NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau E
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December 19, 2019

Mr. George Green, 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 Green,

The New York State Department of Environmental Conservation (DEC) is providing you with a copy of analytical results derived from the December 16, 2019 sampling of the temporary 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).

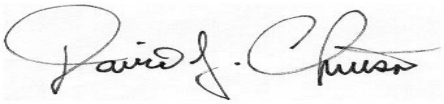
During this event, sampling was conducted at nine locations:

- 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);
- 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, 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
D. McGoey/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

Town of New Windsor

Kroll Well GAC Operation and Maintenance 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	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]

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.

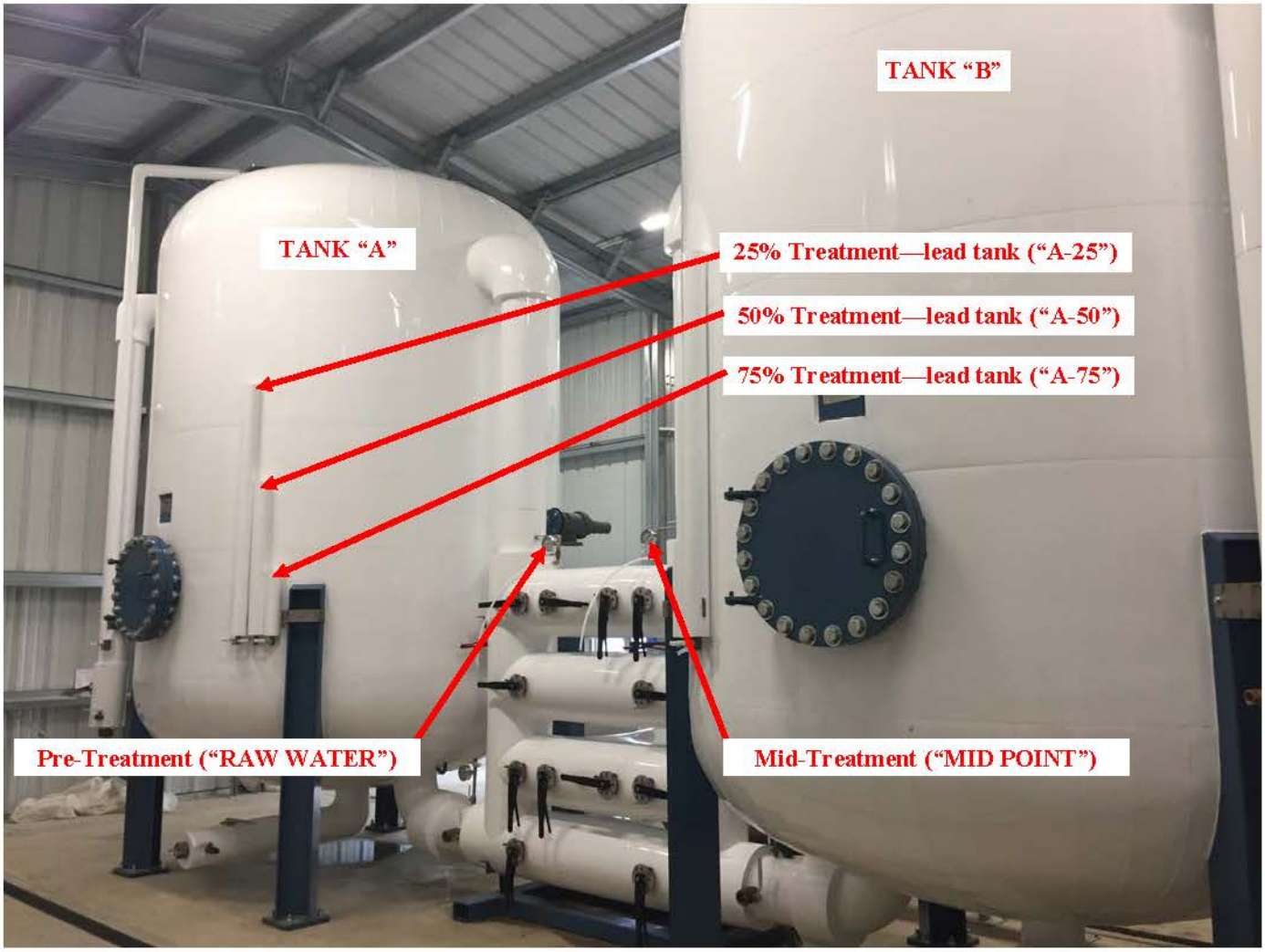
- Labeled Standard or Surrogate is the lab's specific name for an individual control sample.
- %R is the percent of the control sample that was detected by the equipment. A 100% reading represents perfect equipment alignment.
- LCL-UCL is the lower concentration limit (LCL) and upper concentration limit (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 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.



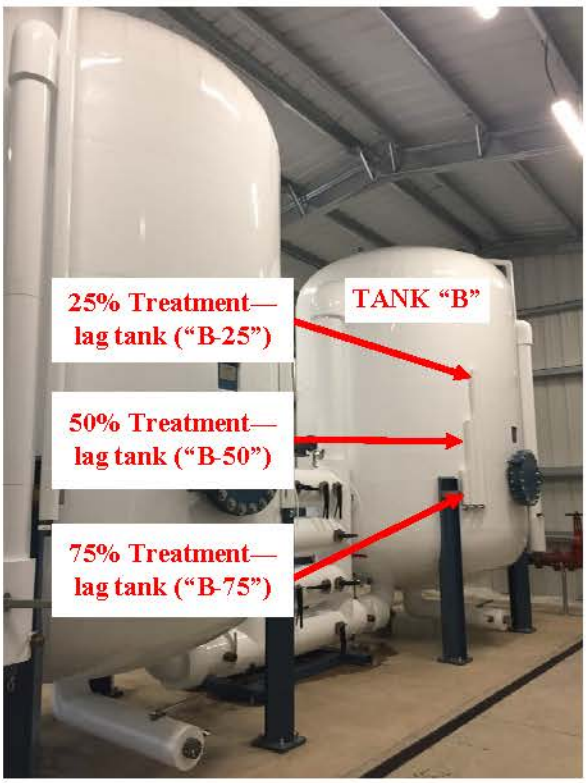


Figure 1—Kroll Well GAC Treatment System Sampling Locations

Detection Summary

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

Job ID: 320-57121-1

Client Sample ID: Effluent — Lab Sample ID: 320-57121-1

No Detections.

Client Sample ID: Mid Point — Lab Sample ID: 320-57121-2

No Detections.

Client Sample ID: Raw Water — Lab Sample ID: 320-57121-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	5.5		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)	3.4		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	9.7		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.7		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA

Client Sample ID: Duplicate — Lab Sample ID: 320-57121-4

No Detections.

Client Sample ID: A-25 — Lab Sample ID: 320-57121-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	5.2		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.4		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanoic acid (PFOA)	9.2		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.6		2.0		ng/L	1		WS-LC-0025 Att1	Total/NA

Client Sample ID: A-50 — Lab Sample ID: 320-57121-6

No Detections.

Client Sample ID: A-75 — Lab Sample ID: 320-57121-7

No Detections.

Client Sample ID: B-25 — Lab Sample ID: 320-57121-8

No Detections.

Client Sample ID: B-50 — Lab Sample ID: 320-57121-9

No Detections.

Client Sample ID: B-75 — Lab Sample ID: 320-57121-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: New York State D.E.C.
Job ID: 320-57121-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: Effluent
Lab Sample ID: 320-57121-1
Date Collected: 12/16/19 11:25
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 15:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 15:48	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 15:48	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 15:48	1
Perfluorooctanesulfonic acid (PFOS)	ND	F1	2.0		ng/L		12/18/19 11:51	12/18/19 15:48	1
Perfluorononanoic acid (PFNA)	ND	F1	2.0		ng/L		12/18/19 11:51	12/18/19 15:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*128*		*25 - 150*	*12/18/19 11:51*	*12/18/19 15:48*	*1*
13C4 PFHpA	*131*		*25 - 150*	*12/18/19 11:51*	*12/18/19 15:48*	*1*
13C4 PFOA	*124*		*70 - 130*	*12/18/19 11:51*	*12/18/19 15:48*	*1*
13C4 PFOS	*122*		*70 - 130*	*12/18/19 11:51*	*12/18/19 15:48*	*1*
13C5 PFNA	*123*		*25 - 150*	*12/18/19 11:51*	*12/18/19 15:48*	*1*
13C3 PFBS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 15:48*	*1*

Client Sample ID: Mid Point
Lab Sample ID: 320-57121-2
Date Collected: 12/16/19 11:55
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 16:43	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 16:43	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 16:43	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 16:43	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 16:43	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 16:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*123*		*25 - 150*	*12/18/19 11:51*	*12/18/19 16:43*	*1*
13C4 PFHpA	*127*		*25 - 150*	*12/18/19 11:51*	*12/18/19 16:43*	*1*
13C4 PFOA	*116*		*70 - 130*	*12/18/19 11:51*	*12/18/19 16:43*	*1*
13C4 PFOS	*123*		*70 - 130*	*12/18/19 11:51*	*12/18/19 16:43*	*1*
13C5 PFNA	*120*		*25 - 150*	*12/18/19 11:51*	*12/18/19 16:43*	*1*
13C3 PFBS	*122*		*25 - 150*	*12/18/19 11:51*	*12/18/19 16:43*	*1*

Client Sample ID: Raw Water
Lab Sample ID: 320-57121-3
Date Collected: 12/16/19 12:15
Matrix: Water
Date Received: 12/17/19 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**5.5**		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1
Perfluorohexanesulfonic acid (PFHxS)	**2.0**		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1
Perfluoroheptanoic acid (PFHpA)	**3.4**		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1
Perfluorooctanoic acid (PFOA)	**9.7**		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1
Perfluorooctanesulfonic acid (PFOS)	**8.7**		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:02	1

Client: New York State D.E.C.
Job ID: 320-57121-1
Project/Site: Stewart ANG Base #336089 Kroll Well

Client Sample ID: Raw Water
Lab Sample ID: 320-57121-3
Date Collected: 12/16/19 12:15
Matrix: Water
Date Received: 12/17/19 09:20

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:02*	*1*
13C4 PFHpA	*122*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:02*	*1*
13C4 PFOA	*119*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:02*	*1*
13C4 PFOS	*118*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:02*	*1*
13C5 PFNA	*113*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:02*	*1*
13C3 PFBS	*117*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:02*	*1*

Client Sample ID: Duplicate
Lab Sample ID: 320-57121-4
Date Collected: 12/16/19 00:00
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 17:20	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:20	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:20	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:20	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:20	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*122*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:20*	*1*
13C4 PFHpA	*124*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:20*	*1*
13C4 PFOA	*120*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:20*	*1*
13C4 PFOS	*120*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:20*	*1*
13C5 PFNA	*118*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:20*	*1*
13C3 PFBS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:20*	*1*

Client Sample ID: A-25
Lab Sample ID: 320-57121-5
Date Collected: 12/16/19 12:10
Matrix: Water
Date Received: 12/17/19 09:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**5.2**		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1
Perfluoroheptanoic acid (PFHpA)	**3.4**		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1
Perfluorooctanoic acid (PFOA)	**9.2**		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1
Perfluorooctanesulfonic acid (PFOS)	**6.6**		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 17:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:38*	*1*
13C4 PFHpA	*123*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:38*	*1*
13C4 PFOA	*115*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:38*	*1*
13C4 PFOS	*122*		*70 - 130*	*12/18/19 11:51*	*12/18/19 17:38*	*1*
13C5 PFNA	*115*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:38*	*1*
13C3 PFBS	*120*		*25 - 150*	*12/18/19 11:51*	*12/18/19 17:38*	*1*

Client Sample ID: A-50
Lab Sample ID: 320-57121-6
Date Collected: 12/16/19 12:05
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 18:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:15	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:15	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:15	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:15*	*1*
13C4 PFHpA	*122*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:15*	*1*
13C4 PFOA	*117*		*70 - 130*	*12/18/19 11:51*	*12/18/19 18:15*	*1*
13C4 PFOS	*122*		*70 - 130*	*12/18/19 11:51*	*12/18/19 18:15*	*1*
13C5 PFNA	*114*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:15*	*1*
13C3 PFBS	*121*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:15*	*1*

Client Sample ID: A-75
Lab Sample ID: 320-57121-7
Date Collected: 12/16/19 12:00
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 18:34	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:34	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:34	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:34	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:34	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*120*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:34*	*1*
13C4 PFHpA	*123*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:34*	*1*
13C4 PFOA	*121*		*70 - 130*	*12/18/19 11:51*	*12/18/19 18:34*	*1*
13C4 PFOS	*127*		*70 - 130*	*12/18/19 11:51*	*12/18/19 18:34*	*1*
13C5 PFNA	*111*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:34*	*1*
13C3 PFBS	*120*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:34*	*1*

Client Sample ID: B-25
Lab Sample ID: 320-57121-8
Date Collected: 12/16/19 11:50
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 18:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:52	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:52	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:52	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:52	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 18:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*125*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:52*	*1*
13C4 PFHpA	*129*		*25 - 150*	*12/18/19 11:51*	*12/18/19 18:52*	*1*
13C4 PFOA	*122*		*70 - 130*	*12/18/19 11:51*	*12/18/19 18:52*	*1*

Client Sample ID: B-25
Lab Sample ID: 320-57121-8
Date Collected: 12/16/19 11:50
Matrix: Water
Date Received: 12/17/19 09:20

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFOS	127		70 - 130	12/18/19 11:51	12/18/19 18:52	1
13C5 PFNA	126		25 - 150	12/18/19 11:51	12/18/19 18:52	1
13C3 PFBS	128		25 - 150	12/18/19 11:51	12/18/19 18:52	1

Client Sample ID: B-50
Lab Sample ID: 320-57121-9
Date Collected: 12/16/19 11:45
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 19:11	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:11	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:11	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:11	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:11	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	122		25 - 150	12/18/19 11:51	12/18/19 19:11	1
13C4 PFHpA	124		25 - 150	12/18/19 11:51	12/18/19 19:11	1
13C4 PFOA	119		70 - 130	12/18/19 11:51	12/18/19 19:11	1
13C4 PFOS	123		70 - 130	12/18/19 11:51	12/18/19 19:11	1
13C5 PFNA	116		25 - 150	12/18/19 11:51	12/18/19 19:11	1
13C3 PFBS	123		25 - 150	12/18/19 11:51	12/18/19 19:11	1

Client Sample ID: B-75
Lab Sample ID: 320-57121-10
Date Collected: 12/16/19 11:35
Matrix: Water
Date Received: 12/17/19 09:20

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		12/18/19 11:51	12/18/19 19:29	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:29	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:29	1
Perfluorooctanoic acid (PFOA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:29	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:29	1
Perfluorononanoic acid (PFNA)	ND		2.0		ng/L		12/18/19 11:51	12/18/19 19:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	125		25 - 150	12/18/19 11:51	12/18/19 19:29	1
13C4 PFHpA	130		25 - 150	12/18/19 11:51	12/18/19 19:29	1
13C4 PFOA	120		70 - 130	12/18/19 11:51	12/18/19 19:29	1
13C4 PFOS	129		70 - 130	12/18/19 11:51	12/18/19 19:29	1
13C5 PFNA	123		25 - 150	12/18/19 11:51	12/18/19 19:29	1
13C3 PFBS	125		25 - 150	12/18/19 11:51	12/18/19 19:29	1