carbon (GAC) water treatment system by DEC representatives that was installed at the Town of New Windsor (Town) Kroll Well field at 354 Mount Airy Road by DEC representatives.

No perfluorooctanesulfonic acid (PFOS) or perfluorooctanoic acid (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 PFOA and PFOS. Data received for the 6 PFAS list analysis has been summarized and also attached. However, sampling data associated with the 21 PFAS list are still pending from the lab, and will be provided to the Town under separate letter after receipt and review by DEC and the New York State Department of Health (DOH). During this event, sampling was conducted at nine 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);



Department of
Environmental
Conservation



- 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 nine 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, Brian Nuemann 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
D. McGoey/M. Weeks, MHE
W. Gilday, NYSDOH
Dr. Kim, NYSDOH
S. Gladding, NYSDOH
S. Gagnon, OCDOH
M. Andersen, OCDOH
J. Hayward, EA Engineering
B. Nuemann, PES
M. Cruden, NYSDEC
D. Bendell, Region 3 RHWRE
D. Harrington, NYSDEC

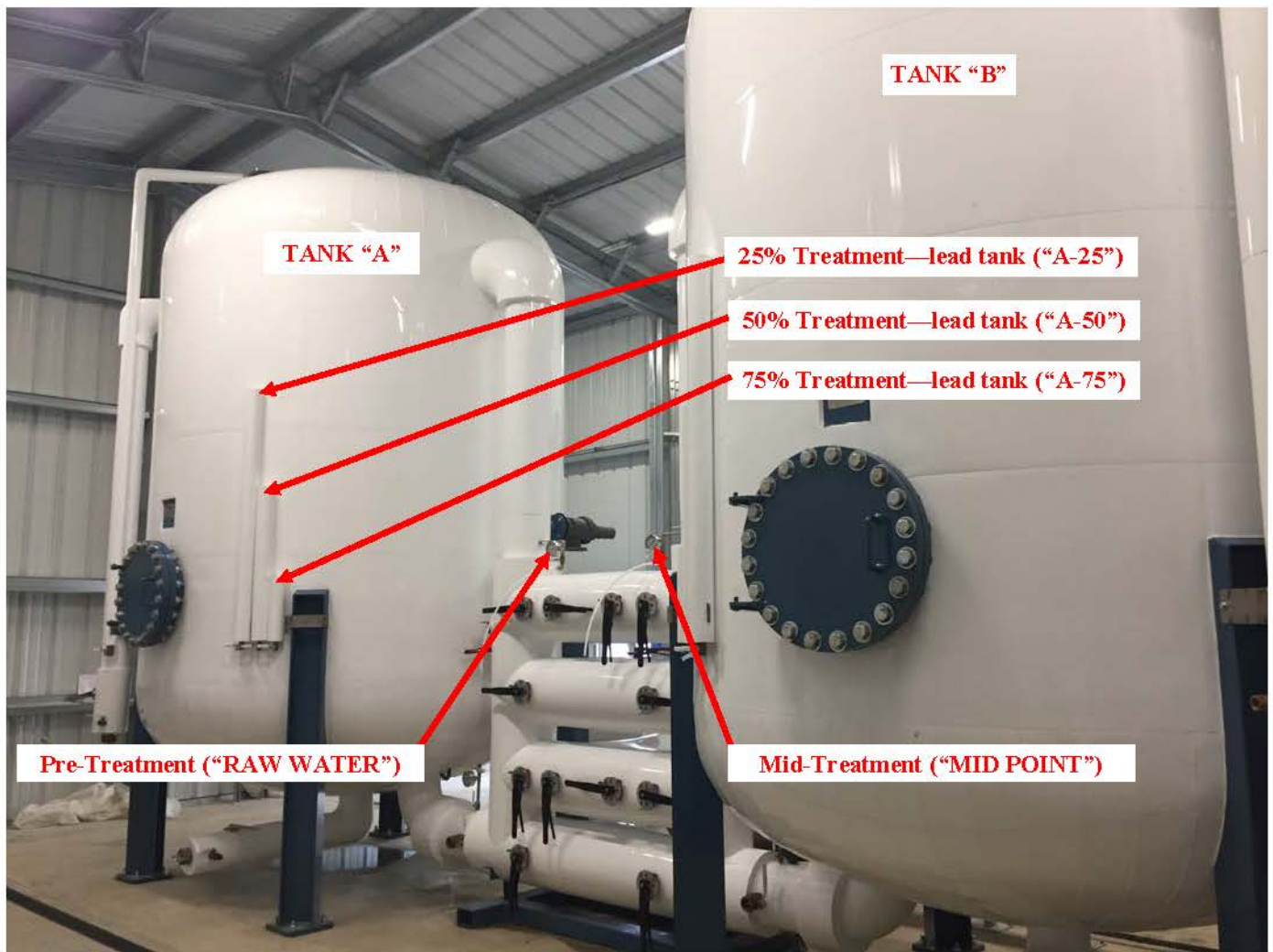


Figure 1—Kroll Well GAC Treatment System
Sampling Locations

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	Propose d NYS MCLs
September 2019	PFOA	7.5	5.9	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
	PFOS	9.2	6.4	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
October 2019	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	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 6 PFAS Analysis Data only)	PFOA	9.7	9.2	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
	PFOS	8.7	6.6	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
January 2020 (Based on 6 PFAS Analysis Data only)	PFOA	8.9	7.5	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
	PFOS	7.8	6.7	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
February 2020 (Based on 6 PFAS Analysis Data only)	PFOA	8.7	8.4	2.6	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵
	PFOS	7.8	6.2	ND	ND	ND	ND	ND	ND	ND	70 ⁴	10 ⁵

Notes:

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 if 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.

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-58644-1

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



Authorized for release by:
2/19/2020 3:51:05 PM

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

LINKS

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results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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.

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
2/19/2020 3:51:05 PM



Table of Contents

Cover Page 1

Table of Contents 3

Definitions/Glossary 4

Case Narrative 5

Detection Summary 6

Client Sample Results 7

Isotope Dilution Summary 11

QC Sample Results 12

QC Association Summary 14

Lab Chronicle 15

Certification Summary 17

Method Summary 18

Sample Summary 19

Chain of Custody 20

Receipt Checklists 21



Definitions/Glossary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.

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.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Job ID: 320-58644-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Job Narrative 320-58644-1

Receipt

The samples were received on 2/15/2020 9:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

LCMS

Method WS-LC-0025 Att1: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for 13C4 PFOA in the following sample: Effluent (320-58644-1). 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 PFAS Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-358267.

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

Detection Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: Effluent

Lab Sample ID: 320-58644-1

No Detections.

Client Sample ID: Mid Point

Lab Sample ID: 320-58644-2

No Detections.

Client Sample ID: Raw Water

Lab Sample ID: 320-58644-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	5.3		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.0		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.6		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	8.7		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.8		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA

Client Sample ID: Duplicate

Lab Sample ID: 320-58644-4

No Detections.

Client Sample ID: A-25

Lab Sample ID: 320-58644-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	5.0		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.7		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	8.4		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.2		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA

Client Sample ID: A-50

Lab Sample ID: 320-58644-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	2.6		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA

Client Sample ID: A-75

Lab Sample ID: 320-58644-7

No Detections.

Client Sample ID: B-25

Lab Sample ID: 320-58644-8

No Detections.

Client Sample ID: B-50

Lab Sample ID: 320-58644-9

No Detections.

Client Sample ID: B-75

Lab Sample ID: 320-58644-10

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: Effluent

Date Collected: 02/14/20 09:25

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-1

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 19:57	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	136		25 - 150				02/18/20 11:50	02/18/20 19:57	1
13C4 PFHpA	136		25 - 150				02/18/20 11:50	02/18/20 19:57	1
13C4 PFOA	132 *		70 - 130				02/18/20 11:50	02/18/20 19:57	1
13C4 PFOS	130		70 - 130				02/18/20 11:50	02/18/20 19:57	1
13C5 PFNA	126		25 - 150				02/18/20 11:50	02/18/20 19:57	1
13C3 PFBS	128		25 - 150				02/18/20 11:50	02/18/20 19:57	1

Client Sample ID: Mid Point

Date Collected: 02/14/20 09:45

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-2

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	112		25 - 150				02/18/20 11:50	02/18/20 20:15	1
13C4 PFHpA	113		25 - 150				02/18/20 11:50	02/18/20 20:15	1
13C4 PFOA	112		70 - 130				02/18/20 11:50	02/18/20 20:15	1
13C4 PFOS	114		70 - 130				02/18/20 11:50	02/18/20 20:15	1
13C5 PFNA	112		25 - 150				02/18/20 11:50	02/18/20 20:15	1
13C3 PFBS	111		25 - 150				02/18/20 11:50	02/18/20 20:15	1

Client Sample ID: Raw Water

Date Collected: 02/14/20 10:05

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-3

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	5.3		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1
Perfluorohexanesulfonic acid (PFHxS)	2.0		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1
Perfluoroheptanoic acid (PFHpA)	2.6		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1
Perfluorooctanoic acid (PFOA)	8.7		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1
Perfluorooctanesulfonic acid (PFOS)	7.8		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:33	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: Raw Water

Date Collected: 02/14/20 10:05

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-3

Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	101		25 - 150	02/18/20 11:50	02/18/20 20:33	1
13C4 PFHpA	99		25 - 150	02/18/20 11:50	02/18/20 20:33	1
13C4 PFOA	97		70 - 130	02/18/20 11:50	02/18/20 20:33	1
13C4 PFOS	100		70 - 130	02/18/20 11:50	02/18/20 20:33	1
13C5 PFNA	96		25 - 150	02/18/20 11:50	02/18/20 20:33	1
13C3 PFBS	95		25 - 150	02/18/20 11:50	02/18/20 20:33	1

Client Sample ID: Duplicate

Date Collected: 02/14/20 00:00

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-4

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 20:52	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	115		25 - 150				02/18/20 11:50	02/18/20 20:52	1
13C4 PFHpA	114		25 - 150				02/18/20 11:50	02/18/20 20:52	1
13C4 PFOA	109		70 - 130				02/18/20 11:50	02/18/20 20:52	1
13C4 PFOS	118		70 - 130				02/18/20 11:50	02/18/20 20:52	1
13C5 PFNA	107		25 - 150				02/18/20 11:50	02/18/20 20:52	1
13C3 PFBS	110		25 - 150				02/18/20 11:50	02/18/20 20:52	1

Client Sample ID: A-25

Date Collected: 02/14/20 10:00

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-5

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	5.0		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Perfluoroheptanoic acid (PFHpA)	2.7		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Perfluorooctanoic acid (PFOA)	8.4		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Perfluorooctanesulfonic acid (PFOS)	6.2		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:10	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	120		25 - 150				02/18/20 11:50	02/18/20 21:10	1
13C4 PFHpA	115		25 - 150				02/18/20 11:50	02/18/20 21:10	1
13C4 PFOA	111		70 - 130				02/18/20 11:50	02/18/20 21:10	1
13C4 PFOS	115		70 - 130				02/18/20 11:50	02/18/20 21:10	1
13C5 PFNA	114		25 - 150				02/18/20 11:50	02/18/20 21:10	1
13C3 PFBS	112		25 - 150				02/18/20 11:50	02/18/20 21:10	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: A-50

Date Collected: 02/14/20 09:55

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-6

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Perfluorooctanoic acid (PFOA)	2.6		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:29	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	124		25 - 150				02/18/20 11:50	02/18/20 21:29	1
13C4 PFHpA	119		25 - 150				02/18/20 11:50	02/18/20 21:29	1
13C4 PFOA	120		70 - 130				02/18/20 11:50	02/18/20 21:29	1
13C4 PFOS	129		70 - 130				02/18/20 11:50	02/18/20 21:29	1
13C5 PFNA	123		25 - 150				02/18/20 11:50	02/18/20 21:29	1
13C3 PFBS	119		25 - 150				02/18/20 11:50	02/18/20 21:29	1

Client Sample ID: A-75

Date Collected: 02/14/20 09:50

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-7

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 21:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	122		25 - 150				02/18/20 11:50	02/18/20 21:47	1
13C4 PFHpA	116		25 - 150				02/18/20 11:50	02/18/20 21:47	1
13C4 PFOA	113		70 - 130				02/18/20 11:50	02/18/20 21:47	1
13C4 PFOS	121		70 - 130				02/18/20 11:50	02/18/20 21:47	1
13C5 PFNA	117		25 - 150				02/18/20 11:50	02/18/20 21:47	1
13C3 PFBS	115		25 - 150				02/18/20 11:50	02/18/20 21:47	1

Client Sample ID: B-25

Date Collected: 02/14/20 09:40

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-8

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	121		25 - 150				02/18/20 11:50	02/18/20 22:06	1
13C4 PFHpA	121		25 - 150				02/18/20 11:50	02/18/20 22:06	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: B-25

Date Collected: 02/14/20 09:40

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-8

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOA	123		70 - 130	02/18/20 11:50	02/18/20 22:06	1
13C4 PFOS	116		70 - 130	02/18/20 11:50	02/18/20 22:06	1
13C5 PFNA	117		25 - 150	02/18/20 11:50	02/18/20 22:06	1
13C3 PFBS	114		25 - 150	02/18/20 11:50	02/18/20 22:06	1

Client Sample ID: B-50

Date Collected: 02/14/20 09:35

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-9

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 22:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	123		25 - 150				02/18/20 11:50	02/18/20 22:43	1
13C4 PFHpA	117		25 - 150				02/18/20 11:50	02/18/20 22:43	1
13C4 PFOA	120		70 - 130				02/18/20 11:50	02/18/20 22:43	1
13C4 PFOS	117		70 - 130				02/18/20 11:50	02/18/20 22:43	1
13C5 PFNA	121		25 - 150				02/18/20 11:50	02/18/20 22:43	1
13C3 PFBS	115		25 - 150				02/18/20 11:50	02/18/20 22:43	1

Client Sample ID: B-75

Date Collected: 02/14/20 09:30

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-10

Matrix: Water

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 23:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	113		25 - 150				02/18/20 11:50	02/18/20 23:01	1
13C4 PFHpA	116		25 - 150				02/18/20 11:50	02/18/20 23:01	1
13C4 PFOA	113		70 - 130				02/18/20 11:50	02/18/20 23:01	1
13C4 PFOS	114		70 - 130				02/18/20 11:50	02/18/20 23:01	1
13C5 PFNA	112		25 - 150				02/18/20 11:50	02/18/20 23:01	1
13C3 PFBS	113		25 - 150				02/18/20 11:50	02/18/20 23:01	1

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Method: WS-LC-0025 Att1 - 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 (70-130)	PFOS (70-130)	PFNA (25-150)	3C3-PFBs (25-150)
320-58644-1	Effluent	136	136	132 *	130	126	128
320-58644-2	Mid Point	112	113	112	114	112	111
320-58644-3	Raw Water	101	99	97	100	96	95
320-58644-4	Duplicate	115	114	109	118	107	110
320-58644-5	A-25	120	115	111	115	114	112
320-58644-6	A-50	124	119	120	129	123	119
320-58644-7	A-75	122	116	113	121	117	115
320-58644-8	B-25	121	121	123	116	117	114
320-58644-9	B-50	123	117	120	117	121	115
320-58644-10	B-75	113	116	113	114	112	113
LCS 320-358267/2-A	Lab Control Sample	128	126	122	125	130	127
LCSD 320-358267/3-A	Lab Control Sample Dup	114	119	120	111	121	112
MB 320-358267/1-A	Method Blank	120	114	114	112	117	112

Surrogate Legend

PFHxS = 18O2 PFHxS

PFHpA = 13C4 PFHpA

PFOA = 13C4 PFOA

PFOS = 13C4 PFOS

PFNA = 13C5 PFNA

13C3-PFBS = 13C3 PFBS

QC Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-358267/1-A

Matrix: Water

Analysis Batch: 358137

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 358267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		02/18/20 11:50	02/18/20 15:57	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	120		25 - 150	02/18/20 11:50	02/18/20 15:57	1
13C4 PFHpA	114		25 - 150	02/18/20 11:50	02/18/20 15:57	1
13C4 PFOA	114		70 - 130	02/18/20 11:50	02/18/20 15:57	1
13C4 PFOS	112		70 - 130	02/18/20 11:50	02/18/20 15:57	1
13C5 PFNA	117		25 - 150	02/18/20 11:50	02/18/20 15:57	1
13C3 PFBS	112		25 - 150	02/18/20 11:50	02/18/20 15:57	1

Lab Sample ID: LCS 320-358267/2-A

Matrix: Water

Analysis Batch: 358137

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 358267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanesulfonic acid (PFBS)	17.7	13.1		ng/L		74	72 - 151
Perfluorohexanesulfonic acid (PFHxS)	18.2	14.0		ng/L		77	73 - 157
Perfluoroheptanoic acid (PFHpA)	20.0	15.8		ng/L		79	71 - 138
Perfluorooctanoic acid (PFOA)	20.0	16.8		ng/L		84	70 - 130
Perfluorooctanesulfonic acid (PFOS)	18.6	13.6		ng/L		73	70 - 130
Perfluorononanoic acid (PFNA)	20.0	16.1		ng/L		81	73 - 147

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	128		25 - 150
13C4 PFHpA	126		25 - 150
13C4 PFOA	122		70 - 130
13C4 PFOS	125		70 - 130
13C5 PFNA	130		25 - 150
13C3 PFBS	127		25 - 150

Lab Sample ID: LCSD 320-358267/3-A

Matrix: Water

Analysis Batch: 358137

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 358267

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanesulfonic acid (PFBS)	17.7	14.7		ng/L		83	72 - 151	11	30
Perfluorohexanesulfonic acid (PFHxS)	18.2	15.5		ng/L		85	73 - 157	10	30
Perfluoroheptanoic acid (PFHpA)	20.0	16.8		ng/L		84	71 - 138	6	30
Perfluorooctanoic acid (PFOA)	20.0	16.6		ng/L		83	70 - 130	1	20

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Method: WS-LC-0025 Att1 - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-358267/3-A

Matrix: Water

Analysis Batch: 358137

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 358267

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorooctanesulfonic acid (PFOS)	18.6	13.7		ng/L		74	70 - 130	0	20
Perfluorononanoic acid (PFNA)	20.0	16.1		ng/L		81	73 - 147	0	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	LCSD Limits
18O2 PFHxS	114		25 - 150
13C4 PFHpA	119		25 - 150
13C4 PFOA	120		70 - 130
13C4 PFOS	111		70 - 130
13C5 PFNA	121		25 - 150
13C3 PFBS	112		25 - 150

QC Association Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

LCMS

Analysis Batch: 358137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58644-1	Effluent	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-2	Mid Point	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-3	Raw Water	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-4	Duplicate	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-5	A-25	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-6	A-50	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-7	A-75	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-8	B-25	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-9	B-50	Total/NA	Water	WS-LC-0025 Att1	358267
320-58644-10	B-75	Total/NA	Water	WS-LC-0025 Att1	358267
MB 320-358267/1-A	Method Blank	Total/NA	Water	WS-LC-0025 Att1	358267
LCS 320-358267/2-A	Lab Control Sample	Total/NA	Water	WS-LC-0025 Att1	358267
LCSD 320-358267/3-A	Lab Control Sample Dup	Total/NA	Water	WS-LC-0025 Att1	358267

Prep Batch: 358267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-58644-1	Effluent	Total/NA	Water	PFAS Prep	
320-58644-2	Mid Point	Total/NA	Water	PFAS Prep	
320-58644-3	Raw Water	Total/NA	Water	PFAS Prep	
320-58644-4	Duplicate	Total/NA	Water	PFAS Prep	
320-58644-5	A-25	Total/NA	Water	PFAS Prep	
320-58644-6	A-50	Total/NA	Water	PFAS Prep	
320-58644-7	A-75	Total/NA	Water	PFAS Prep	
320-58644-8	B-25	Total/NA	Water	PFAS Prep	
320-58644-9	B-50	Total/NA	Water	PFAS Prep	
320-58644-10	B-75	Total/NA	Water	PFAS Prep	
MB 320-358267/1-A	Method Blank	Total/NA	Water	PFAS Prep	
LCS 320-358267/2-A	Lab Control Sample	Total/NA	Water	PFAS Prep	
LCSD 320-358267/3-A	Lab Control Sample Dup	Total/NA	Water	PFAS Prep	

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: Effluent

Date Collected: 02/14/20 09:25

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-1

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 19:57	P1N	TAL SAC

Client Sample ID: Mid Point

Date Collected: 02/14/20 09:45

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-2

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 20:15	P1N	TAL SAC

Client Sample ID: Raw Water

Date Collected: 02/14/20 10:05

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-3

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 20:33	P1N	TAL SAC

Client Sample ID: Duplicate

Date Collected: 02/14/20 00:00

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-4

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 20:52	P1N	TAL SAC

Client Sample ID: A-25

Date Collected: 02/14/20 10:00

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-5

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 21:10	P1N	TAL SAC

Client Sample ID: A-50

Date Collected: 02/14/20 09:55

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-6

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 21:29	P1N	TAL SAC

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Client Sample ID: A-75

Date Collected: 02/14/20 09:50

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-7

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 21:47	P1N	TAL SAC

Client Sample ID: B-25

Date Collected: 02/14/20 09:40

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-8

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 22:06	P1N	TAL SAC

Client Sample ID: B-50

Date Collected: 02/14/20 09:35

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-9

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 22:43	P1N	TAL SAC

Client Sample ID: B-75

Date Collected: 02/14/20 09:30

Date Received: 02/15/20 09:20

Lab Sample ID: 320-58644-10

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	PFAS Prep			1.00 mL	1.66 mL	358267	02/18/20 11:50	LN	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1			358137	02/18/20 23:01	P1N	TAL SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11666	04-01-20

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
WS-LC-0025 Att1	PFAS Prep	Water	Perfluorobutanesulfonic acid (PFBS)
WS-LC-0025 Att1	PFAS Prep	Water	Perfluoroheptanoic acid (PFHpA)
WS-LC-0025 Att1	PFAS Prep	Water	Perfluorohexanesulfonic acid (PFHxS)
WS-LC-0025 Att1	PFAS Prep	Water	Perfluorononanoic acid (PFNA)

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.

Eurofins TestAmerica, Sacramento

Method Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Method	Method Description	Protocol	Laboratory
WS-LC-0025 Att1	Fluorinated Alkyl Substances	TAL-SAC	TAL SAC
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	TAL SAC

Protocol References:

TAL-SAC = TestAmerica Laboratories, West Sacramento, Facility Standard Operating Procedure.

Laboratory References:

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

Sample Summary

Client: New York State D.E.C.
Project/Site: Stewart ANG Base #336089 Kroll Well

Job ID: 320-58644-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
320-58644-1	Effluent	Water	02/14/20 09:25	02/15/20 09:20	
320-58644-2	Mid Point	Water	02/14/20 09:45	02/15/20 09:20	
320-58644-3	Raw Water	Water	02/14/20 10:05	02/15/20 09:20	
320-58644-4	Duplicate	Water	02/14/20 00:00	02/15/20 09:20	
320-58644-5	A-25	Water	02/14/20 10:00	02/15/20 09:20	
320-58644-6	A-50	Water	02/14/20 09:55	02/15/20 09:20	
320-58644-7	A-75	Water	02/14/20 09:50	02/15/20 09:20	
320-58644-8	B-25	Water	02/14/20 09:40	02/15/20 09:20	
320-58644-9	B-50	Water	02/14/20 09:35	02/15/20 09:20	
320-58644-10	B-75	Water	02/14/20 09:30	02/15/20 09:20	

Chain of Custody Record

Albany
#224



Environment Testing
TestAmerica

Client Information		Lab PM:		Carrier Tracking No(s):		COC No:			
Client Contact: Stephen Phelps		Stone, Judy L				480-142110-31042.1			
Company: Precision Environmental Services Inc.		E-Mail: judy.stone@testamericainc.com				Page 1 of 1			
Address: 831 State Route 67 Ste 38		Due Date Requested:		Analysis Requested		Job #:			
City: Ballston Spa		TAT Requested (days):				Preservation Codes:			
State, Zip: NY, 12020						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 Other:			
Phone: 518-402-9813(Tel)		PO #:				M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Email: splphs@pesnyinc.com		WO #:							
Project Name: Stewart ANG Base #336089 Kroll Well		Project #:							
Site:		SSOW#:							
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFAS, DL, DW - PFAS, UCMR List - Sacramento	Total Number of Containers	Special Instructions/Note:
Effluent	2-14-20	0925	Grab	Water				2	
Mid Point		0945		Water				2	
Raw Water		1005		Water				2	
Duplicate		1030		Water				2	
A-25		0955		Water				2	
A-50		0955		Water				2	
A-75		0950		Water				2	
B-25		0940		Water				2	
B-50		0935		Water				2	
B-75		0930		Water				2	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:					
Empty Kit Relinquished by:				Time:					
Relinquished by: <i>Patricia Sokolowski</i>				Date: 2-14-20					
Relinquished by: <i>Jim Kroll</i>				Date: 2-14-20					
Relinquished by: <i>Patricia Sokolowski</i>				Date: 2-14-20					
Custody Seal Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:					

Ver: 01/16/2019



Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 320-58644-1

Login Number: 58644

List Number: 1

Creator: Her, David A

List Source: Eurofins 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	1321576
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	