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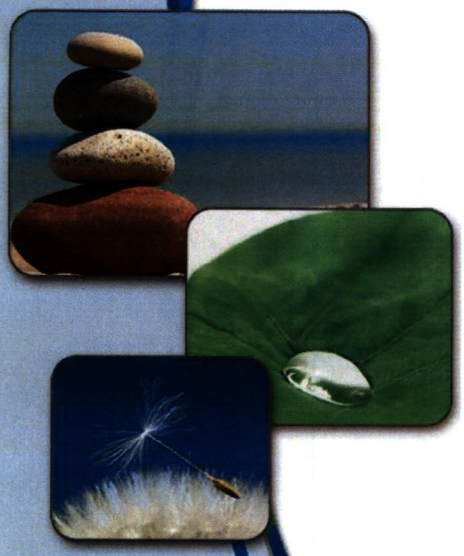

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-156997-1
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:
8/5/2019 6:09:46 PM

Judy Stone, Senior Project Manager
(484)685-0868
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Kroll Well Test Results.
Samples collected 07/30/2019.

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
8/5/2019 6:09:46 PM

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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: 480-156997-1

Job ID: 480-156997-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-156997-1

Receipt
The samples were received on 7/31/2019 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

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

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

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

Job ID: 480-156997-1

Client Sample ID: INFLUENT — Lab Sample ID: 480-156997-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	6.7		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)	2.4		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	6.9		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	11		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Lead	0.0072		0.0010		mg/L	1		200.8	Total/NA

Client Sample ID: MID — Lab Sample ID: 480-156997-2

No Detections.

Client Sample ID: EFFLUENT — Lab Sample ID: 480-156997-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0027		0.0010		mg/L	1		200.8	Total/NA

Client Sample ID: DUPLICATE — Lab Sample ID: 480-156997-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0026		0.0010		mg/L	1		200.8	Total/NA

Client Sample ID: FIELD BLANK — Lab Sample ID: 480-156997-5

No Detections.

THESE TEST RESULTS SHOW CONTAMINANT LEVELS **BEFORE** ANY TREATMENT

This Detection Summary does not include radiochemical test results.

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

Job ID: 480-156997-1

Client Sample ID: INFLUENT
Date Collected: 07/30/19 13:30
Date Received: 07/31/19 08:00

Lab Sample ID: 480-156997-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	6.7		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1
Perfluorohexanesulfonic acid (PFHxS)	2.0		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1
Perfluoroheptanoic acid (PFHpA)	2.4		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1
Perfluorooctanoic acid (PFOA)	6.9		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1
Perfluorooctanesulfonic acid (PFOS)	11		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*119*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:41*	*1*
13C4 PFHpA	*117*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:41*	*1*
13C4 PFOA	*112*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:41*	*1*
13C4 PFOS	*113*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:41*	*1*
13C5 PFNA	*116*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:41*	*1*
13C3 PFBS	*111*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:41*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:25	1
Lead	0.0072		0.0010		mg/L		08/02/19 09:03	08/03/19 14:25	1

THESE RESULTS SHOW CONTAMINANT LEVELS **BEFORE** ANY TREATMENT

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

Job ID: 480-156997-1

Client Sample ID: MID
Date Collected: 07/30/19 13:20
Date Received: 07/31/19 08:00

Lab Sample ID: 480-156997-2
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		07/31/19 18:17	08/01/19 11:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:59	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:59	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:59	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*121*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:59*	*1*
13C4 PFHpA	*119*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:59*	*1*
13C4 PFOA	*118*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:59*	*1*
13C4 PFOS	*113*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:59*	*1*
13C5 PFNA	*115*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:59*	*1*
13C3 PFBS	*113*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:59*	*1*

THESE RESULTS SHOW CONTAMINANT LEVELS **AFTER** TREATMENT THROUGH THE **FIRST** GRANULAR ACTIVATED CARBON (GAC) FILTER. RESULTS ARE NON-DETECT (ND), MEANING NO CONTAMINANTS WERE DETECTED.

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

Job ID: 480-156997-1

Client Sample ID: EFFLUENT
Date Collected: 07/30/19 13:05
Date Received: 07/31/19 08:00

Lab Sample ID: 480-156997-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 12:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*118*		*25 - 150*	*07/31/19 18:17*	*08/01/19 12:18*	*1*
13C4 PFHpA	*120*		*25 - 150*	*07/31/19 18:17*	*08/01/19 12:18*	*1*
13C4 PFOA	*107*		*70 - 130*	*07/31/19 18:17*	*08/01/19 12:18*	*1*
13C4 PFOS	*122*		*70 - 130*	*07/31/19 18:17*	*08/01/19 12:18*	*1*
13C5 PFNA	*119*		*25 - 150*	*07/31/19 18:17*	*08/01/19 12:18*	*1*
13C3 PFBS	*112*		*25 - 150*	*07/31/19 18:17*	*08/01/19 12:18*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0027**		0.0010		mg/L		08/02/19 09:03	08/03/19 14:27	1
Lead	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:27	1

THESE RESULTS SHOW CONTAMINANT LEVELS **AFTER** TREATMENT THROUGH THE **SECOND** GRANULAR ACTIVATED CARBON (GAC) FILTER. THIS IS THE WATER THAT NEXT ENTERS THE DISTRIBUTION SYSTEM FOR CUSTOMER USE. RESULTS ARE NON-DETECT (ND), MEANING NO CONTAMINANTS WERE DETECTED.

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

Job ID: 480-156997-1

Client Sample ID: DUPLICATE
Date Collected: 07/30/19 13:40
Date Received: 07/31/19 08:00

Lab Sample ID: 480-156997-4
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		07/31/19 18:17	08/01/19 13:13	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 13:13	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 13:13	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 13:13	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 13:13	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 13:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*113*		*25 - 150*	*07/31/19 18:17*	*08/01/19 13:13*	*1*
13C4 PFHpA	*120*		*25 - 150*	*07/31/19 18:17*	*08/01/19 13:13*	*1*
13C4 PFOA	*110*		*70 - 130*	*07/31/19 18:17*	*08/01/19 13:13*	*1*
13C4 PFOS	*110*		*70 - 130*	*07/31/19 18:17*	*08/01/19 13:13*	*1*
13C5 PFNA	*111*		*25 - 150*	*07/31/19 18:17*	*08/01/19 13:13*	*1*
13C3 PFBS	*107*		*25 - 150*	*07/31/19 18:17*	*08/01/19 13:13*	*1*

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0026		0.0010		mg/L		08/02/19 09:03	08/03/19 14:38	1
Lead	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:38	1

THE RESULTS SHOW CONTAMINANT LEVELS ON A SECOND/DUPLICATE SAMPLE OF WATER TAKEN **AFTER** TREATMENT THROUGH THE **SECOND** GRANULAR ACTIVATED CARBON (GAC) FILTER. RESULTS ARE NON-DETECT (ND), MEANING NO CONTAMINANTS WERE DETECTED.

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

Job ID: 480-156997-1

Client Sample ID: FIELD BLANK
Date Collected: 07/30/19 13:40
Date Received: 07/31/19 08:00

Lab Sample ID: 480-156997-5
Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:41	1
Lead	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:41	1

THIS PAGE SHOWS TEST RESULTS ON A SAMPLE OF CONTAMINANT FREE WATER (A/K/A FIELD BLANK) PROVIDED BY THE LAB TO ENSURE PROPER HANDLING AND PROCEDURAL TECHNIQUES DURING COLLECTION.

Isotope Dilution Summary

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

Job ID: 480-156997-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFHxS (25-150)	PFHpA (25-150)	PFOA (70-130)	PFOS (70-130)	PFNA (25-150)	13C3-PFBS (25-150)		
480-156997-1	INFLUENT	119	117	112	113	116	111		
480-156997-2	MID	121	119	118	113	115	113		
480-156997-3	EFFLUENT	118	120	107	122	119	112		
480-156997-3 MS	EFFLUENT	115	121	109	106	102	110		
480-156997-3 MSD	EFFLUENT	116	113	108	113	105	107		
480-156997-4	DUPLICATE	113	120	110	110	111	107		
LCS 320-311727/2-A	Lab Control Sample	110	111	111	109	110	106		
MB 320-311727/1-A	Method Blank	116	116	114	106	117	107		

Surrogate Legend

PFHxS = 18O2 PFHxS
PFHpA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFOS = 13C4 PFOS
PFNA = 13C5 PFNA
13C3-PFBS = 13C3 PFBS

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

Lab Sample ID: MB 320-311727/1-A
Matrix: Water
Analysis Batch: 311880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 311727

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		07/31/19 18:17	08/01/19 11:04	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*116*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:04*	*1*
13C4 PFHpA	*116*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:04*	*1*
13C4 PFOA	*114*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:04*	*1*
13C4 PFOS	*106*		*70 - 130*	*07/31/19 18:17*	*08/01/19 11:04*	*1*
13C5 PFNA	*117*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:04*	*1*
13C3 PFBS	*107*		*25 - 150*	*07/31/19 18:17*	*08/01/19 11:04*	*1*

Lab Sample ID: LCS 320-311727/2-A
Matrix: Water
Analysis Batch: 311880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 311727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanesulfonic acid (PFBS)	17.7	15.8		ng/L		90	72 - 151
Perfluorohexanesulfonic acid (PFHxS)	18.2	16.5		ng/L		90	73 - 157
Perfluoroheptanoic acid (PFHpA)	20.0	17.1		ng/L		85	71 - 138
Perfluorooctanoic acid (PFOA)	20.0	18.6		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	18.6	16.4		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	20.0	18.7		ng/L		93	73 - 147

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
18O2 PFHxS	*110*		*25 - 150*
13C4 PFHpA	*111*		*25 - 150*
13C4 PFOA	*111*		*70 - 130*
13C4 PFOS	*109*		*70 - 130*
13C5 PFNA	*110*		*25 - 150*
13C3 PFBS	*106*		*25 - 150*

Lab Sample ID: 480-156997-3 MS
Matrix: Water
Analysis Batch: 311880

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 311727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanesulfonic acid (PFBS)	ND		15.0	13.5		ng/L		90	72 - 151
Perfluorohexanesulfonic acid (PFHxS)	ND		15.4	16.2		ng/L		105	73 - 157
Perfluoroheptanoic acid (PFHpA)	ND		17.0	15.5		ng/L		91	71 - 138
Perfluorooctanoic acid (PFOA)	ND		17.0	18.1		ng/L		107	70 - 130

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

Lab Sample ID: 480-156997-3 MS
Matrix: Water
Analysis Batch: 311880

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 311727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorooctanesulfonic acid (PFOS)	ND		15.7	13.1		ng/L		84	70 - 130
Perfluorononanoic acid (PFNA)	ND		17.0	18.2		ng/L		107	73 - 147

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
18O2 PFHxS	*115*		*25 - 150*
13C4 PFHpA	*121*		*25 - 150*
13C4 PFOA	*109*		*70 - 130*
13C4 PFOS	*106*		*70 - 130*
13C5 PFNA	*102*		*25 - 150*
13C3 PFBS	*110*		*25 - 150*

Lab Sample ID: 480-156997-3 MSD
Matrix: Water
Analysis Batch: 311880

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 311727

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanesulfonic acid (PFBS)	ND		15.5	14.2		ng/L		92	72 - 151	5	30
Perfluorohexanesulfonic acid (PFHxS)	ND		15.9	14.2		ng/L		89	73 - 157	13	30
Perfluoroheptanoic acid (PFHpA)	ND		17.5	15.0		ng/L		86	71 - 138	3	30
Perfluorooctanoic acid (PFOA)	ND		17.5	14.9		ng/L		85	70 - 130	19	20
Perfluorooctanesulfonic acid (PFOS)	ND		16.2	12.1		ng/L		74	70 - 130	8	20
Perfluorononanoic acid (PFNA)	ND		17.5	15.7		ng/L		90	73 - 147	15	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
18O2 PFHxS	*116*		*25 - 150*
13C4 PFHpA	*113*		*25 - 150*
13C4 PFOA	*108*		*70 - 130*
13C4 PFOS	*113*		*70 - 130*
13C5 PFNA	*105*		*25 - 150*
13C3 PFBS	*107*		*25 - 150*

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 480-484891/1-A
Matrix: Water
Analysis Batch: 485294

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:13	1
Lead	ND		0.0010		mg/L		08/02/19 09:03	08/03/19 14:13	1

Lab Sample ID: LCS 480-484891/2-A
Matrix: Water
Analysis Batch: 485294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484891

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0200	0.0202		mg/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 480-484891/2-A
Matrix: Water
Analysis Batch: 485294

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484891

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Lead			0.0200	0.0194		mg/L		97	85 - 115		

Lab Sample ID: 480-156997-3 MS
Matrix: Water
Analysis Batch: 485294

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 484891

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	0.0027		0.0200	0.0231		mg/L		102	70 - 130		
Lead	ND		0.0200	0.0201		mg/L		97	70 - 130		

Lab Sample ID: 480-156997-3 MSD
Matrix: Water
Analysis Batch: 485294

Client Sample ID: EFFLUENT
Prep Type: Total/NA
Prep Batch: 484891

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0027		0.0200	0.0229		mg/L		101	70 - 130	1	20
Lead	ND		0.0200	0.0198		mg/L		95	70 - 130	1	20

QC Association Summary

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

Job ID: 480-156997-1

LCMS

Prep Batch: 311727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156997-1	INFLUENT	Total/NA	Water	PFAS Prep	
480-156997-2	MID	Total/NA	Water	PFAS Prep	
480-156997-3	EFFLUENT	Total/NA	Water	PFAS Prep	
480-156997-4	DUPLICATE	Total/NA	Water	PFAS Prep	
MB 320-311727/1-A	Method Blank	Total/NA	Water	PFAS Prep	
LCS 320-311727/2-A	Lab Control Sample	Total/NA	Water	PFAS Prep	
480-156997-3 MS	EFFLUENT	Total/NA	Water	PFAS Prep	
480-156997-3 MSD	EFFLUENT	Total/NA	Water	PFAS Prep	

Analysis Batch: 311880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156997-1	INFLUENT	Total/NA	Water	WS-LC-0025 Att1	311727
480-156997-2	MID	Total/NA	Water	WS-LC-0025 Att1	311727
480-156997-3	EFFLUENT	Total/NA	Water	WS-LC-0025 Att1	311727
480-156997-4	DUPLICATE	Total/NA	Water	WS-LC-0025 Att1	311727
MB 320-311727/1-A	Method Blank	Total/NA	Water	WS-LC-0025 Att1	311727
LCS 320-311727/2-A	Lab Control Sample	Total/NA	Water	WS-LC-0025 Att1	311727
480-156997-3 MS	EFFLUENT	Total/NA	Water	WS-LC-0025 Att1	311727
480-156997-3 MSD	EFFLUENT	Total/NA	Water	WS-LC-0025 Att1	311727

Metals

Prep Batch: 484891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156997-1	INFLUENT	Total/NA	Water	200.8	
480-156997-3	EFFLUENT	Total/NA	Water	200.8	
480-156997-4	DUPLICATE	Total/NA	Water	200.8	
480-156997-5	FIELD BLANK	Total/NA	Water	200.8	
MB 480-484891/1-A	Method Blank	Total/NA	Water	200.8	
LCS 480-484891/2-A	Lab Control Sample	Total/NA	Water	200.8	
480-156997-3 MS	EFFLUENT	Total/NA	Water	200.8	
480-156997-3 MSD	EFFLUENT	Total/NA	Water	200.8	

Analysis Batch: 485294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-156997-1	INFLUENT	Total/NA	Water	200.8	484891
480-156997-3	EFFLUENT	Total/NA	Water	200.8	484891
480-156997-4	DUPLICATE	Total/NA	Water	200.8	484891
480-156997-5	FIELD BLANK	Total/NA	Water	200.8	484891
MB 480-484891/1-A	Method Blank	Total/NA	Water	200.8	484891
LCS 480-484891/2-A	Lab Control Sample	Total/NA	Water	200.8	484891
480-156997-3 MS	EFFLUENT	Total/NA	Water	200.8	484891
480-156997-3 MSD	EFFLUENT	Total/NA	Water	200.8	484891

Lab Chronicle

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

Job ID: 480-156997-1

Client Sample ID: INFLUENT

Lab Sample ID: 480-156997-1

Date Collected: 07/30/19 13:30
Date Received: 07/31/19 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			311727	07/31/19 18:17	DTH	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1	311880	08/01/19 11:41	P1N	TAL SAC
Total/NA	Prep	200.8			484891	08/02/19 09:03	EMB	TAL BUF
Total/NA	Analysis	200.8		1	485294	08/03/19 14:25	AMH	TAL BUF

Client Sample ID: MID

Lab Sample ID: 480-156997-2

Date Collected: 07/30/19 13:20
Date Received: 07/31/19 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			311727	07/31/19 18:17	DTH	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1	311880	08/01/19 11:59	P1N	TAL SAC

Client Sample ID: EFFLUENT

Lab Sample ID: 480-156997-3

Date Collected: 07/30/19 13:05
Date Received: 07/31/19 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			311727	07/31/19 18:17	DTH	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1	311880	08/01/19 12:18	P1N	TAL SAC
Total/NA	Prep	200.8			484891	08/02/19 09:03	EMB	TAL BUF
Total/NA	Analysis	200.8		1	485294	08/03/19 14:27	AMH	TAL BUF

Client Sample ID: DUPLICATE

Lab Sample ID: 480-156997-4

Date Collected: 07/30/19 13:40
Date Received: 07/31/19 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PFAS Prep			311727	07/31/19 18:17	DTH	TAL SAC
Total/NA	Analysis	WS-LC-0025 Att1		1	311880	08/01/19 13:13	P1N	TAL SAC
Total/NA	Prep	200.8			484891	08/02/19 09:03	EMB	TAL BUF
Total/NA	Analysis	200.8		1	485294	08/03/19 14:38	AMH	TAL BUF

Client Sample ID: FIELD BLANK

Lab Sample ID: 480-156997-5

Date Collected: 07/30/19 13:40
Date Received: 07/31/19 08:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			484891	08/02/19 09:03	EMB	TAL BUF
Total/NA	Analysis	200.8		1	485294	08/03/19 14:41	AMH	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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: 480-156997-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-20

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	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)

Method Summary

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

Job ID: 480-156997-1

Method	Method Description	Protocol	Laboratory
WS-LC-0025 Att1	Fluorinated Alkyl Substances	TAL-SAC	TAL SAC
200.8	Metals (ICP/MS)	EPA	TAL BUF
200.8	Preparation, Total Metals	EPA	TAL BUF
PFAS Prep	Preparation, Direct Inject PFAS	TAL-SAC	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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: 480-156997-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-156997-1	INFLUENT	Water	07/30/19 13:30	07/31/19 08:00	
480-156997-2	MID	Water	07/30/19 13:20	07/31/19 08:00	
480-156997-3	EFFLUENT	Water	07/30/19 13:05	07/31/19 08:00	
480-156997-4	DUPLICATE	Water	07/30/19 13:40	07/31/19 08:00	
480-156997-5	FIELD BLANK	Water	07/30/19 13:40	07/31/19 08:00	

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

Chain of Custody Record

Albany #224

eurofins Environment Testing TestAmerica

Client Information	Sampler: Pat Sakulawski	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-133395-30040.1
Client Contact: Stephen Phelps	Phone: ~~[illegible]~~ 518-858-0599	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 2
Company: Precision Environmental Services Inc.				Job #:
Address: 831 State Route 67 Ste 38	Due Date Requested: ASAP			
City: Ballston Spa	TAT Requested (days): ASAP			
State, Zip: NY, 12020				
Phone: 518-402-9814(Tel)	PO #: Callout ID: 137132			
Email: sphelps@pesnyinc.com	WO #:			
Project Name: Stewart ANG Base #336089 Kroll Well	Project #: 48020467			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL M - Hexane
B - NaOH N - [illegible]

480-156997 Chain of Custody

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)	PFAS_DI_DW - PFAS, UCMR List	PFC_IDA - PFAS, Standard List (21 Analytes)	200.8 - As, Pb - rush	Total Number of co	Special Instructions/Note:
			Preservation Code:				N	N	D		
Influent	7-30-19	1330	Grab	Water			X	X	X	5	
Mid		1320		Water			X	X		4	
Effluent		1305		Water		X	X	X	X	9	
Duplicate		1340		Water			X	X	X	5	
Field Blank		1340		Water				X	X	3	
				Water							
				Water							
				Water							
				Water							
				Water							
			7-30-19	Water							

Other:

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)

Special Instructions/QC Requirements:

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

	Date/Time	Company		Date/Time	Company
Relinquished by: Patrick Sakulawski	7-30-19/1657	PES	Received by:	7-30-19 1657	EUROFINS
Relinquished by:	7-30-19 1710	EUROFINS	Received by:	7/31/19 0900	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: #1 3.1

Ver: 01/16/2019

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

Chain of Custody Record

Albany #224

eurofins | Environment Testing TestAmerica

Client Information	Sampler: Pat Sakulawski	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-133395-30040.1
Client Contact: Stephen Phelps	Phone: ~~[illegible]~~ 518-858-0599	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 2
Company: Precision Environmental Services Inc.				Job #:
Address: 831 State Route 67 Ste 38	Due Date Requested: ASAP			
City: Ballston Spa	TAT Requested (days): ASAP			
State, Zip: NY, 12020				
Phone: 518-402-9814(Tel)	PO #: Callout ID: 137132			
Email: sphelps@pesnyinc.com	WO #:			
Project Name: Stewart ANG Base #336089 Kroll Well	Project #: 48020467			
Site:	SSOW#:			

Analysis Requested

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 (Ww=water, Sw=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFAS_DL_DW - PFAS, UCMR List	PFC_IDA - PFAS, Standard List (21 Analytes)	200.8 - As, Pb - rush	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D		
Influent	7-30-19	1330	Grab	Water			X	X	X	5	
Mid		1320		Water			X	X		4	
Effluent		1305		Water	X		X	X	X	5	
Duplicate		1340		Water			X	X	X	5	
Field Blank		1345		Water				X	X	3	
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

480-156997 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Pat Sakulawski	7-30-19/1657	PES	[signature]	7-30-19 1657	EUROFINSTA
2	[signature]	7-30-19 1740	EUROFINSTA	Sakulawski courier	7/31/19 915	ETA SAC
3						

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.3°C corr 0.8°C

Ver: 01/16/2019

* no time on samples SO 7/31/19

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8/5/2019

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-156997-1

Login Number: 156997
List Number: 1
Creator: Wallace, Cameron

List Source: Eurofins TestAmerica, Buffalo

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	
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	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-156997-1

Login Number: 156997
List Number: 2
Creator: Onishi, Marc

List Source: Eurofins TestAmerica, Sacramento
List Creation: 07/31/19 03:27 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1130912
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.8c
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	