

# CHARACTERIZATION OF PFAS IN PROCESS AND NON-PROCESS WASTEWATER AND STORMWATER

### **Initial Characterization - Final Quarterly Report**

Prepared for

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#### ACRONYMS AND ABBREVIATIONS

CO Consent Order
COC Chain of Custody

DEQ The North Carolina Department of Environmental Quality

DO Dissolved oxygen
DQO data quality objectives

DVM Data Verification Module

EIM Environmental Information Management

EPA Environmental Protection Agency

EPA 537M EPA Method 537 Mod HDPE High Density Polyethylene

HFPO-DA Hexafluoropropylene oxide dimer acid

Hydrolyzed PSDA 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro

sulfoethoxy)propoxy]-acetic acid

IXM ion exchange materials

MS matrix spike

MGD million gallons per day
MSD matrix spike duplicates
NCCW non-contact cooling water

ng/L nanograms per liter

PFAS per- and polyfluoroalkyl substances

PFMOAA 2,2-difluoro-2-(trifluoromethoxy) acetic acid

PMDF Polymer Manufacturing and Development Facility

PMPA perfluoromethoxypropyl carboxylic acid

PPA Polymer Processing Aid

QA/QC quality assurance/ quality control

R-EVE 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-

octafluoro-pentanoic acid

R-PSDA 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-

sulfoethoxy)-pentanoic acid

SOP Standard Operating Procedure

TestAmerica TestAmerica Sacramento
WWTP Wastewater treatment plant



#### **EXECUTIVE SUMMARY**

This report was prepared by Geosyntec Consultants of NC, P.C. (Geosyntec) for The Chemours Company FC, LLC (Chemours) pursuant to Paragraph 11(c) in the executed Consent Order entered February 25, 2019 amongst Chemours, the North Carolina Department of Environmental Quality (DEQ), and Cape Fear River Watch.

The objective of Paragraph 11(c) was to conduct an Initial Characterization of the constituents and concentrations of per- and polyfluoroalkyl substances ("PFAS") in the raw water intake and in process wastewater, non-process wastewater, and stormwater at the Chemours Fayetteville Works, North Carolina site (the Facility). Paragraph 11(c) requires Chemours to submit a final quarterly report no later than 18 months after approval of a sampling plan. This report represents the required final quarterly report. The objectives of the final quarterly report are to summarize the findings of the Paragraph 11(c) sampling events collected during the 18-month Initial Characterization period, and provide recommendations for transitioning to Paragraph 11(d), Ongoing Sampling.

Chemours and its two tenants, Kuraray and DuPont, currently operate five manufacturing areas on the site along with two other areas servicing manufacturing activities. These various areas both use and produce water which flows through the site conveyance network to Outfall 002. The site conveyance network waters are comprised of three (3) water types (process wastewater, non-process wastewater, and stormwater) and five (5) primary flows that combine prior to discharge at Outfall 002. The flow pathways at the Facility are listed below:

- 1. Cooling Water Channel, which transmits non-process wastewater, commonly called non-contact cooling water (NCCW), and stormwater from the Chemours Monomers Ion Exchange Materials (IXM) area;
- 2. Wood Lined Trench, which transmits NCCW from Kuraray areas and stormwater from Kuraray and the Chemours Polymer Processing Aid (PPA) area;
- 3. Wastewater Treatment Plant (WWTP) Discharge, which transmits treated waters from the WWTP;
- 4. DuPont Area Ditches, which transmit NCCW and stormwater from DuPont; and
- 5. Open Channel to Outfall 002, which combines the above conveyances and transmits and discharges these flows through Outfall 002.

Chemours submitted, and NCDEQ approved in writing, a PFAS Characterization Sampling Plan (the Sampling Plan) which identified sample locations and methods for bimonthly sample collection during the Initial Characterization period to represent the various water sources and flow types. The 31 sample locations were grouped into seven location categories developed to facilitate analysis and interpretation of data collected



during this program. The location categories were developed based on locations having either (a) a common type of water (e.g., NCCW), or (b) a common spatial and flow path relationship (e.g., WWTP related locations). The seven categories are listed and briefly described below:

Location Category	Description
Intake River Water at Facility	Represents background PFAS concentrations
Non-Chemours Process Wastewater	Locations representing process wastewater from Kuraray and DuPont
Non-Contact Cooling Water	Locations representing NCCW from Kuraray and Chemours
Stormwater	Locations containing only stormwater from throughout the Facility
Stormwater-Non-Contact Cooling Water	Locations representing commingled stormwater and NCCW
Wastewater Treatment Plant	Locations representing the WWTP influent and effluent, and the Terracotta pipe, which prior to November 2017 transmitted Chemours process wastewater to the WWTP and will be decommissioned in 2021
Combined Flows to Outfall 002	Locations representing stormwater, NCCW, and process wastewater from the combined flow pathways at the Facility in the Open Channel to Outfall 002

Chemours collected samples in accordance with the Sampling Plan for nine (9) bimonthly sampling events during the 18-month Initial Characterization period from April 2019 to September 2020. Samples were analyzed for EPA Method 537 Mod (EPA 537M) and Table 3+ Method PFAS. EPA 537M PFAS compounds are often associated with effluents from municipal WWTPs and firefighting foams, amongst other sources. Table 3+ PFAS compounds are often related to operations at the Facility. Summarized findings and recommendations from the Initial Characterization are listed below:

#### Summary of Findings

The following conclusions can be drawn based on the samples collected during the Initial Characterization period:



- The intake river water at the facility (Location 1) contains PFAS before this water is used at the Facility. PFAS detected at Location 1 represent the background level of PFAS at other sampling locations.
- Across all locations, EPA 537M PFAS were not statistically different or higher than intake data with the exception of one location (23A) on the Terracotta pipe which is being decommissioned in 2021.
- Non-Chemours process wastewater locations (Locations 18, 19A, 19B, and 23B) and NCCW only locations (Locations 6A, 6B, 24A, 24B, and 24C) generally have low PFAS concentrations, similar to or less than those observed at the intake river water at the Facility.
- The primary sources of total Table 3+ PFAS concentrations to Outfall 002 are (1) locations comprising both stormwater and non-process wastewater from the Monomers IXM area, (2) stormwater-only locations, and (3) the WWTP effluent, including PFAS loadings from the Terracotta pipe which prior to November 2017 transmitted Chemours process water to the WWTP.

The degree of PFAS contributions from the sources outlined in the last bullet above are expected to be reduced through on-going present and planned future actions, including:

- Continued use of the Thermal Oxidizer and other air emissions controls at Site reduces aerial emissions of PFAS. This mitigates future PFAS loading to surfaces and subsequent stormwater concentrations;
- Pursuant to the Consent Order Addendum, the in-progress separation of NCCW and stormwater flows occurring in the Monomers IXM Area and the 2021 planned treatment of stormwater flows in this area will reduce PFAS contributions from the Monomers Area; and
- The planned 2021 decommissioning of the Terracotta pipe will reduce PFAS contributions to the WWTP.

#### **Summary of Recommendations**

Based on these findings above, the following recommendations are made as the sampling program transitions from the Initial Characterization period of Paragraph 11(c) to Ongoing Sampling in Paragraph 11(d):

• Continue analyzing EPA 537M at the intake river water at Location 1 and Location 20 only;



- Upon completion of the Monomers IXM stormwater treatment system, replace Locations 9, 10, 10A, 24A, 24B, and 24C with one new sample location representing the combined NCCW;
- Replace locations representing inputs to the WWTP (Locations 6A, 6B, 18, 19A, 19B, 23A, 23B) with ongoing sampling of the WWTP influent (Location 22); and
- Replace stormwater-only Locations 2, 3, 4, and 5 with ongoing sampling of downstream Location 7A.

Pursuant to Paragraph 11(d), over the next two years starting in January 2021, Chemours will continue to collect bimonthly samples to characterize PFAS in the intake river water, process wastewater, non-process wastewater, and stormwater at the Facility. Chemours requests approval from DEQ to perform the ongoing sampling in accordance with these recommendations by January 8, 2021. Results will be reported semi-annually, i.e. everyother quarter, within 90 days of the previous semiannual period. The first report will be submitted within 90 days of the end Quarter 2, 2021.



#### 1. INTRODUCTION

This report was prepared by Geosyntec Consultants of NC, P.C. (Geosyntec) for The Chemours Company FC, LLC (Chemours) as the final quarterly report for Initial Characterization of the identification of constituents and concentrations of per- and polyfluoroalkyl substances ("PFAS") in process wastewater, non-process wastewater, and stormwater at the Chemours Fayetteville Works, North Carolina site (the Facility, Figure 1). This report was prepared pursuant to Paragraph 11(c) in the executed Consent Order amongst Chemours, the North Carolina Department of Environmental Quality (DEQ), and Cape Fear River Watch, entered into court on February 25, 2019.

This is the sixth and final quarterly report addressing Paragraph 11(c) of the Consent Order. The objective of this report reflects the same stated objective in the PFAS Characterization Sampling Plan (Geosyntec, 2019a): to characterize the concentrations of PFAS in the raw water intake at the Facility, process wastewater, non-process wastewater, and stormwater, including water that is discharged through Outfall 002.

This final quarterly report summarizes the findings across nine (9) Paragraph 11(c) sampling events through the 18-month Initial Characterization period, and provides recommendations for transitioning to Paragraph 11(d), Ongoing Sampling. The remainder of this document is organized as follows:

- Section 2 Background: this section describes the Facility, the conveyance network which transmits flow to Outfall 002, locations sampled and location categories, and Paragraph 11(c) quarterly reporting to date;
- Section 3 Final Quarterly Report Objectives: this section describes the objectives of this report;
- Section 4 Paragraph 11(c) Methods: this section describes the methods employed for sample collection and analysis over the 18-month Initial Characterization period;
- Section 5 Assessment of Paragraph 11(c) Initial Characterization: this section describes PFAS concentrations trends and observations in investigative samples over the 18-month Initial Characterization period;
- Section 6 Proposed Paragraph 11(d) Sampling Plan Updates: this section describes recommendations for transitioning to ongoing sampling activities pursuant to Paragraph 11(d) of the executed Consent Order;



- Section 7 Summary and Recommendations: this section summarizes the observations of results from the Initial Characterization period and recommended changes to the sampling plan; and
- Section 8 References: this section lists the documents referenced in the report.

#### 2. BACKGROUND

This section provides a summary of past Paragraph 11(c) quarterly reports and a background overview of how the Facility uses water, the types of water present at the site, how this water flows to the Facility's discharge point at Outfall 002 and how the locations sampled as part of Paragraph 11(c) were grouped for interpretation.

#### 2.1 Paragraph 11(c) Reporting Background

Chemours submitted the PFAS Characterization Sampling Plan (the Sampling Plan) to DEQ on May 6, 2019 (Geosyntec, 2019a) and received written approval from DEQ on June 19, 2019. Past quarterly reports for the bimonthly sampling program have summarized the activities conducted during the previous quarter, reported observed trends in context to previous bimonthly sampling events, and provided recommendations to implement during the next quarter. A summary of the bimonthly sampling events and supplemental investigations included in past quarterly reports are provided in the table below.

Quarterly Report No.	Date Submitted	Activities Summarized	Reference				
1	July 31, 2019	April 2019 and June 2019 bimonthly sampling events collected in 2019 Quarter 2	Geosyntec, 2019b				
2	October 31, 2019	August 2019 bimonthly sampling event collected in 2019 Quarter 3 and supplemental investigations completed in 2019 Quarters 2 and 3	Geosyntec, 2019c				
3	January 31, 2020	October 2019 and December 2019 bimonthly sampling events collected in 2019 Quarter 4	Geosyntec, 2020a				
4	April 30, 2020	January 2020 bimonthly sampling event collected in 2020 Quarter 1	Geosyntec, 2020b				



Quarterly Report No.	Date Submitted	Activities Summarized	Reference
5	July 31, 2021	April 2020 and May/June 2020 bimonthly sampling events collected in 2020 Quarter 2	Geosyntec, 2020c

The ninth and final bimonthly sampling event for the 18-month Initial Characterization period was collected in 2020 Quarter 3 as a dry event on August 26, 2020 (the August 2020 event). Samples were collected as outlined in the PFAS Characterization Sampling Plan (Geosyntec, 2019a), with adjustments made based on recommendations in prior reports (Geosyntec 2019a, 2019b, 2019c, 2020a, 2020b, and 2020c). Results from the investigative samples in the August 2020 event are included in Appendix A and presented and discussed with the data from the entire program in this report.

#### 2.2 Site and Conveyance Network Background

Chemours and its two tenants, Kuraray and DuPont, currently operate five manufacturing areas on the site along with two other areas servicing manufacturing activities. These areas are shown in Figure 1 and listed below:

- Chemours Monomers Ion Exchange Materials (IXM);
- Chemours Polymer Processing Aid (PPA) Area;
- Kuraray Trosifol® Leased Area;
- Kuraray SentryGlas® Leased Area;
- DuPont Polyvinylfluoride Leased Area;
- Wastewater treatment plant (WWTP); and
- Power Area at the Facility (produces filtered water and demineralized water).

These various areas both use and produce water which flows through the site conveyance network to Outfall 002. As an example of flows through Outfall 002, during normal operations between January and November 2020, the operations from Chemours and its tenants, DuPont and Kuraray, resulted in Facility discharges at Outfall 002 of primarily NCCW at flow rates between 7.2 to 36.5 million gallons per day (MGD) with a median flow of 21.9 MGD. The site conveyance network waters are comprised of three (3) water types and five (5) primary flows as they combine at Outfall 002. Thirty-one (31) sample locations representing the various water types and flow pathways were grouped into seven (7) categories described in the following sub-section to facilitate the analyses of data collected during this program. The water types and flow pathways at the Facility are listed below:



#### Water Types

- 1. Process wastewater. Note, Chemours process wastewaters are presently disposed of offsite while tenant (Kuraray and DuPont) process wastewaters are treated at the onsite WWTP prior to discharge;
- 2. Non-Process Wastewater. Note, Non-Process Wastewater is also commonly called non-contact cooling water (NCCW); and
- 3. Stormwater.

#### Flow Pathways

- 1. Cooling Water Channel, which transmits NCCW and stormwater from the Chemours Monomers IXM area;
- 2. Wood Lined Trench, which transmits NCCW from Kuraray areas and stormwater from Kuraray and the Chemours PPA area;
- 3. Wastewater Treatment Plant Discharge, which transmits treated waters from the WWTP;
- 4. DuPont Area Ditches, which transmit NCCW and stormwater from DuPont; and
- 5. Open Channel to Outfall 002, which combines the above flows and transmits and discharges them through Outfall 002.

#### 2.2.1 Locations and Location Categories

The 31 locations were grouped into seven location categories developed to facilitate analysis and interpretation of data collected during this program. The location categories were developed based on locations having either (a) a common type of water (e.g., NCCW), or (b) a common spatial and flow path relationship (e.g., WWTP related locations). The seven categories are listed below and then described:

- Intake River Water at Facility
- Non-Chemours Process Wastewater
- Non-Contact Cooling Water
- Stormwater
- Stormwater-Non-Contact Cooling Water
- Wastewater Treatment Plant
- Combined Flows to Outfall 002



#### Intake River Water at Facility

The majority (~98%) of water discharged at Outfall 002 originates from water drawn from the Cape Fear River. Samples were collected at the intake river water at the Facility (Location 1, Figure 2) to represent the background concentration of PFAS in water entering the conveyance network.

#### Non-Chemours Process Wastewater

Process wastewater from non-Chemours manufacturing areas (Kuraray and DuPont leased areas) are piped to the WWTP for treatment and ultimately discharge via the WWTP to Outfall 002. Non-Chemours Process Wastewater locations include: Kuraray process wastewater (Location 18), DuPont Plant 1 process wastewater (Location 19A), DuPont Plant 2 process wastewater (Location 19B), and Kuraray Laboratory process wastewater (Location 23B) as shown on Figure 2.

#### Non-Contact Cooling Water

Non-contact cooling water (i.e. NCCW) is non-process wastewater used to cool equipment in manufacturing areas. This water does not directly contact manufactured products. NCCW is derived from the intake river water. The NCCW locations include Kuraray Area non-process wastewater (Locations 6A and 6B) and Monomers IXM non-process wastewater (Locations 24A, 24B, and 24C) as shown on Figure 2. The Kuraray and Monomers IXM non-process wastewater sources of flow discharge to Outfall 002 via the WWTP and the Cooling Water Channel, respectively.

#### Stormwater

Stormwater is a source of flow to Outfall 002 throughout the Site during and shortly after precipitation events. The stormwater-only locations include Kuraray northern area (Location 2), the PPA area (Location 3), the combined Kuraray northern area and PPA areas (Location 4), the Kuraray southern area (Location 5), the Monomers IXM area (Location 10), and the former DuPont Polymer Manufacturing and Development Facility (PMDF) area (Location 11) as shown on Figure 2. Additional site-wide and targeted stormwater sampling was conducted to support the investigations related to Paragraph 12 of the executed Consent Order. Results of this sampling are described in Appendix B.

#### Stormwater-Non-Contact Cooling Water

Stormwater and NCCW are commingled in some of the flow pathways at the site as described earlier. The locations comprising Stormwater-NCCW include locations from the western portion of the Facility (Location 7A), non-process wastewater and stormwater



from Monomers IXM (Locations 9 and 10A), DuPont area non-process wastewater and stormwater (Locations 12, 13, and 14), non-process wastewater and stormwater from the eastern portion of the Facility (Location 15), and the southern sediment basin (Location 21A) as shown on Figure 2.

#### Wastewater Treatment Plant

Effluent from the WWTP is a source of flow to Outfall 002. The WWTP receives process wastewater from Kuraray and DuPont, non-process wastewater from throughout the Facility, and some stormwater flows. Wastewater Treatment Plant category locations include the WWTP effluent (Location 8), the WWTP combined influent (Location 22), and the Terracotta pipe (Location 23A) as shown on Figure 2.

#### Combined Flows to Outfall 002

Stormwater, NCCW, and process wastewater from all flow pathways at the Facility combine in the Open Channel to Outfall 002. Locations include the Open Channel to Outfall 002 downstream of the WWTP (Location 7B), the Open Channel to Outfall 002 downstream of DuPont area (Location 7C), and Outfall 002 (Location 20) as shown on Figure 2.

#### 3. FINAL QUARTERLY REPORT OBJECTIVES

This final quarterly report summarizes the data from the nine bimonthly sampling events that have been collected to characterize PFAS in non-process wastewater, process wastewater, and stormwater at the Facility, pursuant to Paragraph 11(c) of the executed Consent Order. Objectives of the final quarterly report are to:

- 1) identify trends and observations at each location / location category using time trend plots,
- 2) evaluate if each location contains PFAS concentrations in addition to the background concentrations observed at the intake river water at the Facility (Location 1) using statistical methods, and
- 3) make recommendations for the Ongoing Sampling program pursuant to Paragraph 11(d) based on the Initial Characterization program findings.

#### 4. PARAGRAPH 11(C) METHODS AND SCOPE

This section describes the methods implemented for the 18-month Initial Characterization period including locations sampled, field methods implemented, and laboratory methods



used. Further details on these locations and methods are provided in the prior quarterly reports.

#### 4.1 <u>Sample Locations</u>

Locations sampled are described in Table 1 and shown in Figure 2. The number of samples collected during the 18-month period during each bimonthly sampling event varied from nineteen (19) in the October 2019 sampling event to thirty (30) in the May/June 2020 event. Table 2 provides a summary of the sample locations collected during each event. Adjustments to some sample locations were made based on recommendations stated in prior reports. A summary of these changes is listed below:

- Chemours process wastewater Locations 16, 17A, and 17B were not sampled after 2019 Quarter 2 as water from these locations are presently disposed of offsite and do not reach Outfall 002 (Geosyntec, 2019c).
- Location 7C was added to the Sampling Plan beginning in the May 2020 to characterize PFAS concentrations in the Open Channel to Outfall 002 downstream of the confluence with discharge from the DuPont area (Geosyntec, 2020c).
- Location 10A was added to the Sampling Plan in May 2020 to characterize PFAS concentrations of the combined Chemours Monomers IXM NCCW and stormwater discharge (Geosyntec, 2020c).
- Location 23B was added to the Sampling Plan in June 2019 to evaluate the Kuraray laboratory process wastewater, an input to the Terracotta pipe.

#### 4.2 Field Methods

Field methods used during the Initial Characterization period are documented in previous quarterly reports. The following sub-sections summarize these field methods. Appendix A provides a detailed description of field methods for the August 2020 event.

#### 4.2.1 General Field Methods

Equipment was inspected by the field program supervisor, decontaminated, and calibrated daily prior to use in the field, according to the manufacturer's recommendations. Field parameters (e.g., pH, temperature, turbidity) were measured with a water quality meter prior to sample collection for grab samples, and for temporal composite samples, once during composite sampling (collected directly from the water stream), and once after composite sampling (collected from the autosampler reservoir). A field notebook and location-specific field forms were used to record information regarding additional items such as quality assurance/ quality control (QA/QC), sample identifications, color, odor, and other field observations.



Field QA/QC samples, including field duplicates, equipment blanks, field blanks, and trip blanks were collected and analyzed during the bimonthly sampling events as described in Appendix A and Geosyntec (2019b, 2019c, 2020a, 2020b, and 2020c).

Upon sample collection, labelled and containerized samples were placed inside an insulated sample cooler with ice. Prior to shipment of the samples to the laboratory, a chain of custody (COC) form was completed identifying sample locations, sample identification numbers, and specific laboratory analyses to be performed on the samples. COCs were signed by the field personnel relinquishing the samples to the courier and were signed by the laboratory upon receipt of the cooler.

#### 4.2.2 Grab Sampling Methods

Grab samples were collected from locations where temporal variability over the course of one day was not expected. These locations include non-process wastewater only locations (Locations 6A, 6B, 24A, 24B, and 24C), select process wastewater only locations (Locations 19A and 19B), and the Sediment Basin South location (Location 21A), as identified in Table 2 and shown on Figure 2. All grab samples were collected by directly filling the HDPE bottle with the sample. Other locations collected as grab samples during the Initial Characterization period are identified below:

- Location 7B was collected as a grab sample for the April and June 2019 events due to limited autosampler availability. This location was collected as a temporal composite sample for the August 2019 event and all further sampling events.
- Locations 18 and 23A were collected as four grab samples over four hours during the August 2019 event to assess temporal variability at these locations. Due to temporal variability, future samples were collected as temporal composites.
- Location 22 was collected as a temporal composite beginning in the April 2020 event. All previous samples at this location were grab samples.

#### 4.2.3 Temporal Composite Sampling Methods

Temporal composite samples were collected during the bimonthly sampling events from locations where variability was expected to potentially be significant within a short time frame (e.g., one day). These locations, identified in Table 2 and shown on Figure 2, include those within the site conveyance network and the intake and outfall locations, since these locations can have highly variable dissolved and suspended constituent loads over short time periods. Temporal composite samples were collected using a dedicated Teledyne 6712C autosampler equipped with a rain gauge, HDPE tubing, silicon tubing, and an HDPE sample reservoir. During dry sampling events, autosamplers integrated water over a four-hour sample collection period. During wet sampling events, the



integration time on the autosamplers was set to correspond to the duration of the storm event.

#### 4.2.4 Wet Event Sampling Methods

The May/June 2020 event included a wet sampling event in May 2020 and a dry sampling event in June 2020. Locations that contain stormwater (Locations 1, 2, 3, 4, 5, 7A, 7B, 7C, 8, 9, 10, 10A, 11, 12, 13, 14, 15, 20, and 21A) were sampled on May 20, 2020 during a storm event following an 11-day antecedent dry period. The storm event began on May 18, 2020 and lasted through May 21, 2020; a total of 3.2 inches of rainfall fell during the storm event. Composite samples were collected over a 3.75-hour period during the peak intensity of the storm event. In accordance with the PFAS Characterization Sampling Plan (Geosyntec, 2019a), Locations 6A, 6B, 8, 18, 19A, 19B, 22, 23A, 23B, 24A, 24B, and 24C were collected during dry weather on June 3, 2020, following 72 hours with less than 0.5 inches of rain.

#### 4.3 Laboratory Methods

Samples were analyzed for PFAS by the following methods:

- Table 3+ Laboratory Standard Operating Procedure (SOP); and
- EPA Method 537 Mod Laboratory SOP (EPA 537M).

PFAS reported under each of these methods are listed in Table 3.

Throughout the Initial Characterization period, laboratory analyses were performed largely in accordance with the PFAS Characterization Sampling Plan (Geosyntec, 2019a) and within the guidelines specified by the laboratory SOPs. The collection frequency of field duplicates, matrix spike / matrix spike duplicates (MS/MSD), trip blanks, and equipment blanks was largely in accordance with the PFAS Characterization Sampling Plan (Geosyntec, 2019a). Deviations, as listed in Appendix A and Geosyntec (2019b, 2019c, 2020a, 2020b, and 2020c), were acceptable as previous QA/QC samples met criteria.

All data were reviewed using the Data Verification Module (DVM) within the Locus<sup>TM</sup> Environmental Information Management (EIM) system, which is a commercial software program used to manage data. Following the DVM process, a manual review of the data was conducted. The data usability, in view of the project's data quality objectives (DQOs), was assessed and the data were entered into the EIM system. Details regarding the data review process are provided in Appendix A for the August 2020 event and Geosyntec (2019b, 2019c, 2020a, 2020b, and 2020c) for other bimonthly sampling events.



#### 5. ASSESSMENT OF PARAGRAPH 11(C) INITIAL CHARACTERIZATION

This section presents an assessment of the key observations and summary statistics observed over the 18-month Initial Characterization period. Observations in this section are based on total Table 3+ concentrations and total EPA 537M concentrations. Table 3+ PFAS compounds are often related to Chemours manufacturing processes whereas EPA 537M PFAS compounds are generally associated with firefighting foams, municipal WWTPs, and other background sources. The remainder of this section discusses the presentation of Table 3+ results and PFAS data observations, including a statistical evaluation of the data.

#### 5.1 Presentation of Results Table 3+ 17 Compounds

For clarity, the text and figures of this report describe the Table 3+ 17 compound sums while both Table 3+ 17 compound and Table 3+ 20 compound sums are included in the tables.

As reported in the *Matrix Interference During Analysis of Table 3+ Compounds* memorandum (Geosyntec, 2020d), matrix interference studies conducted by the analytical laboratory (TestAmerica, Sacramento) have shown that the quantitation of three compounds (R-PSDA [formerly Byproduct 4], Hydrolyzed PSDA [formerly Byproduct 5], and R-EVE) is inaccurate due to interferences by the sample matrix in both groundwater and surface water. Given the matrix interference issues, Total Table 3+ PFAS concentrations are calculated and presented in the tables of this report in two ways: (i) summing over 17 of the 20 Table 3+ compounds "Total Table 3+ (sum of 17 compounds)", i.e., excluding results of R-PSDA, Hydrolyzed PSDA, and R-EVE; and (ii) summing over 20 of the Table 3+ compounds "Total Table 3+ (sum of 20 compounds)". Expressing these data as a range represents possible values of what these results might be without matrix interferences. In other words, the sum of all 17 compounds is an underestimate of the actual value while the sum of the 20 compounds is likely an overestimate of the actual value.

#### 5.2 Results Tables and Figures

The observations and assessment described in this section are based on the following figures:



- Figure 3A presents summary statistics for HFPO-DA<sup>1</sup>, PFMOAA<sup>2</sup>, and PMPA<sup>3</sup> concentrations for locations that reach Outfall 002. Table 4 represents these data tabularly;
- Figure 3B presents summary statistics for total Table 3+ concentrations and total EPA 537M concentrations for locations that reach Outfall 002. Table 5 represents these data tabularly;
- Figures 4A 4F present time series plots for total Table 3+ concentrations. Each time series plot displays the total Table 3+ concentrations observed during each event at the intake river water at the Facility (Location 1) and at other locations as grouped by sample location type described in Section 4.1 (e.g., Stormwater, NCCW, etc.).;
- Figures 5A and 5B display the median total Table 3+ and total EPA 537M concentration by location for all sampling locations, respectively;
- Table 6 presents results from the Wilcoxon Rank Sum test evaluation; and
- Appendix C presents a complete summary of the PFAS concentrations in the samples collected during the 18-month initial characterization period.

Median concentrations are discussed throughout this section. The median was selected as the measure of central tendency for this discussion because the data are often skewed and not normally distributed, as is common for environmental data. The median represents a robust measure of central tendency not influenced by outliers.

#### 5.3 Statistical Assessment Technique

The data set collected for each location in the sampling program was compared to background concentrations of the River Intake Water data set using the Wilcoxon Rank Sum. The Wilcoxon Rank Sum test is a non-parametric test used to evaluate whether the distributions of total EPA 537M PFAS and/or total Table 3+ PFAS concentrations at each location were statistically different than those at the intake river water at the Facility (Location 1). The Wilcoxon Rank Sum test is appropriate for small sample sizes that are not normally distributed. The tests were conducted at the 5% level of significance, i.e.,  $\alpha = 0.05$ . Therefore, a p-value result greater than 0.05 indicates the subject location concentration distribution was not significantly different from the distribution at Location 1, i.e., is not adding PFAS significantly above background concentrations. A p-value

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<sup>&</sup>lt;sup>1</sup> HFPO-DA - hexafluoropropylene oxide dimer acid

<sup>&</sup>lt;sup>2</sup> PFMOAA - 2,2-difluoro-2-(trifluoromethoxy) acetic acid

<sup>&</sup>lt;sup>3</sup> PMPA - perfluoromethoxypropyl carboxylic acid



result less than 0.05 indicates the subject location concentration distribution was significantly higher (positive result statistic) or lower (negative result statistic) than the distribution collected from Location 1. For example, a positive result statistic and a p-value less than 0.05 indicate that the location is contributing PFAS above median background concentrations. Table 6 presents results from the non-parametric Wilcoxon Rank Sum test evaluation for total Table 3+ and total EPA 537M concentrations in the investigative samples. Stormwater-only locations were only sampled during one (1) sampling event (May/June 2020); therefore, results from all stormwater locations were grouped into one dataset and compared to the dataset from Location 1. The results of the statistical assessment are described on a location category basis in the next sub-section.

#### 5.4 Conveyance Network PFAS Data Observations

This sub-section presents the assessment of results from the nine sampling events. Observations are summarized in the list and table below and described in the remainder of this section on a per location category basis.

#### Summary of Observations

- Across all locations EPA 537M PFAS were not statistically different or higher than intake river water data with the exception of one location (23A) on the Terracotta pipe which will be decommissioned in 2021;
- Table 3+ PFAS in NCCW-only locations and non-Chemours process wastewater locations are similar to background concentrations observed at the intake river water and are not statistically different or significantly lower, with the exception of one location (23B) which decreased to intake concentration levels over the course of the program. Location 23B also drains through the Terracotta pipe which will be decommissioned in 2021;
- Table 3+ PFAS were statistically higher for locations which either contained stormwater or water related to the WWTP effluent; and
- Monomers IXM area flows containing stormwater have higher concentrations of Table 3+ PFAS during both wet and dry weather compared to other stormwater-NCCW locations which decrease during dry periods. Pursuant to Paragraph 4(a) of the Addendum to Consent Order Paragraph 12 (CO Addendum) Chemours will capture and treat stormwater in the catchment area shown on Attachment 6 of the CO Addendum; this system includes separating NCCW and stormwater flows in the Monomers IXM area.



Location Category	EPA 537M PFAS Statistical Assessment Outcome	Table 3+ PFAS Statistical Assessment Outcome				
Non-Chemours Process Wastewater	Not Different or Lower than Intake	Not Different or Lower than Intake*				
Non-Contact Cooling Water	Not Different than Intake	Not Different than Intake				
Stormwater	Not Different than Intake	Greater than Intake				
Stormwater-NCCW	Not Different than Intake	Some Greater than Intake (stormwater from Monomers IXM)				
Wastewater Treatment Plant	Not Different than Intake** (influent and effluent only)	Greater than Intake				
Combined Flows to Outfall 002	Not Different than Intake	Greater than Intake (WWTP and stormwater)				

<sup>\*</sup> Location 23B concentrations were initially higher than the intake river water but have declined and been similar to the intake since January 2020. Flows from Location 23B discharge to the Terracotta pipe which is being decommissioned in 2021.

#### 5.4.1 Intake River Water at Facility

As observed in Figures 4A – 4F, total Table 3+ concentrations at Location 1 were relatively consistent over the 18-month sampling program, varying between 48 ng/L to 120 ng/L with a median of 58 ng/L (Figures 3B and 5A; Table 4). Total EPA 537M concentrations were also consistent, varying between 30 ng/L to 190 ng/L with a median of 55 ng/L (Figures 3B and 5B; Table 5). The samples collected at Location 1 were considered to represent the background concentration of PFAS at the facility. Detected PFAS at Location 1 were generally observed in other facility locations that derive water from the river intake.

#### **5.4.2** Non-Chemours Process Wastewater

Figure 4A presents a time series plot of total Table 3+ data collected from non-Chemours process wastewater locations. Process wastewater total Table 3+ concentrations from

<sup>\*\*</sup> Wastewater treatment plant influent and effluent EPA 537M concentrations were not statistically different or higher from the intake, but an upstream location (23A) in the Terracotta pipe did have elevated EPA 537M concentrations. This source to the wastewater treatment plant will be removed with the planned decommissioning of the Terracotta pipe in 2021.



Kuraray (Location 18) and DuPont (Locations 19A and 19B) were consistently lower than or similar to the intake river water (Location 1) and generally reduced over time (Figure 4A). The distribution of total Table 3+ and total EPA 537M concentrations for non-Chemours process wastewater were similar to the intake river water (Figures 3A, 3B, 5A, and 5B; Tables 4 and 5). The statistical assessment indicated that for both EPA 537M PFAS and Table 3+ compounds, PFAS concentrations in Non-Chemours Process Wastewater concentrations are not different or lower than concentrations from the intake river water at the Facility for all locations, except for Kuraray Laboratory process wastewater (Location 23B), which was significantly greater for Table 3+ compounds only (Table 6). Location 23B concentrations were initially higher than the intake river water (Location 1) but have declined and been similar to the intake since January 2020 (Figure 4A). Flows from Location 23B discharge to the Terracotta pipe which will be decommissioned in 2021.

#### **5.4.3** Non-Contact Cooling Water

Figure 4B presents a time series plot of total Table 3+ data collected from NCCW locations and indicates the total Table 3+ concentrations from NCCW are consistently similar to Location 1. One data point at Location 24C in December 2019 was an order of magnitude higher than the intake value. This isolated event is not reflective of long term NCCW concentrations (Geosyntec, 2020a). NCCW concentrations returned and remained at normal levels in the following January 2020 event. The statistical evaluation indicated total Table 3+ and total EPA 537M concentrations for NCCW were not significantly different from the intake river water (Figures 3A, 3B, 5A, and 5B; Tables 4, 5, and 6).

#### 5.4.4 Stormwater

Figure 4C presents total Table 3+ data collected from stormwater-only locations in the May/June 2020 event. All other bimonthly sampling events were collected during dry weather; stormwater-only locations were either dry or not hydraulically connected to Outfall 002 during other sampling events. Based on statistical evaluation of the May/June 2020 event, Table 3+ PFAS are present in stormwater at significantly higher concentrations compared to the intake river water at the facility (Location 1) (Table 6). The sample representing stormwater from the Monomers IXM area (Location 10) had the highest total Table 3+ PFAS concentration (9,800 ng/L) of all the stormwater locations (Figure 4C, Appendix C). Pursuant to paragraph 4(a) of the CO Addendum, Chemours will capture and treat stormwater in the catchment area shown on Attachment 6 of the CO Addendum. Total EPA 537M concentrations at stormwater locations were similar to intake river water concentrations (Figures 3B and 5B; Table 5); the statistical assessment



indicated EPA 537M concentrations for stormwater from the May/June 2020 event were not significantly different than the intake river water (Table 6).

#### 5.4.5 Stormwater-NCCW

Figure 4D presents a time series of total Table 3+ data collected from stormwater-NCCW locations. These locations contain combined stormwater and NCCW flows. As shown previously, NCCW is not a contributor of PFAS to Outfall 002 while stormwater, primarily from the Monomers IXM Area, is a contributor. These stormwater-NCCW locations contain Table 3+ PFAS at concentrations greater than the river intake. The two controlling factors are if the samples were collected during wet weather or are in or downstream from the Monomers IXM Area.

As a specific example of the effect of wet weather events, the samples representing the western portion of the Facility (Location 7A), which primarily contain Kuraray NCCW, were similar to the intake river water (Location 1) except during the May 2020 wet weather event when stormwater was being actively added to these flows.

Table 3+ PFAS concentrations in stormwater-NCCW locations in or downstream of the Monomers IXM area (Locations 9, 10A, 15, and 21A) were generally higher than concentrations at other stormwater-NCCW locations (Locations 7A, 12, 13, and 14) during both dry and wet weather sampling events. NCCW from the Monomers IXM area has similar concentrations to the intake water, therefore elevated concentrations observed during both dry and wet events are likely due to ongoing PFAS contributions from stormwater inflows that are not fully flushed from the sampling locations. NCCW and stormwater flows from the Monomers IXM area will be separated and the stormwater treated as pursuant to paragraph 4(a) of the CO Addendum previously discussed. The statistical evaluation indicated Table 3+ PFAS concentrations from stormwater-NCCW in locations in or downstream of the Monomers IXM area with enough samples for statistical comparison were significantly higher than the intake river water (Table 6).

The distribution of EPA 537M concentrations at all stormwater-NCCW locations were similar to the intake river water concentrations (Figures 3B and 5B; Table 5). The statistical assessment indicated EPA 537M concentrations at all stormwater-NCCW locations were not significantly different from the intake river water for those locations with enough samples for statistical comparison (Table 6).

#### **5.4.6** Wastewater Treatment Plant

Figure 4E presents a time series of total Table 3+ data collected from the WWTP locations. The total Table 3+ concentrations at the WWTP effluent (Location 8), the combined WWTP influent (Location 22), and the Terracotta pipe (Location 23A) are elevated compared to, and statistically higher than, the intake river water (Location 1) for



all events (Figures 4E and 5A; Table 6). Pursuant to paragraph 4(d), Chemours is preparing a report on sources of PFAS to the WWTP by May 31, 2021. Chemours and its tenant Kuraray are also decommissioning the Terracotta pipe. Prior to November 2017, the Terracotta pipe transmitted Chemours process wastewater to the WWTP.

The distribution of total EPA 537M concentrations at the WWTP influent and effluent were similar to, and not significantly different from, total EPA 537M intake river water concentrations (Figures 3B and 5B; Tables 5and 6). The median total EPA 537M concentration at the Terracotta pipe (Location 23A) was over 5 times greater than the median total EPA 537M concentration at Location 1 (Figure 3B, Table 5), and the statistical evaluation indicated Location 23A was the only location with EPA 537M concentrations significantly higher than the intake river water (Table 6). As noted above, this component of the WWTP influent stream, the Terracotta pipe, is being decommissioned in 2021.

#### 5.4.7 Combined Flows to Outfall 002

Figure 4F presents a time series of total Table 3+ data collected from the locations representing the combined flows to Outfall 002. These locations contain Table 3+ PFAS from upstream sources including combinations of WWTP effluent, NCCW, and stormwater. The locations representing the combined flows to Outfall 002 have Table 3+ PFAS concentrations that are significantly greater than the intake river water for those locations with enough samples for statistical comparison (Figures 3B and 5A; Tables 5 and 6). The increases over intake river water concentrations are interpreted to originate from both stormwater and WWTP effluent. First, the two highest total Table 3+ concentrations at these locations were measured during the wet weather May/June 2020 event indicating the stormwater contributions. Second, Location 7A upstream of the WWTP effluent is routinely lower in concentration than Location 7B downstream of the WWTP effluent.

The statistical assessment indicated EPA 537M concentrations at the locations representing combined flows to Outfall 002 were not significantly different from the intake river water for those locations with enough samples for statistical comparison (Table 6).

#### 6. PARAGRAPH 11(D) SAMPLING PLAN UPDATES

Based on the findings in Section 5 and planned activities at the Facility described below, several revisions are recommended to the Sampling Plan for the Ongoing Sampling program pursuant to Paragraph 11(d). These recommendations fall into two categories:

1. Remove sampling locations and analyte groups that are not contributing PFAS to Outfall 002 or are characterized by other sampling locations and programs; and



2. Reconfiguration of the sampling locations in the Monomers IXM area based on the upcoming separation of NCCW and stormwater flows and stormwater treatment.

Recommendations and rationale for the proposed Sampling Plan revisions are provided in the table below. The proposed sample locations for Paragraph 11(d) after completion of the stormwater treatment system in June 2021 are provided in Figure 6.

Recommendation	Rationale
Continue analyzing EPA 537M compounds at the intake river water at the Facility (Location 1) and Outfall 002 (Location 20) only.	Total EPA 537M concentrations were not significantly different or were significantly less than the total EPA 537M concentrations at the river intake water. <sup>4</sup> The intake river water at the facility (Location 1) and Outfall 002 (Location 20) are proposed to continue to be analyzed for EPA 537M compounds.
Replace the sampling locations in the Monomers IXM area (Locations 9, 10, 10A, 24A, 24B, 24C) with one new sample location (Location 9A) representing the combined NCCW from Monomers IXM upon completion of the Monomers IXM stormwater treatment system.	This recommendation is supported because: (1) NCCW Locations 24A, 24B, and 24C have contained low and relatively homogenous levels of PFAS relative to the intake water at the facility (Location 1) and will be combined into one piped water stream, (2) stormwater from the Monomers IXM area will be characterized as a part of stormwater treatment system sampling program, and (3) combined NCCW and stormwater from the Monomers IXM area will be sampled downstream at Location 15.
Replace sampling of inputs to the WWTP (Locations 6A, 6B, 18, 19A, 19B, 23A, and 23B) with continued sampling of influent (Location 22).	This recommendation is supported because: (1) Locations 6A, 6B, 18, 19A, and 19B are not sources of PFAS, and (2) individual sources to the WWTP are being investigated as part of the ongoing supplemental WWTP sampling plan.
Replace upstream stormwater-only locations from the western portion	Stormwater from the western portion of the facility is characterized downstream of Locations

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<sup>&</sup>lt;sup>4</sup> The exception is location 23A on the Terracotta pipe which is being decommissioned.



Recommendation	Rationale
of the facility (Locations 2, 3, 4, and 5) with downstream combined sampling at Location 7A.	2, 3, 4, and 5 at Location 7A during wet weather events.

#### 7. SUMMARY AND RECOMMENDATIONS

Pursuant to Consent Order Paragraph 11(c), this final quarterly report summarizes results and observations from the nine bimonthly sampling events collected during the 18-month initial characterization period. The objective of the initial characterization period was to characterize the concentrations of PFAS in the raw water intake, process wastewater, non-process wastewater, and stormwater at the Facility.

#### **Summary of Findings**

The following conclusions can be drawn based on the samples collected during the initial characterization period:

- The intake river water at the facility (Location 1) contains PFAS before this water is used at the Facility. PFAS detected at Location 1 represent the background level of PFAS at other sampling locations.
- Across all locations, EPA 537M PFAS were not statistically different or higher than intake data with the exception of one location (23A) on the Terracotta pipe which is being decommissioned in 2021.
- Non-Chemours process wastewater locations (Locations 18, 19A, 19B, and 23B) and NCCW only locations (Locations 6A, 6B, 24A, 24B, and 24C) generally have low PFAS concentrations, similar to or less than those observed at the intake river water at the Facility.
- The primary sources of total Table 3+ PFAS concentrations to Outfall 002 are (1) locations comprising both stormwater and non-process wastewater from the Monomers IXM area, (2) stormwater-only locations, and (3) the WWTP effluent, including PFAS loadings from the Terracotta pipe which prior to November 2017 transmitted Chemours process water to the WWTP.

The degree of PFAS contributions from the sources outlined in the last bullet above will be mitigated through on-going present and planned future actions, specifically:



- Continued use of the Thermal Oxidizer and other air emissions controls at the Facility reduces aerial emissions of PFAS. This mitigates future PFAS loading to surfaces and subsequent stormwater concentrations;
- Pursuant to the CO Addendum, the in-progress separation of NCCW and stormwater flows occurring in the Monomers IXM Area and the 2021 planned treatment of stormwater flows in this area will reduce PFAS contributions from the Monomers Area; and
- The planned 2021 decommissioning of the Terracotta pipe will reduce PFAS contributions to the WWTP.

#### Summary of Recommendations

Based on these findings above, the following recommendations are made as the sampling program transitions from the initial characterization period of Paragraph 11(c) to Ongoing Sampling in Paragraph 11(d):

- Continue analyzing EPA 537M at the intake river water at Location 1 and Location 20 only;
- Upon completion of the Monomers IXM stormwater treatment system, replace Locations 9, 10, 10A, 24A, 24B, and 24C with one new sample location representing the combined NCCW;
- Replace locations representing inputs to the WWTP (Locations 6A, 6B, 18, 19A, 19B, 23A, 23B) with ongoing sampling of the WWTP influent (Location 22); and
- Replace stormwater-only Locations 2, 3, 4, and 5 with ongoing sampling of downstream Location 7A.

Pursuant to Paragraph 11(d), over the next two years starting in January 2021, Chemours will continue to collect bimonthly samples to characterize PFAS in the intake river water, process wastewater, non-process wastewater, and stormwater at the Facility. Chemours requests approval from DEQ to perform the ongoing sampling in accordance with these recommendations by January 8, 2021. Results will be reported semi-annually, i.e. everyother quarter, within 90 days of the previous semiannual period. The first report will be submitted within 90 days of the end Quarter 2, 2021.



#### 8. REFERENCES

Geosyntec, 2019a. PFAS Characterization Sampling Plan. May 6, 2019.

Geosyntec, 2019b. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #1. July 31, 2019.

Geosyntec, 2019c. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #2. October 31, 2019.

Geosyntec, 2019d. Assessment of HFPO-DA and PFMOAA in Outfall 002 Discharge and Evaluation of Potential Control Options. August 2019.

Geosyntec, 2020a. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #3. January 31, 2020.

Geosyntec, 2020b. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #4. April 30, 2020.

Geosyntec, 2020c. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #5. July 31, 2020.

Geosyntec, 2020d. Matrix Interference During Analysis of Table 3+ Compounds. Chemours Fayetteville Works. July 31, 2020.

## **TABLES**

December 2020

## TABLE 1 PARAGRAPH 11(b) SAMPLE LOCATION SUMMARY Chemours Fayetteville Works, North Carolina

Sample Category	Sample Location ID	Sample Location Description	Sampling Method	Sample Included in May 2019 PFAS Characterization Plan
Intake River Water at Facility	1	Discharge point of excess river water (i.e., water drawn from the Cape Fear River, but not used as process water or NCCW) to characterize background levels of PFAS	Temporal Composite	✓
V. Cl. P.	18	Kuraray process wastewater	Grab/Temporal Composite*	✓
Non-Chemours Process Wastewater	19A	DuPont process wastewater, Plant 1	Grab	✓
wastewater	19B	DuPont process wastewater, Plant 2	Grab	✓
1	23B	Kuraray laboratory process wastewater	Grab	
	6A	Kuraray southern leased area NCCW discharge - Vacuum Condenser	Grab	✓
I	6B	Kuraray southern leased area NCCW discharge - Resins Area	Grab	✓
NCCW	24A	Chemours Monomers IXM Vinyl Ethers South NCCW	Grab	✓
	24B	Chemours Monomers IXM Line 3 and Line 4 Extruder NCCW	Grab	✓
	24C	Chemours Monomers IXM Water Return Header NCCW	Grab	✓
	2	Kuraray northern leased area stormwater discharge	Temporal Composite	✓
	3	Chemours PPA area stormwater discharge	Temporal Composite	✓
	4	Combined stormwater discharge from Kuraray northern leased area and Chemours PPA area	Temporal Composite	✓
Stormwater	5	Kuraray southern leased area stormwater	Temporal Composite	✓
1	10	Chemours Monomers IXM area stormwater discharge	Temporal Composite	✓
	11	Stormwater discharge from portion of grassy field to north of decommissioned Chemours Teflon area	Temporal Composite	✓
	7A	Combined stormwater and NCCW discharge from western portion of the Facility	Temporal Composite	✓
	9	Chemours Monomers IXM NCCW and stormwater discharge including stormwater from Vinyl Ethers South and Vinyl Ethers North	Temporal Composite	✓
1	10A	Combined Chemours Monomers IXM NCCW and stormwater discharge	Temporal Composite	
	12	DuPont area southern drainage ditch stormwater discharge and NCCW	Temporal Composite	✓
Stormwater-NCCW	13	DuPont area northern drainage ditch stormwater discharge and NCCW	Temporal Composite	✓
	14	DuPont area southeast stormwater and NCCW discharge	Temporal Composite	✓
	15	Combined stormwater and NCCW discharge from eastern portion of the Facility	Temporal Composite	<b>√</b>
I	21A	Sediment Basin South	Grab	✓
	21B	Sediment Basin North	Grab	<b>√</b>
	8	Outfall 001 treated non-Chemours process wastewater discharge to open channel to Outfall 002	Temporal Composite	· ✓
Wastewater Treatment Plant	22	WWTP combined influent	Grab/Temporal Composite*	✓
wasewater freatment faint	23A	Kuraray northern leased area combined process wastewater and NCCW; open grate on Terracotta pipe	Grab/Temporal Composite*	✓
	7B	Combined stormwater and NCCW discharge from western portion of the Facility and treated discharge from WWTP	Grab/Temporal Composite*	<b>√</b>
Combined Flows to Outfall 002	7C	Combined stormwater and NCCW discharge from western portion of the Facility, the eastern portion of the Facility, and the DuPont Area, and treated discharge from WWTP	Temporal Composite	
1	20	Outfall 002 pipe to Cape Fear River upstream of sump	Temporal Composite	✓
	16	Chemours Monomers IXM Area combined process wastewater	Grab	✓
Chemours Process Wastewater	17A	Chemours PPA Area waste acid trailer	Grab	✓
1	17B	Chemours PPA Area waste rinse water trailer	Grab	✓

#### Notes

Sample locations refer to locations identified in Figure 2.

Temporal composite samples were integrated over 4 hours in dry weather, or less time to line up with the duration of a storm event in wet weather.

Intake River Water at Facility sample location represents background concentrations of PFAS.

 $Non-Chemours\ Process\ Wastewater\ sample\ locations\ contain\ process\ wastewater\ from\ non-Chemours\ manufacturing\ areas.$ 

 $NCCW\ sample\ locations\ contain\ non-process\ was tewater\ from\ Kuraray\ and\ Chemours\ manufacturing\ areas.$ 

Stormwater sample locations contain stormwater only.

Stormwater-NCCW sample locations are locations containing both stormwater and non-process wastewater from throughout the Facility.

Wastewater Treatment Plant sample locations contain process wastewater from non-Chemours manufacturing areas and non-process wastewater from throughout the Facility.

Combined Flows to Outfall 002 contain process wastewater, non-process wastewater, and stormwater from throughout the Facility.

Chemours Process Wastewater sample locations contain Chemours process wastewater only and do not contribute flow to Outfall 002. The open grate on Terracotta pipe was formerly referred to as the manhole on Terracotta pipe.

IXM - ion exchange membrane

NCCW - non-contact cooling water

PFAS - per- and polyfluoroalkyl substances

PPA - polymer processing aid

WWTP - Wastewater treatment plant

\*Select locations were collected as grab samples and as composite samples during different sampling events. Details for each sample are provided in Table 2.

#### TABLE 2 SUMMARY OF SAMPLES COLLECTED Chemours Fayetteville Works, North Carolina

					Sample Collected										
Commis	Sample			Commling	2019 2020										
Sample Category	Location ID	Sample Location Description	Sample Category	Sampling Method	April (Q2)	June (Q2)	August (Q3)	October (Q4)	December (Q4)	January (Q1)	April (Q2)	May (Q2) <sup>1</sup>	June (Q2) <sup>1</sup>	August (Q3)	
Intake River Water at Facility	I I	Discharge point of excess river water (i.e., water drawn from the Cape Fear River, but not used as process water or NCCW) to characterize background levels of PFAS	Intake River Water at Facility	Temporal Composite	YES	YES	YES	YES	YES	YES	YES	YES	$NS^2$	YES	
	18	Kuraray process wastewater		Grab/ Temporal Composite <sup>7</sup>	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
Non-Chemours Process	19A	DuPont process wastewater, Plant 1	Non-Chemours Process Wastewater	Grab	YES	YES	YES	YES	YES	YES	YES	$NS^2$	YES	YES	
Wastewater	19B	DuPont process wastewater, Plant 2	Non-Chemours Process Wastewater	Grab	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
	23B	Kuraray laboratory process wastewater	Non-Chemours Process Wastewater	Grab	NS <sup>10</sup>	YES	NS <sup>10</sup>	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
	6A	Kuraray southern leased area NCCW discharge - Vacuum Condenser	NCCW	Grab	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
		Kuraray southern leased area NCCW discharge - Resins Area	NCCW	Grab	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
NCCW		Chemours Monomers IXM Vinyl Ethers South NCCW	NCCW	Grab	YES	YES	YES	NS <sup>11</sup>	YES	YES	YES	NS <sup>2</sup>	YES	YES	
		Chemours Monomers IXM Line 3 and Line 4 Extruder NCCW	NCCW	Grab	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
	24C	Chemours Monomers IXM Water Return Header NCCW	NCCW	Grab	YES	YES	YES	NS <sup>11</sup>	YES	YES	YES	NS <sup>2</sup>	YES	YES	
	2	Kuraray northern leased area stormwater discharge	Stormwater	Temporal Composite	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
	3	Chemours PPA area stormwater discharge	Stormwater	Temporal Composite	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
Stormwater	4	Combined stormwater discharge from Kuraray northern leased area and Chemours PPA area	Stormwater	Temporal Composite	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
	5	Kuraray southern leased area stormwater	Stormwater	Temporal Composite	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
		Chemours Monomers IXM area stormwater discharge	Stormwater	Temporal Composite	YES	DRY	YES	YES	YES	YES	NS <sup>5</sup>	YES	NS <sup>2</sup>	DRY	
	11	Stormwater discharge from portion of grassy field to north of decommissioned Chemours Teflon area	Stormwater	Temporal Composite	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
		Combined stormwater and NCCW discharge from western portion of the Facility	Stormwater-NCCW	Temporal Composite	YES	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	
	9	Chemours Monomers IXM NCCW and stormwater discharge including stormwater from Vinyl Ethers South and Vinyl Ethers North	Stormwater-NCCW	Temporal Composite	YES	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	
		Combined Chemours Monomers IXM NCCW and stormwater discharge	Stormwater-NCCW	Temporal Composite Temporal	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	YES	NS <sup>2</sup>	YES	
Stormwater-		DuPont area southern drainage ditch stormwater discharge and NCCW	Stormwater-NCCW	Composite Temporal	DRY	DRY	YES	DRY	YES	DRY	DRY	YES	NS <sup>2</sup>	YES	
NCCW		DuPont area northern drainage ditch stormwater discharge and NCCW	Stormwater-NCCW	Composite Temporal	DRY	DRY	DRY	DRY	DRY	DRY	DRY	YES	NS <sup>2</sup>	DRY	
		DuPont area southeast stormwater and NCCW discharge	Stormwater-NCCW	Composite Temporal	YES	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	
		Combined stormwater and NCCW discharge from eastern portion of the Facility  Sediment Basin South	Stormwater-NCCW Stormwater-NCCW	Composite  Grab	YES YES	YES YES	YES YES	YES YES	YES YES	YES YES	YES YES	YES YES	$\frac{\mathrm{NS}^2}{\mathrm{NS}^2}$	YES YES	
		Sediment Basin North	Stormwater-NCCW	Grab	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	NS <sup>8</sup>	
		Outfall 001 treated non-Chemours process wastewater discharge to open channel to Outfall 002	Wastewater Treatment Plant	Temporal Composite	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
Wastewater Treatment Plant	22	WWTP combined influent	Wastewater Treatment Plant	Grab/ Temporal Composite	YES	YES	YES	YES	YES	YES	YES	NS <sup>2</sup>	YES	YES	
	/ 1 A	Kuraray northern leased area combined process wastewater and NCCW; open grate on Terracotta pipe	Wastewater Treatment Plant	Grab/ Temporal Composite <sup>7</sup>	YES	YES	YES	YES	YES	YES	YES	$NS^2$	YES	YES	

#### TABLE 2 SUMMARY OF SAMPLES COLLECTED Chemours Fayetteville Works, North Carolina

			Sample Category	Sampling - Method	Sample Collected										
Sample	Sample					_	2019			2020					
Category	Location ID	Sample Location Description			April (Q2)	June (Q2)	August (Q3)	October (Q4)	December (Q4)	January (Q1)	April (Q2)	May (Q2) <sup>1</sup>	June (Q2) <sup>1</sup>	August (Q3)	
Combined	7B	Combined stormwater and NCCW discharge from western portion of the Facility and treated discharge from WWTP	Combined Flows to Outfall 002	Grab/ Temporal Composite <sup>3</sup>	YES	YES	YES	YES	YES	YES	YES	YES	$NS^2$	YES	
Flows to Outfall 002	7C	Combined stormwater and NCCW discharge from western portion of the Facility, the eastern portion of the Facility, and the DuPont Area, and treated discharge from WWTP	Combined Flows to Outfall 002	Temporal Composite	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	NS <sup>4</sup>	YES	NS <sup>2</sup>	YES	
	20	Outfall 002 pipe to Cape Fear River upstream of sump	Combined Flows to Outfall 002	Temporal Composite	YES	YES	YES	YES	YES	YES	YES	YES	$NS^2$	YES	
Chemours	16	Chemours Monomers IXM Area combined process wastewater	Chemours Process Wastewater	Grab	YES	YES	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	${ m NS}^6$	$\mathrm{NS}^6$	NS <sup>6</sup>	
Process Wastewater	17A	Chemours PPA Area waste acid trailer	Chemours Process Wastewater	Grab	YES	YES	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	NS <sup>6</sup>	${ m NS}^6$	$\mathrm{NS}^6$	NS <sup>6</sup>	
wastewater	17B	Chemours PPA Area waste rinse water trailer	Chemours Process Wastewater	Grab	YES	YES	NS <sup>6</sup>	NS <sup>6</sup>	$NS^6$	NS <sup>6</sup>	${\sf NS}^6$	${ m NS}^6$	$NS^6$	${ m NS}^6$	

#### Notes:

Sample Events

April 2019 event (Q2) - 24 April 2019

June 2019 event (Q2) - 27 and 28 June 2019

August 2019 event (Q3) - 21 and 22 August 2019

October 2019 event (Q4) - 9 and 10 October 2019

December 2019 event (Q4) - 20 and 23 December 2019

January 2020 event (Q1) - 29 and 31 January 2020

April 2020 event (Q2) - 28 April 2020

May/June 2020 event (Q2) - 20 May and 3 June 2020

August 2020 event (Q3) - 26 August 2020

Sample numbers refer to locations identified in Figure 2.

All temporal composite samples collected in dry weather were integrated over 4 hours. Temporal composite samples collected during the storm event in May 2020 were integrated over up to 2 hours to line up with the storm event.

- 1 Samples collected in May 2020 and June 2020 are considered one sampling event, the May/June 2020 event, which was subdivided into a storm event in May for sample locations with stormwater flows with non-stormwater flow locations collected in June.
- 2 For the May/June 2020 event, all locations that contain stormwater were sampled in the dry period in June. Location 8 was sampled in both the storm event in May and the dry period in June.
- 3 Location 7B was collected as a grab sample for the April and June 2019 events due to limited autosampler availability. This location was collected as a temporal composite sample for the August 2019 event and all further sampling events.
- 4 Locations 7C and 10A were added to the workplan beginning in 2020 Quarter 2 (May/June 2020 event).
- 5 Locations 10 was not sampled in the April 2020 event because it was not hydraulically connected to the Outfall 002 at the time of sample collection, per recommendations from the fourth quarterly report of 2019 (Geosyntec, 2020b).
- 6 Locations 16, 17A, and 17B were removed from the sampling program as these locations did not contribute flow to Outfall 002 and were consequently not sampled after 2019 Quarter 2.
- 7 Locations 18 and 23A were collected as four grab samples over four hours during the August 2019 event to assess temporal variability at these locations. Due to temporal variability, subsequent samples were collected as temporal composites.
- 8 Location 21B was not sampled to date because this sediment pond was not in use at the time of sampling.
- 9 Location 22 was collected as a temporal composite beginning in the April 2020 event. All previous samples at this location were grab samples.
- 10 Location 23B was added to the Sampling Plan after the April 2019 event. It was sampled during the June 2019 event was but was not sampled during the August 2019 event because it had insufficient water to collect a sample.
- 11 Locations 24A and 24C were not sampled in October 2019 because these locations did not have flow due to Plant Turn Around.

IXM - ion exchange membrane

NCCW - non-contact cooling water

NS - Not sampled

PFAS - per- and polyfluoroalkyl substances

PPA - polymer processing aid

WWTP - Wastewater treatment plant

## TABLE 3 PFAS AND ASSOCIATED ANALYTICAL METHODS Chemours Fayetteville Works, North Carolina

Analytical Method	Common Name	Chemical Name	CASN	Chemical Formula
	HFPO-DA*	Hexafluoropropylene oxide dimer acid	13252-13-6	C6HF11O3
	PEPA	Perfluoro-2-ethoxypropionic acid	267239-61-2	C5HF9O3
	PFECA-G	Perfluoro-4-isopropoxybutanoic acid	801212-59-9	C12H9F9O3S
	PFMOAA	Perfluoro-2-methoxyacetic acid	674-13-5	C3HF5O3
	PFO2HxA	Perfluoro-3,5-dioxahexanoic acid	39492-88-1	C4HF7O4
	PFO3OA	Perfluoro-3,5,7-trioxaoctanoic acid	39492-89-2	C5HF9O5
	PFO4DA	Perfluoro-3,5,7,9-tetraoxadecanoic acid	39492-90-5	C6HF11O6
_	PMPA	Perfluoro-2-methoxypropionic acid	13140-29-9	C4HF7O3
	Hydro-EVE Acid	2,2,3,3-tetrafluoro-3-({1,1,1,2,3,3-hexafluoro-3-[(1,2,2,2-tetrafluoroethyl)oxy]propan-2-yl}oxy)propionic acid	773804-62-9	C8H2F14O4
	EVE Acid	2,2,3,3-tetrafluoro-3-({1,1,1,2,3,3-hexafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propan-2-yl}oxy)propionic acid	69087-46-3	C8HF13O4
	PFECA B	Perfluoro-3,6-dioxaheptanoic acid	151772-58-6	C5HF9O4
	R-EVE	Pentanoic acid, 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)- 2,2,3,3,4,5,5,5-octafluoro	2416366-22-6	C8H2F12O5
_	PFO5DA	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid	39492-91-6	C7HF13O7
Table 3+ Lab SOP	R-PSDA	Pentanoic acid, 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro- 2-sulfoethoxy)	2416366-18-0	C7H2F12O6S
	R-PSDCA	Ethanesulfonic acid, 1,1,2,2-tetrafluoro-2-[1,2,2,3,3-pentafluoro- 1-(trifluoromethyl)propoxy]	2416366-21-5	C6H2F12O4S
	Hydrolyzed PSDA	Acetic acid, 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro-2-sulfoethoxy)propoxy]	2416366-19-1	C7H3F11O7S
	NVHOS	1,1,2,2,4,5,5,5-heptafluoro-3-oxapentanesulfonic acid; or 2-(1,2,2,2-ethoxy)tetrafluoroethanesulfonic acid; or 1-(1,1,2,2-tetrafluoro-2-sulfoethoxy)-1,2,2,2-tetrafluoroethane	1132933-86-8	C4H2F8O4S
	PES	Perfluoro-2-ethoxyethanesulfonic acid	113507-82-7	C4HF9O4S
	PS Acid	Ethanesulfonic acid, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro	29311-67-9	C7HF13O5S
	Hydro-PS Acid	Ethanesulfonic acid, 2-[1-[difluoro(1,2,2,2-tetrafluoroethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro	749836-20-2	C7H2F14O5S
	PFBA	Perfluorobutanoic acid	375-22-4	C4HF7O2
	PFDA	Perfluorodecanoic acid	335-76-2	C10HF19O2
	PFDoA	Perfluorododecanoic acid	307-55-1	C12HF23O2
	PFHpA	Perfluoroheptanoic acid	375-85-9	C7HF13O2
	PFNA	Perfluorononanoic acid	375-95-1	C9HF17O2
	PFOA	Perfluorooctanoic acid	335-67-1	C8HF15O
	PFHxA	Perfluorohexanoic acid	307-24-4	C6HF11O2
	PFPeA	Perfluoropentanoic acid	2706-90-3	C5HF9O2
	PFTeA	Perfluorotetradecanoic acid	376-06-7	C14HF27O2
	PFTriA	Perfluorotridecanoic acid	72629-94-8	C13HF25O2
	PFUnA	Perfluoroundecanoic acid	2058-94-8	C11HF21O2
	PFBS	Perfluorobutanesulfonate	375-73-5	C4HF9SO
	PFDS	Perfluorodecanesulfonate	335-77-3	C10HF21O3S
	PFHpS	Perfluoroheptanesulfonic acid	375-92-8	C7HF15O3S
	PFHxS	Perfluorohexanesulfonic acid	355-46-4	C6HF13SO3
	PFNS	Perfluorononanesulfonate	68259-12-1	C9HF19O3S
	PFOS	Perfluorosulfonic acid	1763-23-1	C8HF17SO3
	PFPeS	Perfluoropentane sulfonic acid	2706-91-4	C5HF11O3S
EPA Method 537	10:2 FTS	Fluorotelomer sulfonate 10:2	120226-60-0	C12H5F21O3
Mod	4:2 FTS	Fluorotelomer sulfonate 4:2	757124-72-4	C6H5F9O3S
	6:2 FTS	Fluorotelomer sulfonate 6:2	27619-97-2	C8H5F13SO3
	8:2 FTS	Fluorotelomer sulfonate 8:2	39108-34-4	C10H5F17O3S
	NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid	2991-50-6	C12H8F17NO4S
	NEtPFOSA	N-ethylperfluoro-1-octanesulfonamide	4151-50-2	C10H6F17NO2S
	NEtPFOSAE	N-ethyl perfluorooctane sulphonamidoethanol	1691-99-2	C12H10F17NO3S
	NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid	2355-31-9	C11H6F17NO4S
<u> </u>	NMePFOSA	N-methyl perfluoro-1-octanesulfonamide	31506-32-8	C9H4F17NO2S
<u> </u>	NMePFOSAE	N-methyl perfluorooctane sulfonamidoethanol	24448-09-7	C11H8F17NO3S
<u> </u>	PFDOS	Perfluorododecanesulfonic acid	79780-39-5	C12HF25O3S
F	PFHxDA	Perfluorohexadecanoic acid	67905-19-5	C16HF31O2
F	PFODA	Perfluorooctadecanoic acid	16517-11-6	C18HF35O2
<u> </u>	PFOSA	Perfluorooctane Sulfonamide	754-91-6	C8H2F17NO2S
<b></b>	F-53B Major	F-53B Major	73606-19-6	C8HZF17NO2S C8HClF16O4S
<u> </u>		*		
<u> </u>	F-53B Minor	F-53B Minor	83329-89-9	C10HClF20O4S
<u> </u>	ADONA NaDONA	4,8-dioxa-3H-perfluorononanoate	958445-44-8 EVE1261	C7H2F12O4
<u> </u>	NaDONA	NaDONA DONA	EVS1361	
	DONA	DONA	919005-14-4	

Notes:
\*HFPO-DA may also appear on the EPA Method 537 Mod analyte list
EPA - Environmental Protection Agency

PFAS - per- and polyfluoroalkyl substances SOP - Standard Operating Procedure

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#### TABLE 4 SUMMARY STATISTICS FOR HFPO-DA, PFMOAA, AND PMPA Chemours Fayetteville Works, North Carolina

					HFPO-DA (ng/L)			PFMOAA (ng/L)					PMPA (ng/L)				
Sample Category	Sample Location ID	Sample Location Description	No. of Samples	No. of Detects	Minimum	Median	Maximum	No. of Samples	No. of Detects	Minimum	Median	Maximum	No. of Samples	No. of Detects	Minimum	Median	Maximum
Intake River Water at Facility	1	Discharge point of excess river water (i.e., water drawn from the Cape Fear River, but not used as process water or NCCW) to characterize background levels of PFAS	9	9	9.8	13	30	9	6	5	9.8	25	9	9	17	26	60
	18	Kuraray process wastewater	12	12	3.6	8.6	120	12	0	-	-	-	12	6	15	20	64
Non-Chemours Process	19A	DuPont process wastewater, Plant 1	9	9	4.2	18	380	9	3	5.5	8.7	16	9	7	13	27	340
Wastewater	19B	DuPont process wastewater, Plant 2	9	9	2.2	22	75	9	3	5.6	14	37	9	6	12	38	120
	23B	Kuraray laboratory process wastewater	7	7	17	35	3,200	7	6	3.7	16	200	7	6	24	32	21,000
	6A	Kuraray southern leased area NCCW discharge - Vacuum Condenser	9	9	6.7	19	66	9	4	9.9	13	24	9	9	14	30	80
NCCW	6B	Kuraray southern leased area NCCW discharge - Resins Area	9	9	4.5	17	41	9	4	8.9	11	31	9	9	17	26	53
	24A	Chemours Monomers IXM Vinyl Ethers South NCCW	15	15	8.7	17	38	15	10	6.9	10	18	15	15	21	28	96
	24B	Chemours Monomers IXM Line 3 and Line 4 Extruder NCCW	10	10	4.7	11	16	10	6	3.2	12	15	10	10	16	23	33
	24C	Chemours Monomers IXM Water Return Header NCCW	8	8	5.6	15	270	8	5	3	10	15	8	8	14	27	61
	2	Kurarav northern leased area stormwater discharge	1	1	2.700	2,700	2,700	1	0	_	-	_	1	1	220	220	220
	3	Chemours PPA area stormwater discharge	1	1	2,700	2,700	2,700	1	0	_	-	_	1	0	-	-	-
	4	Combined stormwater discharge from Kuraray northern leased area and Chemours PPA area	1	1	620	620	620	1	1	12	12	12	1	1	65	65	65
Stormwater	5	Kuraray southern leased area stormwater	1	1	100	100	100	1	0				1	1	68	68	68
Stormwater	101	Chemours Monomers IXM area stormwater discharge	1	1	1.700	1,700	1,700	1	1	5,300	5,300	5,300	1	0	_	_	-
		Stormwater discharge from portion of grassy field to north of decommissioned Chemours Teflon	1	1	320	320	320	1	1	46	46	46	1	1	120	120	120
		area															
	7A	Combined stormwater and NCCW discharge from western portion of the Facility	9	9	7.8	14	200	9	6	5.2	10	14	9	9	15	24	69
	9	Chemours Monomers IXM NCCW and stormwater discharge including stormwater from Vinyl Ethers South and Vinyl Ethers North	9	9	25	55	3200	9	8	5.7	14	390	9	8	18	34	1,000
	10A	Combined Chemours Monomers IXM NCCW and stormwater discharge	2	2	56	1,300	2,600	2	1	13,000	13,000	13,000	2	0	-	-	-
	12	DuPont area southern drainage ditch stormwater discharge and NCCW	5	5	15	20	77	5	3	12	12	20	5	5	26	52	83
Stormwater-NCCW	13	DuPont area northern drainage ditch stormwater discharge and NCCW	1	1	640	640	640	1	1	50	50	50	1	1	190	190	190
	14	DuPont area southeast stormwater and NCCW discharge	8	8	12	20	120	8	4	8.1	14	25	8	8	15	34	68
	15	Combined stormwater and NCCW discharge from eastern portion of the Facility	11	11	34	51	3,000	11	9	8.4	15	2,700	11	10	23	35	680
	21A	Sediment Basin South	9	9	16	43	420	9	8	9.5	14	110	9	9	23	43	180
	$21B^3$	Sediment Basin North	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	Outfall 001 treated non-Chemours process wastewater discharge to open channel to Outfall 002	10	10	96	210	500	10	9	88	280	20,000	10	8	38	100	1,000
Wastewater Treatment Plant	22	WWTP combined influent	10	8	27	67	170	10	7	25	56	230	10	7	11	37	1,500
wastewater Treatment Flant	23A	Kuraray northern leased area combined process wastewater and NCCW; open grate on Terracotta pipe	12	12	570	870	25,000	12	12	320	1,200	1,800	12	6	33	100	1,300
	7B	Combined stormwater and NCCW discharge from western portion of the Facility and treated discharge from WWTP	10	10	16	21	200	10	10	9.8	46	1,100	10	10	19	27	66
Combined Flows to Outfall 002		Combined stormwater and NCCW discharge from western portion of the Facility, the eastern portion of the Facility, and the DuPont Area, and treated discharge from WWTP	2	2	24	240	460	2	2	36	210	380	2	2	63	82	100
	20	Outfall 002 pipe to Cape Fear River upstream of sump	15	15	30	50	940	15	14	13	33	850	15	14	27	33	200
	16 <sup>2</sup>	Chemours Monomers IXM Area combined process wastewater	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chemours Process Wastewater	17A <sup>2</sup>	Chemours PPA Area waste acid trailer	-		-	-	-		-	-	-	-		-	-		-
	$17B^2$	Chemours PPA Area waste rinse water trailer	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample numbers refer to locations identified in Figure 2.

The summary statistics and number of samples collected reflect the total number of samples collected throughout the initial characterization period, including field duplicates.

HFPO-DA - Hexafluoropropylene oxide dimer acid

IXM - ion exchange membrane

ng/L - nanograms per liter

NCCW - non-contact cooling water

PFAS - per- and polyfluoroalkyl substances PFMOAA - Perfluoro-2-methoxyacetic acid

PMPA - Perfluoromethoxypropyl carboxylic acid

PPA - polymer processing aid

WWTP - Wastewater treatment plant

- 1 The summary statistics and number of samples collected for Location 10 reflect the wet weather May/June 2020 event only.
- 2 Locations 16, 17A, 17B were initially in the sampling program but were removed because they do not reach Outfall 002. Summary statistics were not computed for these locations.
  3 Location 21B was not sampled to date because this sediment pond was not in use at the time of sampling.

December 2020

## TABLE 5 SUMMARY STATISTICS FOR TOTAL TABLE 3+ (17 COMPOUNDS), TOTAL TABLE 3+ (20 COMPOUNDS), AND TOTAL EPA METHOD 537 Chemours Fayetteville Works, North Carolina

Sample Category	Sample Location ID	Sample Location Description	Total Table 3+ (17 Compounds) (ng/L)				Total Table 3+ (20 Compounds) (ng/L)				EPA Method 537 Mod (ng/L)			
			No. of Samples	Minimum	Median	Maximum	No. of Samples	Minimum	Median	Maximum	No. of Samples	Minimum	Median	Maximum
Intake River Water at Facility	1	Discharge point of excess river water (i.e., water drawn from the Cape Fear River, but not used as process water or NCCW) to characterize background levels of PFAS	9	48	58	120	9	60	76	150	9	30	55	190
Non-Chemours Process Wastewater	18	Kuraray process wastewater	12	6.4	32	260	12	6.4	39	360	12	9	32	120
	19A	DuPont process wastewater, Plant 1	9	18	49	970	9	18	49	980	9	5.9	28	99
	19B	DuPont process wastewater, Plant 2	9	4.9	67	510	9	4.9	68	510	9	15	26	74
	23B	Kuraray laboratory process wastewater	7	110	150	34,000	7	140	170	36,000	7	33	52	730
NCCW	6A	Kuraray southern leased area NCCW discharge - Vacuum Condenser	9	30	81	150	9	43	100	190	9	41	60	190
	6B	Kuraray southern leased area NCCW discharge - Resins Area	9	28	67	150	9	30	85	150	9	35	54	380
	24A	Chemours Monomers IXM Vinyl Ethers South NCCW	15	52	77	280	15	65	92	280	15	31	64	130
	24B	Chemours Monomers IXM Line 3 and Line 4 Extruder NCCW	10	36	54	120	10	46	66	130	10	26	51	190
	24C	Chemours Monomers IXM Water Return Header NCCW	8	44	85	2,600	8	66	140	4,500	8	24	53	120
Stormwater	2	Kuraray northern leased area stormwater discharge	1	3,000	3,000	3,000	1	3,100	3,100	3,100	1	18	18	18
	3	Chemours PPA area stormwater discharge	1	2,800	2,800	2,800	1	2,800	2,800	2,800	1	44	44	44
	4	Combined stormwater discharge from Kuraray northern leased area and Chemours PPA area	1	720	720	720	1	740	740	740	1	9	9	9
	5	Kuraray southern leased area stormwater	1	280	280	280	1	420	420	420	1	20	20	20
	10 <sup>1</sup>	Chemours Monomers IXM area stormwater discharge	1	9,800	9,800	9,800	1	11,000	11,000	11,000	1	130	130	130
	11	Stormwater discharge from portion of grassy field to north of decommissioned Chemours Teflon area	1	1,200	1,200	1,200	1	1,600	1,600	1,600	1	130	130	130
Stormwater-NCCW	7A	Combined stormwater and NCCW discharge from western portion of the Facility	9	41	60	810	9	52	73	1,000	9	31	60	190
		Chemours Monomers IXM NCCW and stormwater discharge including stormwater from Vinyl Ethers South and Vinyl Ethers North	9	110	300	12,000	9	170	550	16,000	9	41	63	410
	10A	Combined Chemours Monomers IXM NCCW and stormwater discharge	2	370	11,000	21,000	2	750	12,000	24,000	2	56	160	260
		DuPont area southern drainage ditch stormwater discharge and NCCW	5	65	110	230	5	80	120	300	5	75	83	180
		DuPont area northern drainage ditch stormwater discharge and NCCW	1	1,300	1,300	1,300	1	1,700	1,700	1,700	1	84	84	84
		DuPont area southeast stormwater and NCCW discharge	8	47	86	210	8	53	90	240	8	36	98	280
		Combined stormwater and NCCW discharge from eastern portion of the Facility	11	140	510	13,000	11	210	1,000	17,000	11	38	100	420
	21A	Sediment Basin South	9	55	170	1,800	9	59	190	3,000	9	37	82	180
	$21B^2$	Sediment Basin North	_	_	_	_	-	_	_	_	_	_	_	_
Wastewater Treatment Plant		Outfall 001 treated non-Chemours process wastewater discharge to open channel to Outfall 002	10	560	1,600	31,000	10	930	2,100	36,000	10	32	71	160
	22	WWTP combined influent	10	93	290	4,400	10	390	680	18,000	10	32	74	140
	23A	Kuraray northern leased area combined process wastewater and NCCW; open grate on Terracotta pipe	12	5,600	15,000	40,000	12	7,800	20,000	48,000	12	110	300	960
Combined Flows to Outfall 002	7B	Combined stormwater and NCCW discharge from western portion of the Facility and treated discharge from WWTP	10	71	190	1,900	10	120	310	3,200	10	33	92	960
	7C	Combined stormwater and NCCW discharge from western portion of the Facility, the eastern portion of the Facility, and the DuPont Area, and treated discharge from WWTP	2	220	1,100	2,000	2	340	1,500	2,600	2	45	78	110
	20	Outfall 002 pipe to Cape Fear River upstream of sump	15	120	200	4,000	15	180	310	5,300	15	34	60	430
Chemours Process Wastewater	16 <sup>3</sup>	Chemours Monomers IXM Area combined process wastewater	_	_	_	-	-	_		-	-	_		-
	17A <sup>3</sup>	Chemours PPA Area waste acid trailer		-	-	-	-	-	-	-	-		-	-
	$17B^3$	Chemours PPA Area waste rinse water trailer	-	-	-	-	-	-	_	-	-	-	_	-

#### Notes

Sample numbers refer to locations identified in Figure 2.

The summary statistics and number of samples collected reflect the total number of samples collected throughout the initial characterization period, including field duplicates.

Total Table 3+ (17 compounds) concentration includes HFPO-DA results evaluated by EPA Method 537 Mod and does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.

Non-detect values were not included in sum of Total Table 3+ results or EPA Method 537 Mod.

Total Table 3+ and EPA Method 537 Mod results include J-qualified data.

HFPO-DA - Hexafluoropropylene oxide dimer acid

Hydrolyzed PSDA - Acetic acid, 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro-2-sulfoethoxy)propoxy]-

IXM - ion exchange membrane

ng/L - nanograms per liter

NCCW - non-contact cooling water

PFAS - per- and polyfluoroalkyl substances

PPA - polymer processing aid

R-EVE - Pentanoic acid, 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-

R-PSDA - Pentanoic acid, 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)-

WWTP - Wastewater treatment plant

- 1 The summary statistics and number of samples collected for Location 10 reflect the wet weather May/June 2020 event only.
- 2 Location 21B was not sampled to date because this sediment pond was not in use at the time of sampling.
- 3 Locations 16, 17A, 17B were initially in the sampling program but were removed because they do not reach Outfall 002. Summary staistics were not computed for these locations.

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### TABLE 6 WILCOXON RANK SUM TEST RESULTS FOR COMPARISON TO LOCATION 1 (INTAKE RIVER WATER AT FACILITY) Chemours Fayetteville Works, North Carolina

Sample Category	Sample	Sample Location Description	Total Table 3+ (ng/L)			EPA Method 537 Mod (ng/L)		
	Location ID	Location ID	Result	p-value	Interpretation <sup>1</sup>	Result	p-value	Interpretation <sup>1</sup>
Intake River Water at Facility	1	Discharge point of excess river water (i.e., water drawn from the Cape Fear River, but not used as process water or NCCW) to characterize background levels of PFAS	-	-	-	-	-	-
	18	Kuraray process wastewater	-2.71	0.00666	Lower	-2.42	0.01531	Lower
Non-Chemours Process Wastewater	19A	DuPont process wastewater, Plant 1	-1.10	0.26969	Not Different	-2.52	0.01185	Lower
Non-Chemours Process wastewater	19B	DuPont process wastewater, Plant 2	-0.57	0.56599	Not Different	-2.25	0.02434	Lower
	23B	Kuraray laboratory process wastewater	3.13	0.00175	Higher	0.32	0.74939	Not Different
	6A	Kuraray southern leased area NCCW discharge - Vacuum Condenser	0.93	0.35384	Not Different	0.66	0.50780	Not Different
	6B	Kuraray southern leased area NCCW discharge - Resins Area	0.04	0.96478	Not Different	0.40	0.69110	Not Different
	24A	Chemours Monomers IXM Vinyl Ethers South NCCW	1.06	0.29020	Not Different	1.60	0.11029	Not Different
	24B	Chemours Monomers IXM Line 3 and Line 4 Extruder NCCW	-1.21	0.22648	Not Different	-0.60	0.54535	Not Different
	24C	Chemours Monomers IXM Water Return Header NCCW	1.05	0.29362	Not Different	-0.21	0.83363	Not Different
	2	Kuraray northern leased area stormwater discharge	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
	3	Chemours PPA area stormwater discharge	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
Stormwater	4	Combined stormwater discharge from Kuraray northern leased area and Chemours PPA area	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
Stormwater	5	Kuraray southern leased area stormwater	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
	10	Chemours Monomers IXM area stormwater discharge	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
	11	Stormwater discharge from portion of grassy field to north of decommissioned Chemours Teflon area	2.88	0.00395	Higher <sup>2</sup>	-0.96	0.33667	Not Different <sup>2</sup>
	7A	Combined stormwater and NCCW discharge from western portion of the Facility	0.04	0.96478	Not Different	0.62	0.53650	Not Different
	9	Chemours Monomers IXM NCCW and stormwater discharge including stormwater from Vinyl Ethers South and Vinyl Ethers North	3.49	0.00049	Higher	1.55	0.12228	Not Different
	10A	Combined Chemours Monomers IXM NCCW and stormwater discharge	-	-	NA <sup>3</sup>	-	-	NA <sup>3</sup>
G. NGCW	12	DuPont area southern drainage ditch stormwater discharge and NCCW	1.15	0.25059	Not Different	1.78	0.07580	Not Different
Stormwater-NCCW	13	DuPont area northern drainage ditch stormwater discharge and NCCW	-	-	$NA^3$	-	-	NA <sup>3</sup>
	14	DuPont area southeast stormwater and NCCW discharge	0.74	0.46225	Not Different	1.05	0.29362	Not Different
	15	Combined stormwater and NCCW discharge from eastern portion of the Facility	3.97	0.00007	Higher	1.67	0.09404	Not Different
	21A	Sediment Basin South	2.69	0.00708	Higher	0.13	0.89463	Not Different
	21B	Sediment Basin North	=	=	NA <sup>4</sup>	-	=	NA <sup>4</sup>
	8	Outfall 001 treated non-Chemours process wastewater discharge to open channel to Outfall 002	3.78	0.00016	Higher	0.60	0.54535	Not Different
Wastewater Treatment Plant	22	WWTP combined influent	3.33	0.00088	Higher	-0.45	0.65015	Not Different
	23A	Kuraray northern leased area combined process wastewater and NCCW; open grate on Terracotta pipe	4.16	0.00003	Higher	4.04	0.00005	Not Different
	7B	Combined stormwater and NCCW discharge from western portion of the Facility and treated discharge from WWTP	3.10	0.00194	Higher	0.91	0.36435	Not Different
Combined Flows to Outfall 002	7C	Combined stormwater and NCCW discharge from western portion of the Facility, the eastern portion of the Facility, and the DuPont Area, and treated discharge from WWTP	-	-	NA <sup>3</sup>	-	-	NA <sup>3</sup>
	20	Outfall 002 pipe to Cape Fear River upstream of sump	4.67	0.00000	Higher	1.27	0.20584	Not Different
	16	Chemours Monomers IXM Area combined process wastewater	-	-	NA <sup>5</sup>			NA <sup>5</sup>
Chemours Process Wastewater	17A	Chemours PPA Area waste acid trailer	-	-	NA <sup>5</sup>			NA <sup>5</sup>
	17B	Chemours PPA Area waste rinse water trailer	=	-	NA <sup>5</sup>			NA <sup>5</sup>

#### Notes

Sample numbers refer to locations identified in Figure 2.

The Wilcoxon Rank Sum test was used to compare whether the total Table 3+ concentrations and EPA Method 537 Mod concentrations in samples collected at the subject location were higher or lower than concentrations in the samples collected at Location 1.

Total Table 3+ concentration includes HFPO-DA results evaluated by EPA Method 537 Mod and does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.

Non-detect values were not included in the sum of Total Table 3+ results or EPA Method 537 Mod.

Total Table 3+ and EPA Method 537 Mod results include J-qualified data.

HFPO-DA - Hexafluoropropylene oxide dimer acid

Hydrolyzed PSDA - Acetic acid, 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro-2-sulfoethoxy)propoxy]-

IXM - ion exchange membrane

ng/L - nanograms per liter

NCCW - non-contact cooling water

PFAS - per- and polyfluoroalkyl substances

PPA - polymer processing aid

R-EVE - Pentanoic acid, 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-

R-PSDA - Pentanoic acid, 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)-

WWTP - Wastewater treatment plant

1 - Higher: Concentrations at this location are significantly higher than Location 1 (Intake River Water at Facility)

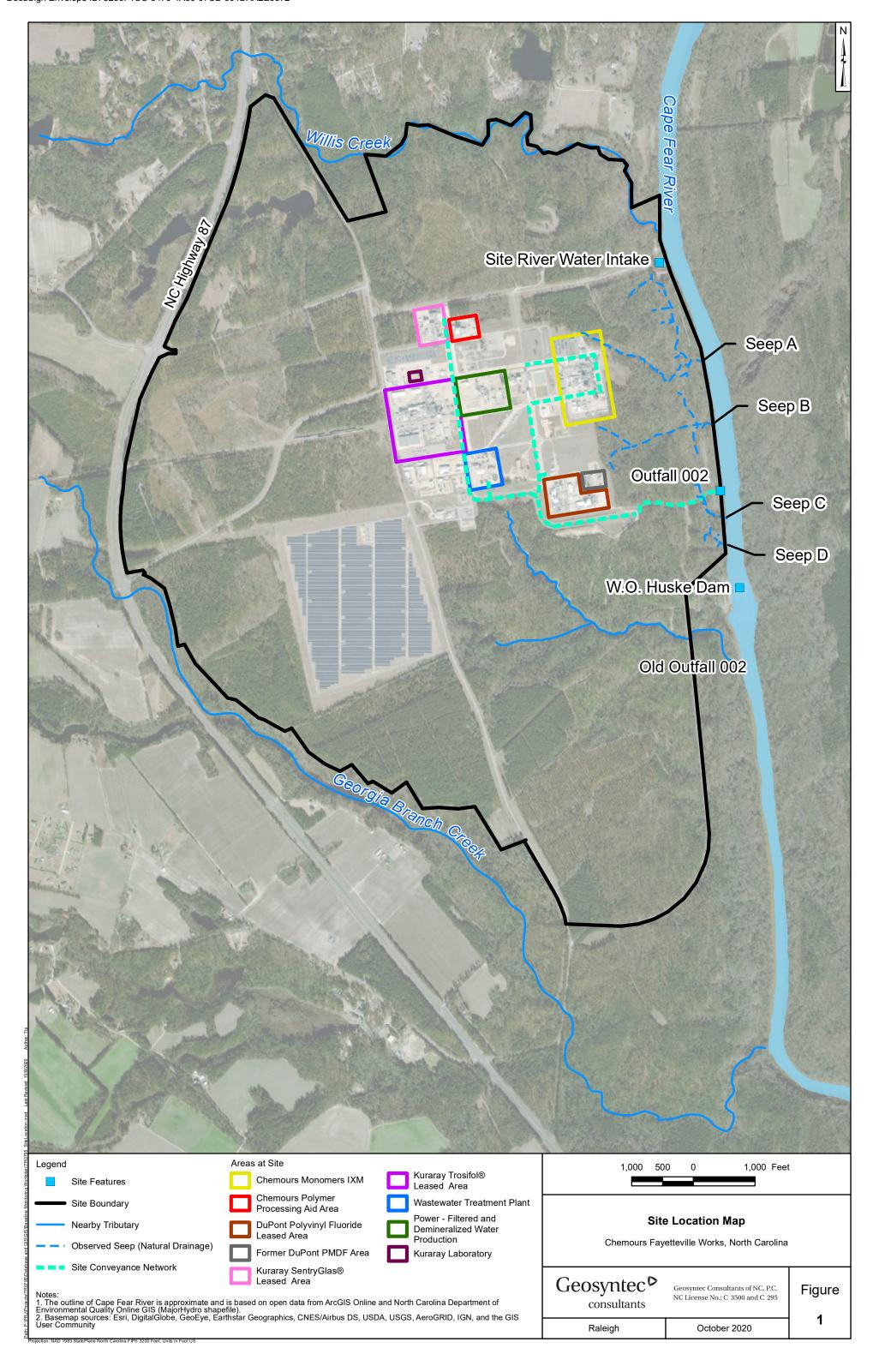
Lower: Concentrations at this location are significantly lower than Location 1 (Intake River Water at Facility)

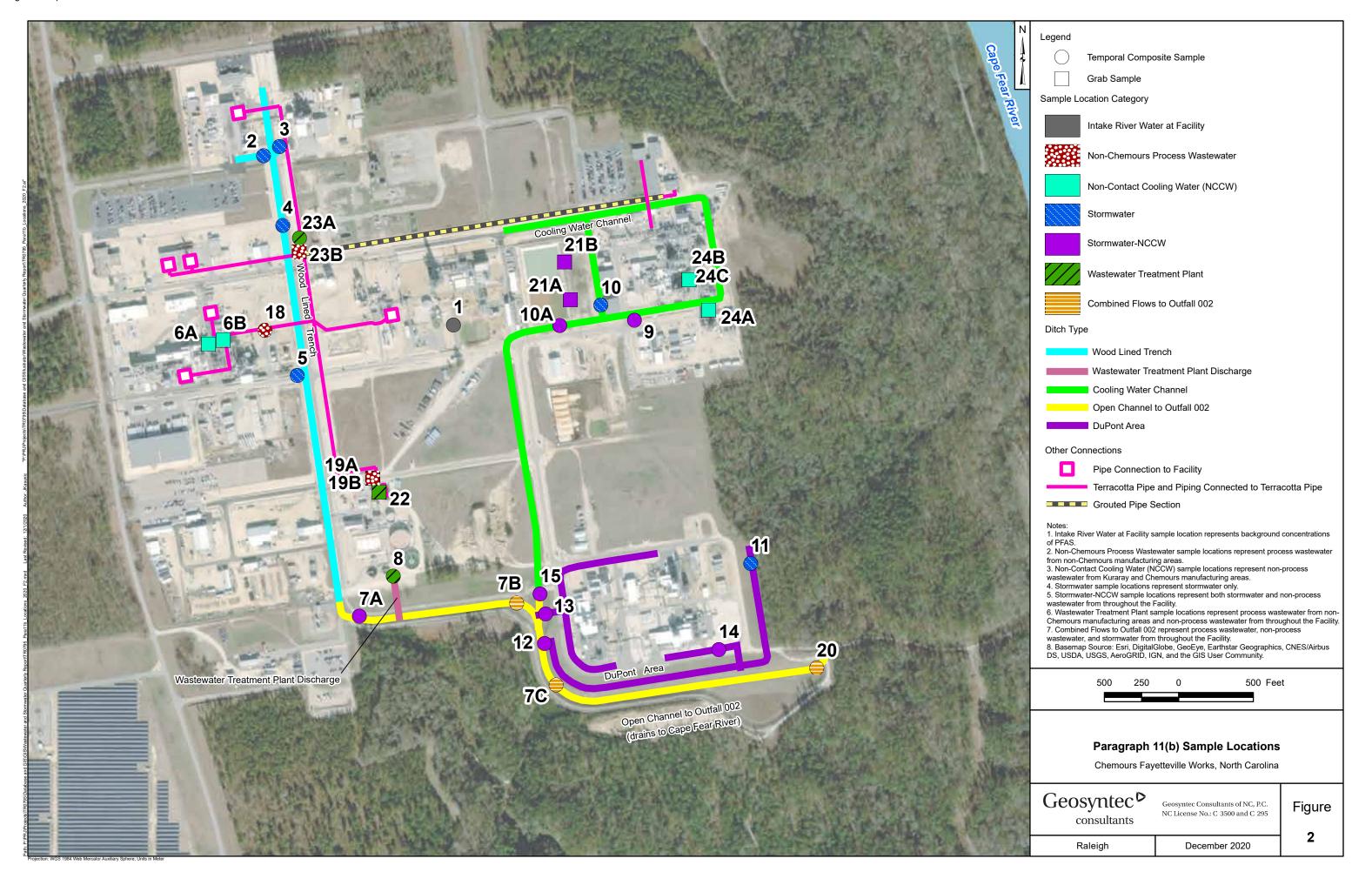
Not Different: Concentrations at this location are not signficantly different than Location 1 (Intake River Water at Facility)

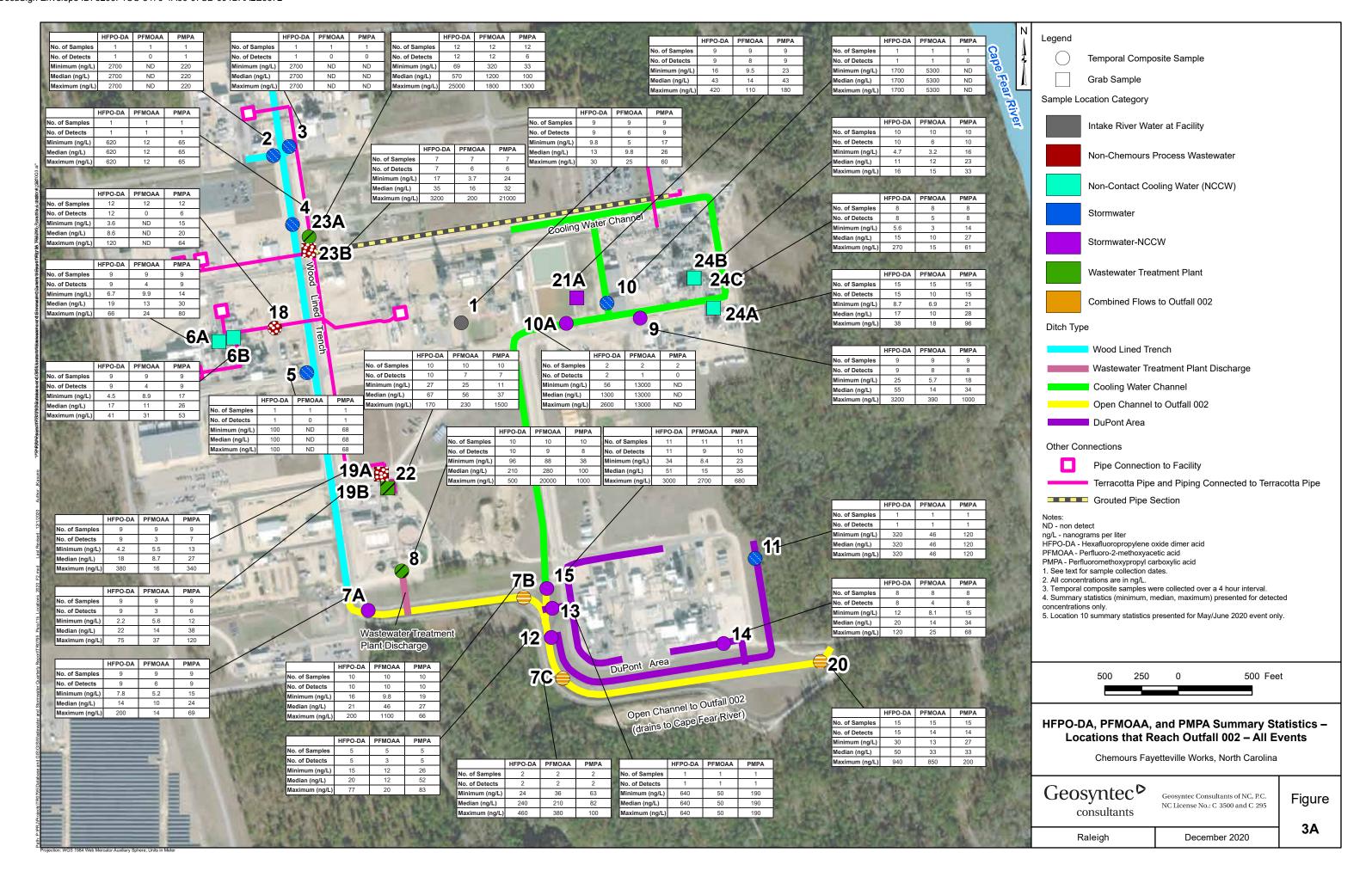
- 2 Because the stormwater locations only had results from one (1) sampling event (May/June 2020), results from all stormwater locations were grouped into one dataset and compared to concentrations at Location 1.
- 3 There were not enough samples at this location for comparison to Location 1 (Intake River Water at Facility)
- 4 Location 21B was not sampled to date because this sediment pond was not in use at the time of sampling.
- 5 Locations 16, 17A, 17B were initially in the sampling program but were removed because they do not reach Outfall 002. Comparison to Location 1 was not analyzed for these locations.

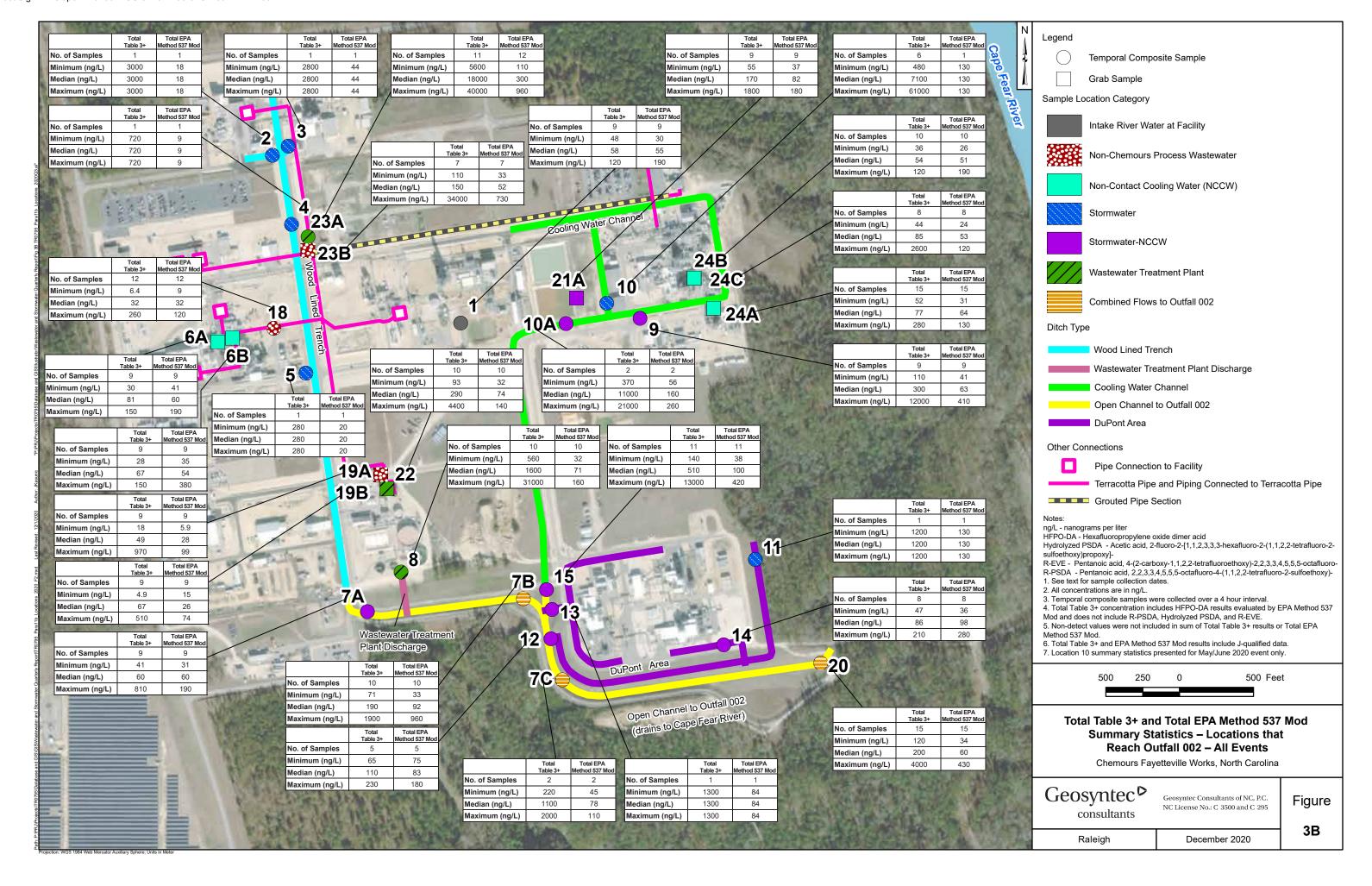
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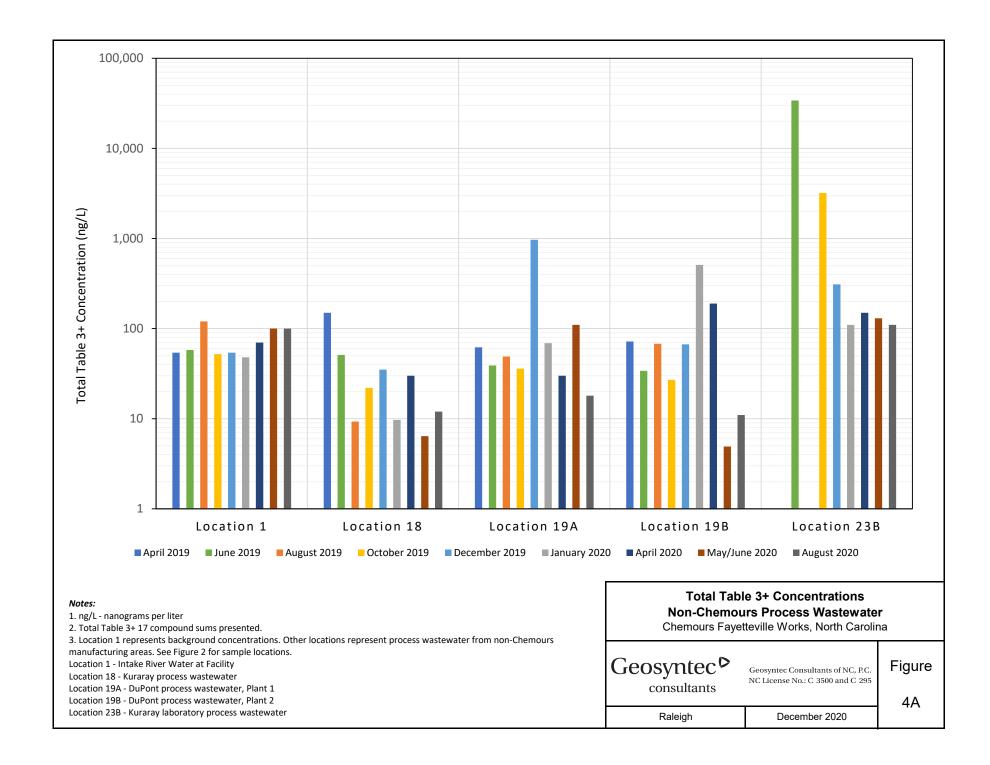
### **FIGURES**

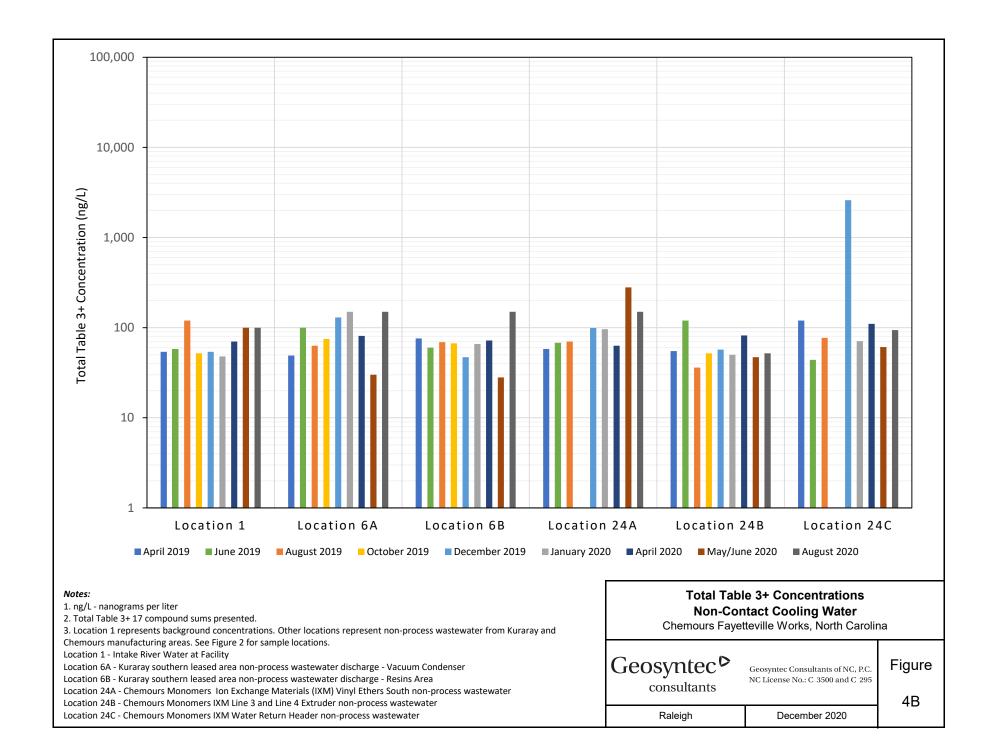


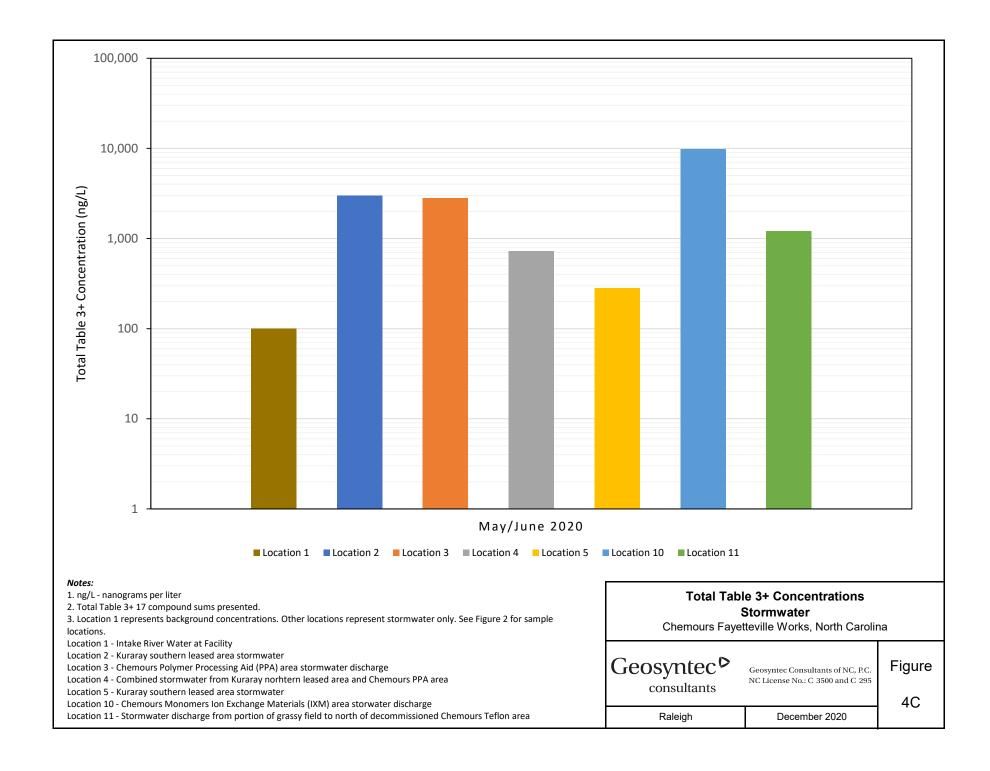


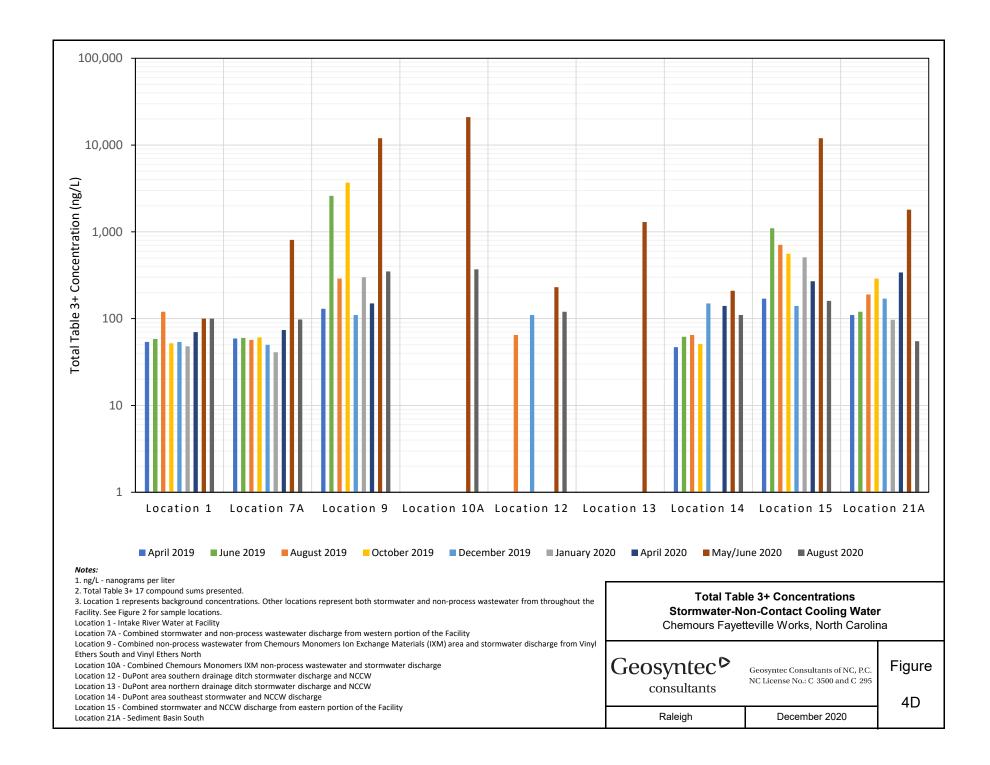


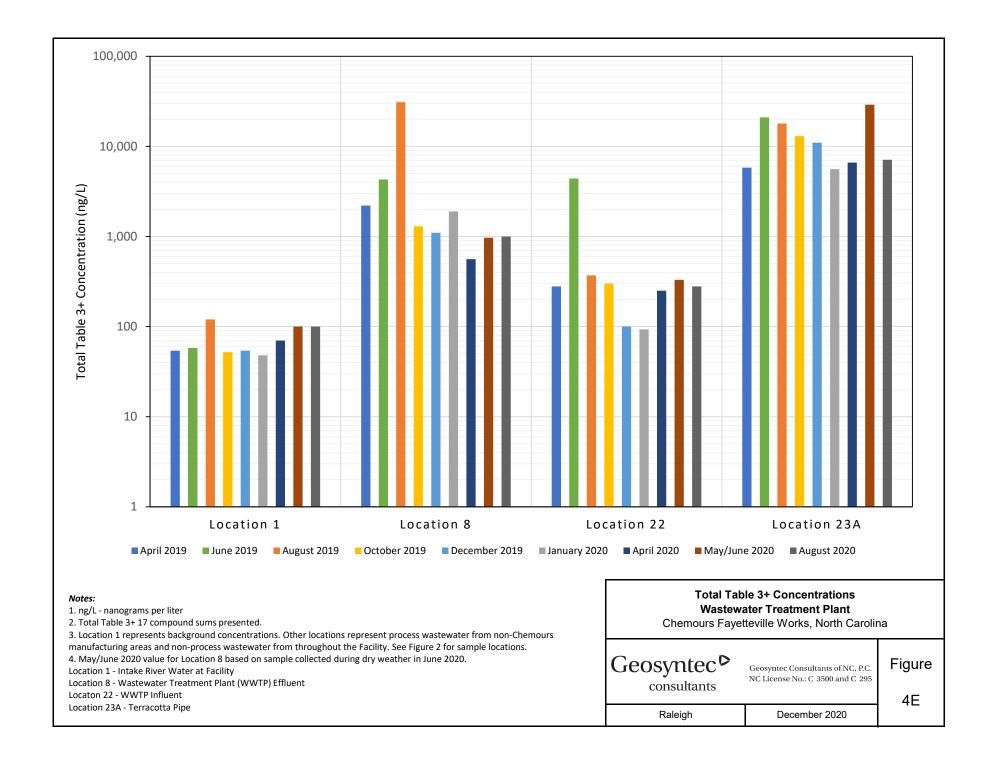


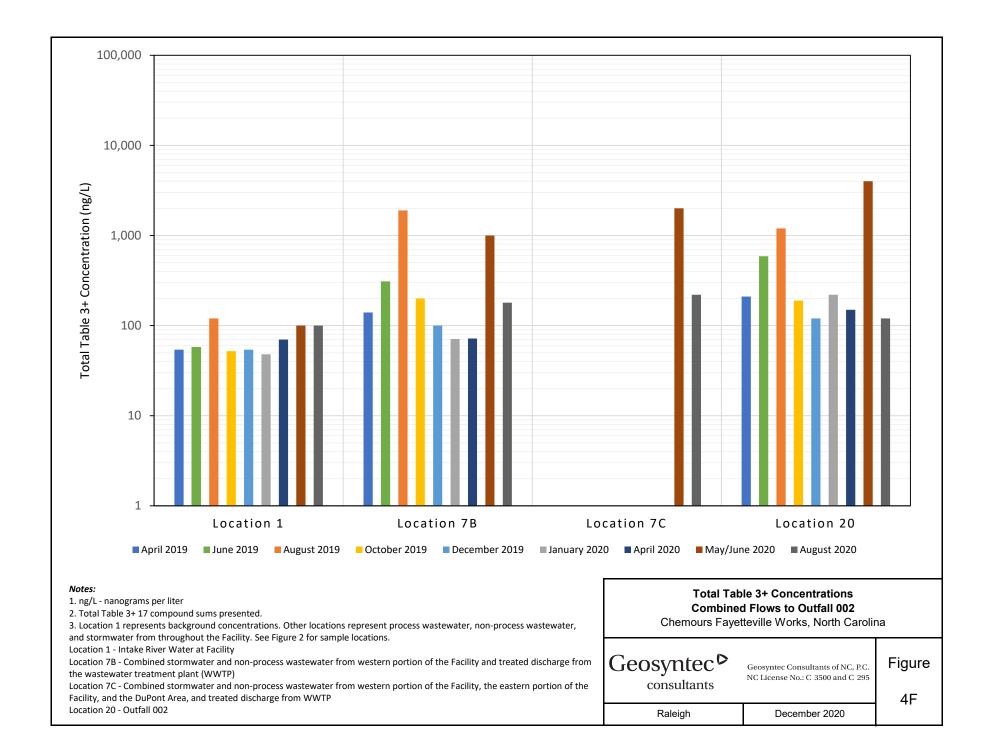


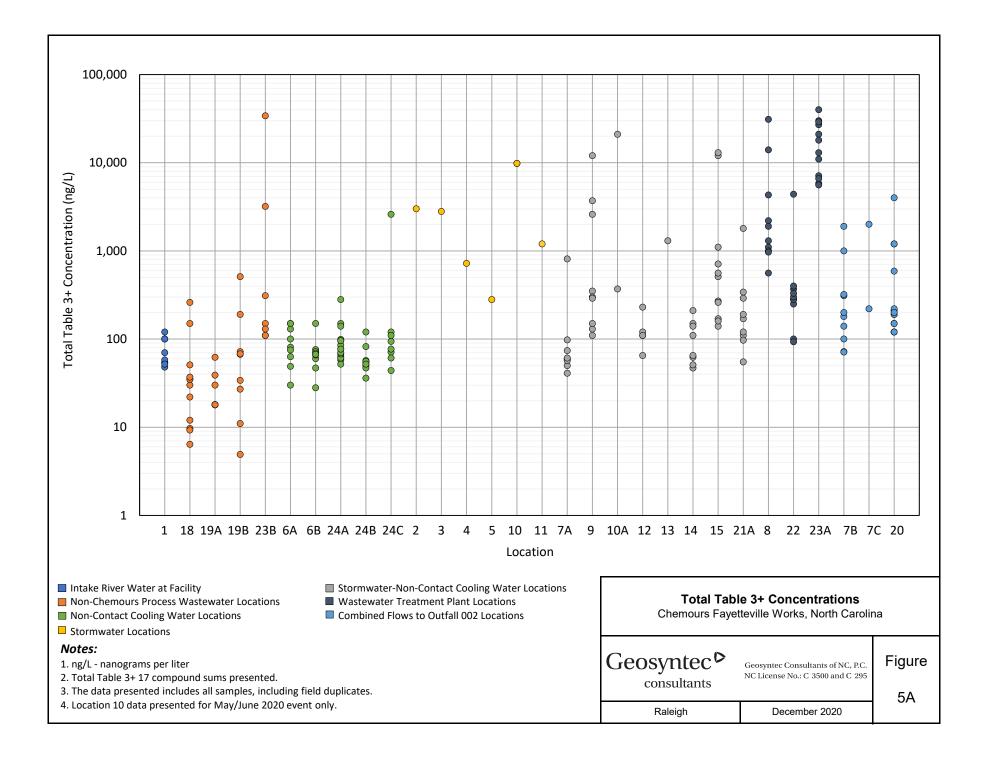


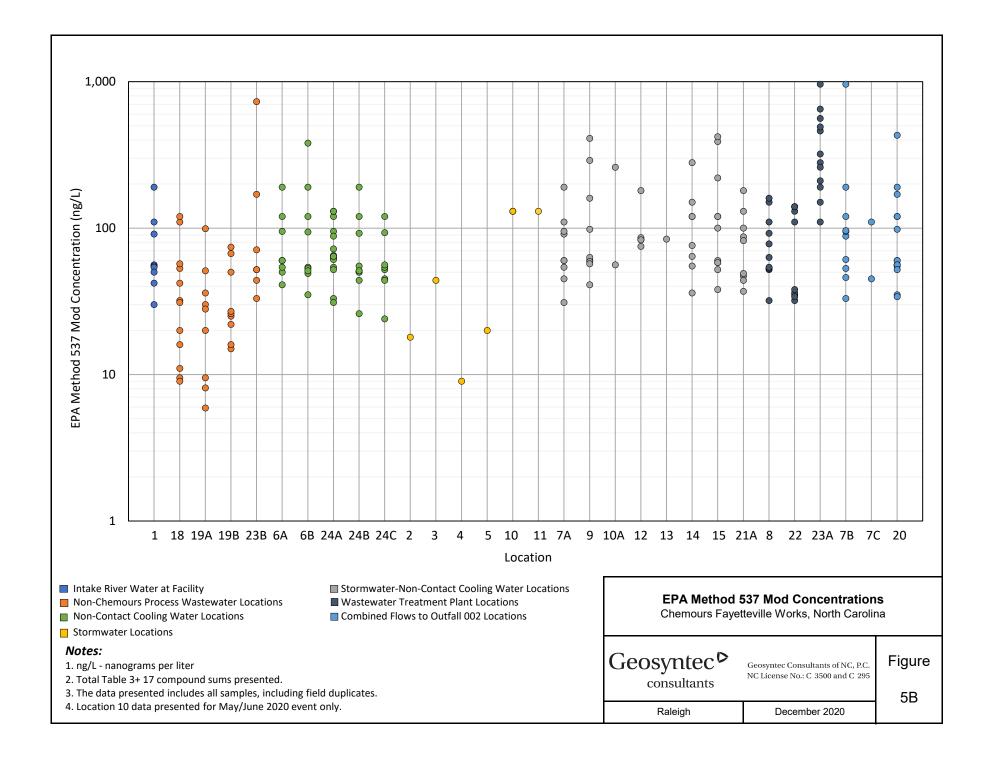


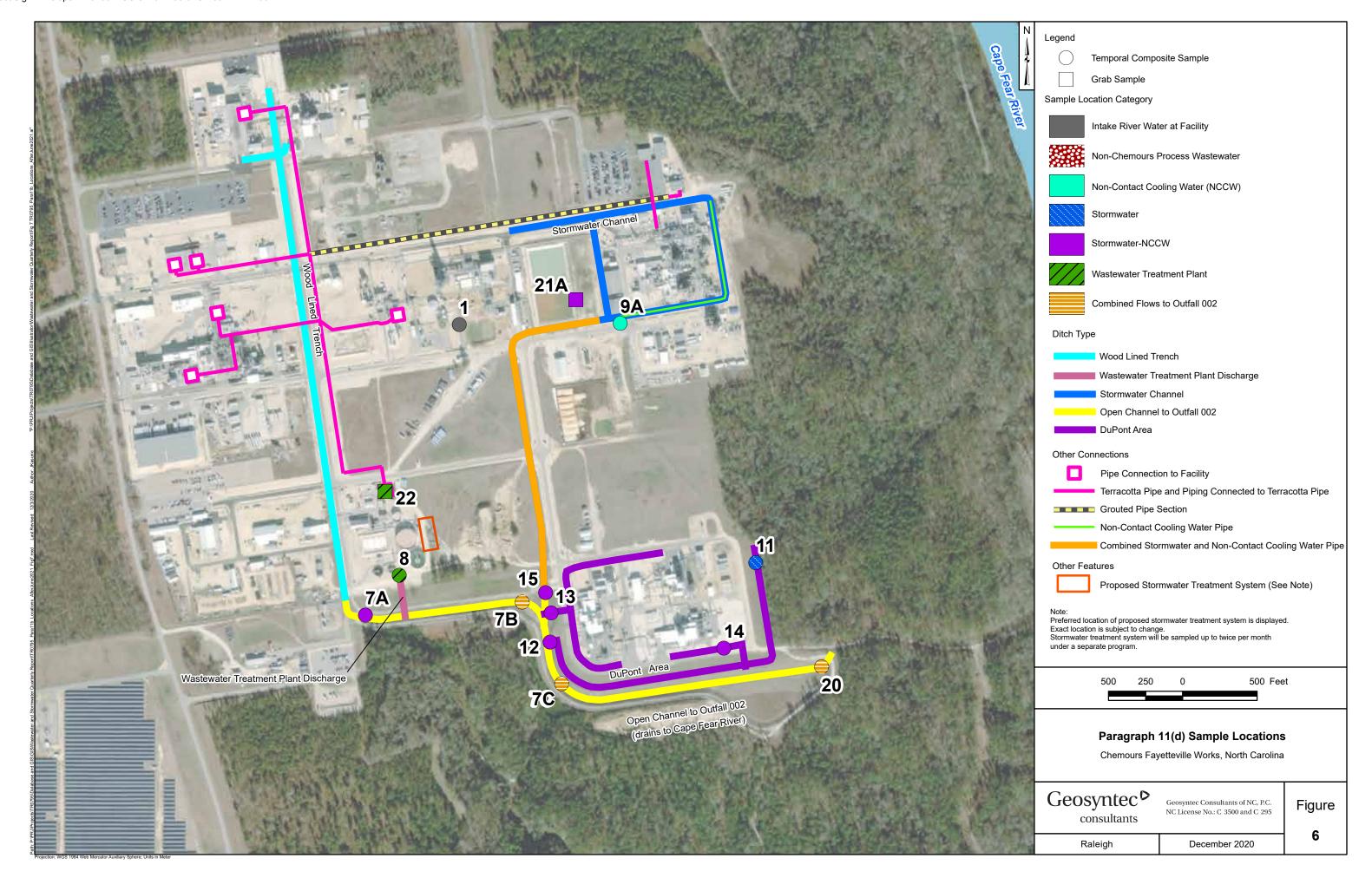












# APPENDIX A 2020 Quarter 3 Paragraph 11(c) Scope Methods and Results



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#### APPENDIX A

#### 2020 Ouarter 3 Methods and Results

#### INTRODUCTION

Pursuant to Paragraph 11(c) in the executed Consent Order entered February 25, 2019 amongst Chemours, the North Carolina Department of Environmental Quality (DEQ), and Cape Fear River Watch, this appendix summarizes the ninth and final bimonthly sampling event in the 18-month initial characterization period. The objective of Paragraph 11(c) is to characterize the concentrations of per- and polyfluoroalkyl substances ("PFAS") in process wastewater, non-process wastewater, stormwater, and the raw water intake at the Chemours Fayetteville Works, North Carolina site (the Facility, Figure 1).

The activity period for this appendix includes 2020 Quarter 3 (July, August, September). In this quarter, process wastewater and non-process wastewater samples were collected for the ninth and final bimonthly sampling event in the 18-month initial characterization period. Samples were collected during dry weather on August 26, 2020 (the August 2020 event), as outlined in the PFAS Characterization Sampling Plan (Geosyntec, 2019a), with adjustments made based on recommendations in prior reports (Geosyntec 2019a, 2019b, 2019c, 2020a, 2020b, and 2020c). Results from the investigative samples in the August 2020 event are included in this appendix.

#### **METHODS**

This section describes the methods implemented for data reported in this 2020 Quarter 3 appendix.

#### **Sample Locations**

Sample locations outlined in the PFAS Characterization Sampling Plan (Geosyntec, 2019a) are described in Table 1 and shown in Figure 2 of the main body of the report. Sample locations that have been added to the Sampling Plan based on recommendations made in previous reports are also identified in Table 1 and shown in Figure 2.

In the August 2020 event, investigative samples were collected from twenty-three (23) locations listed in Table 2. Locations 2, 3, 4, 5, 10, 11, 12, and 13 were not sampled for the August 2020 event as there was insufficient water at these locations because the event occurred during a dry period.

During each sampling event, either Location 21A or 21B (the south and north sediment ponds) is sampled depending on which sediment pond is active. Consistent with previous sampling events, the south sediment pond (Location 21A) was active during the August 2020 event and a sample was collected from this pond.

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#### **Field Methods**

#### **General Field Methods**

All equipment was inspected by the field program supervisor and calibrated daily prior to use in the field, according to the manufacturer's recommendations. Field parameters were measured with a water quality meter prior to sample collection and then recorded. Field parameters include the following:

- pH;
- Temperature (degrees Celsius; °C);
- Specific conductance [SC] (micromhos, μmho);
- Dissolved oxygen [DO] (milligrams per liter; mg/L);
- Oxidation/Reduction Potential [ORP] (millivolts; mV);
- Turbidity (nephelometric turbidity units, NTU);
- Color; and
- Odor.

Samples were collected in 250 milliliter (mL) high density polyethylene (HDPE) bottles with a wide-mouth screw-cap. Sample bottles were filled and caps were securely fastened after sample collection. Each sample was labelled with a unique sample identification number, date, time and location of sampling, and the initials of the individual collecting the sample. A field notebook and location-specific field forms were used to record information regarding additional items such as quality assurance/ quality control (QA/QC), sample identifications, color, odor, turbidity, and other field parameters.

#### **Decontamination Methods**

Sample containers were new and used only once for each sample. Disposable equipment (e.g., gloves, tubing, etc.) was not reused; these items did not require decontamination.

All non-dedicated or non-disposable sampling equipment (i.e., the autosampler reservoir and dip rod) was decontaminated immediately before sample collection in the following manner:

- De-ionized water rinse;
- Scrub with de-ionized water containing non-phosphate detergent (i.e., Alconox®); and
- De-ionized water rinse.

If there was a delay between decontamination and sample collection, decontaminated sampling equipment was covered with PFAS-free plastic until it was ready for use.

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#### **Grab Sampling Methods**

Grab samples were collected from locations where temporal variability over the course of one day was not expected. These locations include non-process wastewater only locations (Locations 6A, 6B, 24A, 24B, and 24C), select process wastewater only locations (Locations 19A and 19B), and the Sediment Basin South location (Location 21A), as identified in Table 2 and shown on Figure 2 of the main body of the report. All grab samples were collected by directly filling the HDPE bottle with the sample. Prior to grab sample collection, field parameters were measured using a flow through cell for all grab sample locations.

#### **Temporal Composite Sampling Methods**

Temporal composite samples were collected during the bimonthly sampling events from locations where variability was expected to potentially be significant within a short time frame (e.g., one day). These locations, identified in Table 2 and shown on Figure 2 of the main body of the report, include those within the Facility conveyance network and the intake and outfall locations, since these locations can have highly variable dissolved and suspended constituent loads over short time periods. Temporal composite samples were collected using a dedicated Teledyne 6712C autosampler equipped with a rain gauge, HDPE tubing, silicon tubing, and an HDPE sample reservoir. Field parameters were measured once during composite sampling (collected directly from the water stream). During the sampling event, autosamplers generally integrated water over a four-hour sample collection period.

#### Sample Shipping, Chain of Custody, and Holding Times

Upon sample collection, each labelled, containerized sample was placed into a plastic bag inside an insulated sample cooler with ice. Prior to shipment of the samples to the laboratory, a chain of custody (COC) form was completed by the field sample custodian. Sample locations, sample identification numbers, description of samples, number of samples collected, and specific laboratory analyses to be performed on the samples were recorded on the COC form. COCs were signed by the field personnel relinquishing the samples to the courier and was signed by the laboratory upon receipt of the cooler.

#### Field QA/QC Samples

The following field QA/QC samples were collected and analyzed along with the August 2020 investigative samples:

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- Two blind field duplicates;
- Three equipment blanks for the dip rod, autosampler, and peristaltic pump;
- One field blank; and
- One trip blank.



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#### **Documentation**

The project field team kept a daily record of field activities during the execution of field work including sampling notes and observations documented on field forms, instrument calibration records, measured field parameters, sample COC, and shipping records.

#### **Laboratory Methods**

#### **Analytical Methods**

Samples were analyzed for PFAS by the following methods:

- Table 3+ Laboratory Standard Operating Procedure (SOP); and
- EPA Method 537 Mod (Laboratory SOP).

PFAS reported under each of these methods are listed in Table 3.

#### Laboratory and Field QA/QC

Field sampling and laboratory analyses were performed largely in accordance with the PFAS Characterization Sampling Plan (Geosyntec, 2019a). Samples were collected by the field team and shipped to TestAmerica Sacramento (TestAmerica) under COC. Laboratory analyses were performed within the guidelines specified by the laboratory SOPs. The collection frequency of field duplicates, matrix spike / matrix spike duplicates (MS/MSD), trip blanks, and equipment blanks was conducted in accordance with the PFAS Characterization Sampling Plan (Geosyntec, 2019a).

#### **RESULTS – AUGUST 2020 EVENT**

This section describes the data quality, field parameter data, and investigative sample results from the August 2020 event. PFAS concentrations for all sample locations in the August 2020 event are provided in Table A1. Table A2 provides the total daily precipitation in the area of the Facility and the flow measured at Outfall 002 at the times of sampling events discussed in this report. Field parameters recorded during the August 2020 event are provided in Table A3.

#### **Data Quality**

All data from the August 2020 event were reviewed using the Data Verification Module (DVM) within the Locus<sup>TM</sup> Environmental Information Management (EIM) system, which is a commercial software program used to manage data. Following the DVM process, a manual review of the data was conducted. The DVM and the manual review results were combined in a data review narrative report for each set of sample results which were consistent with Stage 2b of the EPA Guidance for Labelling Externally Validated Laboratory Analytical Data for Superfund Use (EPA-540-R-08-005 2009). The narrative report summarizes which samples were qualified (if any), the specific reasons for the qualification, and any potential bias in reported results. The data usability, in view of the project's data quality objectives (DQOs), was assessed and the data were entered into the EIM system.



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The data were evaluated by the DVM against the following data usability checks:

- Hold time criteria;
- Field and laboratory blank contamination;
- Completeness of QA/QC samples;
- MS/MSD recoveries and the relative percent differences (RPDs) between these spikes;
- Laboratory control sample/control sample duplicate recoveries and the RPD between these spikes;
- Surrogate spike recoveries for organic analyses; and
- RPD between field duplicate sample pairs.

The manual review includes instrument-related QC results for calibration standards, blanks, and recoveries. The data review process (DVM plus manual review) applied the following data evaluation qualifiers to analysis results in the August 2020 event, as warranted:

- J Analyte present. Reported value may not be accurate or precise;
- UJ Analyte not detected. Reporting limit may not be accurate or precise; and
- R Reject. The presence or absence of the analyte cannot be verified.

The data review process described above was performed for all laboratory chemical analytical data generated for the sampling event. The DQOs were met for the analytical results for accuracy and precision. The data collected during the August 2020 event are believed to be complete, representative and comparable, with the exception of R-PSDA<sup>1</sup>, Hydrolyzed PSDA<sup>2</sup>, and R-EVE<sup>3</sup>.

As reported in the (Geosyntec, 2020d), studies have shown that the quantitation of R-PSDA, Hydrolyzed PSDA, and R-EVE is inaccurate due to interferences by the sample matrix in both groundwater and surface water. Given the matrix interference issues, total Table 3+ PFAS concentrations can be calculated and presented in two ways: (i) summing over 17 of the 20 Table 3+ compounds, i.e., excluding results of R-PSDA, Hydrolyzed PSDA, and R-EVE, and (ii) summing over 20 of the Table 3+ compounds. Expressing these data as a range represents possible values of what these results might be without matrix interferences.

Because of this known matrix interference, results for R-PSDA, Hydrolyzed PSDA, and R-EVE have been J-qualified for the August 2020 event (Table A1) and retrospectively for all events (Appendix C).

#### **Data Management and Reporting**

Chemours's Analytical Data Quality Management team currently uses the EIM system for management of analytical data, xyz Site coordinate data, and field parameter data. Validation and

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<sup>&</sup>lt;sup>1</sup> R-PSDA: 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)-pentanoic acid

<sup>&</sup>lt;sup>2</sup> Hydrolyzed PSDA: 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-tetrafluoro-2-sulfoethoxy)propoxy]-acetic acid

<sup>&</sup>lt;sup>3</sup> R-EVE: 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-pentanoic acid



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qualification of data are performed by AECOM who maintains the EIM system for the Chemours Fayetteville Site. Whitebooks consisting of the data review narratives and the laboratory analytical reports produced by AECOM summarize the findings of the DVM and manual review process.

#### **QA/QC Samples**

PFAS concentrations for all field QA/QC samples in the August 2020 event are reported in Table 4. The following observations were noted for the QA/QC samples:

- The RPD for field duplicate pairs in the August 2020 event were generally less than 30% for all PFAS. Where RPDs were greater than 30%, the reported results may be imprecise and were J qualified, indicating the results are estimated.
- No PFAS were detected above the associated reporting limits in the August 2020 Equipment Blanks (3), Trip Blank, or Field Blank.

#### **August 2020 Event Field Parameter Data**

Field parameters recorded during the August 2020 event are provided in Table A3 for grab samples and temporal composite samples. Field parameters were measured using a Horiba U-52 model. The water quality meter was calibrated at the start of every sampling day.

For grab samples, field parameters were measured once prior to sampling using a flow through cell. For temporal composite samples once during composite sampling and collected directly from the water stream.

Recorded field parameter data observed during the August 2020 event are generally in accordance with expectations for the sample locations, with the following exceptions:

- Most locations had recorded pH between 5 and 10. Location 22, the combined influent to the wastewater treatment plant (WWTP), had pH greater than 10.
- Most locations had recorded DO between 5 and 9 mg/L. Location 14, the DuPont area southeast stormwater and non-contact cooling water (NCCW) discharge, had the highest DO measurements at 8.4 mg/L.
- Most locations had recorded ORP between 20 and 100 mV. Location 10A, the Combined Chemours Monomers IXM NCCW and stormwater discharge, had the lowest ORP reading at -7.1 mV. Location 21A, the Sediment Basin South, had the highest ORP reading at 179 mV.
- Most locations had recorded Turbidity between 0 and 100 NTU. Location 6A, the Kuraray southern leased area NCCW discharge Resins Area; Location 19B, the DuPont process wastewater Plant 2; and Location 21A, the Sediment Basin South all had Turbidity measurements greater than 100 NTU at 149, 237, and 679 NTU respectively.



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#### **August 2020 Event Investigative Sample Results**

PFAS concentrations for all sample locations in the August 2020 event are provided in Table A1. Table A2 provides the total daily precipitation in the area of the Facility and the flow measured at Outfall 002 at the times of sampling events discussed in this report. The analytical reporting limits associated with the August 2020 data were determined by the laboratories. TestAmerica analytical reports and the data review narrative whitebooks are provided as Attachment A to this appendix.

Trends and observations from the August 2020 event were generally consistent with previous sampling events and are interpreted in conjunction with the entire dataset for the 18-month initial characterization period in the main body of the report.

#### REFERENCES

Environmental Protection Agency (EPA), 2009. Guidance for Labelling Externally Validated Laboratory Analytical Data for Superfund Use. Office of Solid Waste and Emergency Response. OSWER No. 9200.1-85, EPA-540-R-08-005

Geosyntec, 2019a. PFAS Characterization Sampling Plan. May 6, 2019.

Geosyntec, 2019b. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #1. July 31, 2019.

Geosyntec, 2019c. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #2. October 31, 2019.

Geosyntec, 2019d. Assessment of HFPO-DA and PFMOAA in Outfall 002 Discharge and Evaluation of Potential Control Options. August 2019.

Geosyntec, 2020a. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #3. January 31, 2020.

Geosyntec, 2020b. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #4. April 30, 2020.

Geosyntec, 2020c. Characterization of PFAS in Process and Non-Process Wastewater and Stormwater: Quarterly Report #5. July 31, 2020.

Geosyntec, 2020d. Matrix Interference During Analysis of Table 3+ Compounds. Chemours Fayetteville Works. July 31, 2020.

### **TABLES**

I d ID	1		(P	
Location ID	•	6A	6B	7A
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID	STW-LOC-1-4-082620	STW-LOC-6A-082620	STW-LOC-6B-082620	STW-LOC-7A-4-082620
Date Sampled		8/26/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ SOP (ng/L)				
HFPODA	13	21	27	14
PFMOAA	5.0	24	31	5.2
PFO2HxA	14	23	32	13
PFO3OA	2.5	3.4	4.7	2.0
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	60	80	53	57
PEPA	<10	<10	<10	<10
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	<2	<2	<2	<2
Hydrolyzed PSDA	3.0	10	<2	3.2
R-PSDCA	<2	<2	<2	<2
NVHOS	6.5	<2	<2	6.5
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ (17 compounds)*	100	150	150	98
Total Table 3+ (20 compounds)*	100	160	150	100
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11Cl-PF3OUdS	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol 2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<2 <4	<2 <4	<2 <4	<2 <4
2-(N-metnyl perfluoro-1-octanesulfonamido)-etnanol 6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9Cl-PF3ONS	<20	<20	<20	<20
ADONA				
DONA	<2	<2	<2	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.1	4.2	4.6	4.0
Perfluorobutanoic Acid	4.3	5.5	5.9	4.4
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.0	3.3	3.4	3.2
Perfluorohexadecanoic acid (PFHxDA)				
Perfluorohexane Sulfonic Acid	3.6	4.1	3.8	4.1
Perfluorohexanoic Acid	7.1	7.5	7.5	6.8
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	7.1	7.9	8.1	6.7
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	5.1	6	5.6	5.8
PFOS	7.4	11	9.7	10

#### Notes:

 $\ast$  - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

**Bold** - Analyte detected above associated reporting limit

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathsf{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

Iti ID	7B	7C	8	9
Location ID			August 2020	·
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID	STW-LOC-7B-4-082620	STW-LOC-7C-4-082620	STW-LOC-8-4-082620	STW-LOC-9-4-082620
Date Sampled		8/26/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ SOP (ng/L)				
HFPODA	20	24	96	51
PFMOAA	41	36	470	5.7
PFO2HxA	27	23	200	15
PFO3OA	6.3	5.4	50	3.8
PFO4DA	4.8	<2	17	<2
PFO5DA	5.2	<2	17	<2
PMPA	56	63	52	40
PEPA	<10	<10	15	<10
PS Acid	<2	26	<2	100
Hydro-PS Acid	7.1	6.6	77	8.9
R-PSDA	<2	<2	18	58
Hydrolyzed PSDA	70	110	200	320
R-PSDCA	<2	<2	2.1	<2
NVHOS	8.5	8.0 14	30	3.2 71
EVE Acid	<2 <2	14	5.8 6.1	55
Hydro-EVE Acid R-EVE	10	10	17	55 19
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ (17 compounds)*	180	220	1,000	350
Total Table 3+ (20 compounds)*	260	340	1,300	750
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11Cl-PF3OUdS	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9CI-PF3ONS	<2	<2	<2	<2
ADONA				
DONA	<2	<2	<2	<2
NaDONA			-	
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20 <b>3.9</b>	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	3.9	3.6	4.2 5.8	4.3 6.2
Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid	<b>3.8</b> <2	<b>3.9</b> <2	<b>5.8</b> <2	<b>6.2</b> <2
Perfluorodecanoic Acid  Perfluorodecanoic Acid	<2 <2	<2	<2	<2 <2
Perfluorododecanos sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid  Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.5	3.3	4.6	4.2
Perfluorohexadecanoic acid (PFHxDA)				
Perfluorohexane Sulfonic Acid	4.2	4.00	2.7	4.5
Perfluorohexanoic Acid	6.8	6.9	8.4	7.0
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	7.4	7.8	17	13
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	6.1	5.9	9.4	6.2
PFOS	9.9	9.8	<2	12

#### Notes:

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ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

	1 401	Г .		
Location ID	10A		2	14
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID	STW-LOC-10A-4-082620	STW-LOC-12-4-082620	STW-LOC-12-4-082620	STW-LOC-14-4-082620
Date Sampled		8/26/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC			Field Duplicate	
Table 3+ SOP (ng/L)			Ticia Duplicate	
HFPODA	56	21	20	19
PFMOAA	<4	12 J	12	8.7
PFO2HxA	15	21	22	17
PFO3OA	2.4	3.6	3.9	2.5
PFO4DA	<3	<2	<2	<2
PFO5DA	<3.9	<2	<2	<2
PMPA	<31	52	52	51
PEPA	<10	<10	<10	<10
PS Acid	160	<2	<2	<2
Hydro-PS Acid	12	<2	<2	<2
R-PSDA	34	23 J	<2 UJ	<2
Hydrolyzed PSDA	340	4.1 J	4.0	3.2
R-PSDCA	<2	<2	<2	<2
NVHOS	2.6	11 J	<2 UJ	8.9
EVE Acid	72	<2	<2	<2
Hydro-EVE Acid	49	<2	<2	<2
R-EVE	9.9	7.4 J	<2 UJ	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2.4	<2	<2	<2
Total Table 3+ (17 compounds)*	370	120	120	110
Total Table 3+ (20 compounds)*	750	160	160	110
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11CI-PF3OUdS	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9CI-PF3ONS	<2	<2	<2	<2
ADONA				
DONA	<2	<2	<2	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2 <2	<2 <2
N-methyl perfluoro-1-octanesulfonamide  N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<20 <20	<20
N-metnyl perfluorooctane sulfonamidoacetic acid  Perfluorobutane Sulfonic Acid	4.3	<20 <b>6.9</b>	<20 <b>6.5</b>	<20 <b>6.1</b>
Perfluorobutanoic Acid  Perfluorobutanoic Acid	6.4	8.3	8.1	7.8
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid  Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.8	6.3	6.1	5.8
Perfluorohexadecanoic acid (PFHxDA)				
Perfluorohexane Sulfonic Acid	4.2	6.5	6.2	6.2
Perfluorohexanoic Acid	7.4	12	12	11
Perfluorononanesulfonic acid	<2	<2 UJ	<2	<2
Perfluorononanoic Acid	<2	2.1	2.0	<2
Perfluorooctadecanoic acid	<2 UJ	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	12	14	14	12
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2 UJ	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	6.3	11	10	10
PFOS	12	19	18	17

#### Notes:

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Profession	Location ID	15	18	19A	19B
Piete   Piet					
Name	-	August 2020	August 2020	August 2020	August 2020
TelAmerica	Field Sample ID	STW-LOC-15-4-082620	STW-LOC-18-4-082620	STW-LOC-19A-082620	STW-LOC-19B-082620
March   1900	Date Sampled	8/26/2020	8/26/2020	8/26/2020	8/26/2020
Table 31 NOT Ingel		TestAmerica	TestAmerica	TestAmerica	TestAmerica
HPPODA		-			
PFMOAA					
PRODESTA   73   28   4.9   6.2   1.7   1					
PRODOA					
PPODDA					
PROSIDA					
PMPA					
PEPA					
PS Acid   51					
Hydro-PS Acid   3.8					
RFSDA					
Hydrolyzel BDA	-				
RPSDCA					
NY410S					
EVE Acid   27					
Bythe-EVE Acid   BR					
FEFE   19.4   2   2   2   2   2   2   2   2   2					
PFECAB		3.4	<2	<2	<2
PEFECA A		<2			<2
Total Table 3+ (17 compounds)*   330   322   18   11	PFECA B	<2	<2	<2	<2
Total Table 3+ (20 compounds)*   330   22   18   11   11   10   11   10   10   10	PFECA-G	<2	<2	<2	<2
102 Flooretelomer sulfonate					
D.2 Fluorotelomer salfonate		330	22	18	11
ICL-PETAOLMS					
H.H.L.2H.2H-perfluorodecanesulfonate (8:2 FTS)					
H.   H.   H.   H.   H.   Perfluorohexanesulfonanido   ethanol					
2-(N-nethyl) perfluoro-1-octanesulfonamido)-ethanol   <2   <2   <2   <2   <2   <2   <2   <					·
2-(N-methyl perfluoro-l-octanesulfonamido)-ethanol         <4					
62 Floroselomer sulfonate					
SCLPFIONS	` '				
ADONA					
DONA					
NaDONA					
N-ethyl perfluoro-loctane sulfonamidoacetic acid         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20         <20					
N-ethylperfluoro-1-octanesulfonamide         <2         <2         <2         <2 UJ           N-methyl perfluoro-1-octanesulfonamide         <2					
N-methyl perfluoro-1-octanesulfonamide         ✓					-
N-methyl perfluorootane sulfonamidoacetic acid         <20         <20         <20         <20           Perfluorobutane Sulfonic Acid         4.2         <2	· · · · · · · · · · · · · · · · · · ·				
Perfluorobutane Sulfonic Acid         4.2         <2         <2         <2           Perfluorobutanoic Acid         6.8         4.8 J         <2	y 1				
Perfluorodecane Sulfonic Acid		4.2	<2	<2	
Perfluorodecanoic Acid	Perfluorobutanoic Acid	6.8	4.8 J	<2	2.2
Perfluorododecane sulfonic acid (PFDoS)	Perfluorodecane Sulfonic Acid				
Perfluorododecanoic Acid         <2					
Perfluoroheptane sulfonic acid (PFHpS)         <2         <2         <2         <2 UJ           Perfluoroheptanoic Acid         4.1         2.4         <2					
Perfluoroheptanoic Acid         4.1         2.4         2         2           Perfluorohexadecanoic acid (PFHxDA)					
Perfluorohexadecanoic acid (PFHxDA)         -					
Perfluorohexane Sulfonic Acid         4.3         <2         <2         <2 UJ           Perfluorohexanoic Acid         7.6         2.3         2.5         2.9           Perfluorononanesulfonic acid         <2					
Perfluorohexanoic Acid         7.6         2.3         2.5         2.9           Perfluorononanesulfonic acid         <2	` '				
Perfluoronanesulfonic acid         <2         <2         <2         <2 UJ           Perfluoronanoic Acid         <2					
Perfluorononanoic Acid         <2         <2         <2         <2 UJ           Perfluorooctadecanoic acid         <2					
Perfluorooctadecanoic acid         <2         <2 UJ         <2 UJ         <2 UJ           Perfluorooctane Sulfonamide         <2					
Perfluorooctane Sulfonamide         <2         <2         <2         <2 UJ           Perfluoropentane sulfonic acid (PFPeS)         <2					
Perfluoropentane sulfonic acid (PFPeS)         <2         <2         <2         <2           Perfluoropentanoic Acid         13         3.3         2.9         3.9           Perfluorotetradecanoic Acid         <2					
Perfluoropentanoic Acid         13         3.3         2.9         3.9           Perfluorotetradecanoic Acid         <2					
Perfluorotetradecanoic Acid         <2         <2         <2         <2 UJ           Perfluorotridecanoic Acid         <2					
Perfluorotridecanoic Acid         <2         <2         <2         <2           Perfluoroundecanoic Acid         <2					
Perfluoroundecanoic Acid         <2         <2         <2         <2           PFOA         6.4         2.5         2.7         3.4 J					
PFOA 6.4 2.5 2.7 3.4 J					
1100 2.110	PFOS	12	4.4	<2	2.1 J

#### Notes:

 $\ast$  - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

**Bold** - Analyte detected above associated reporting limit

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathsf{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

		<b>1</b>		T
Location ID	20	21A	22	23A
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID	CTW I OC 20 4 042020	CTW I OC 21 A 002/20	CTW 1 OC 22 4 002 (20	CTW I OC 22 A 2 002 (20
Date Sampled	STW-LOC-20-4-042820 8/26/2020	STW-LOC-21A-082620 8/26/2020	STW-LOC-22-4-082620 8/26/2020	STW-LOC-23A-2-082620 8/26/2020
Date Sampled Analytical Laboratory			0,-0,-0-0	
Analytical Laboratory  QA/QC	TestAmerica 	TestAmerica	TestAmerica	TestAmerica
Table 3+ SOP (ng/L)			<b></b>	-
HFPODA	57	16	99 J	69
PFMOAA	<2	<2	<2	520
PFO2HxA	14	14	16	110
PFO3OA	3.2	2.2	5.6	44
PFO4DA	<2	<2	7.6	<30
PFO5DA	<2	<2	6.4	<39
PMPA	<20	23	<20	<310
PEPA	<10	<10	<10	<10
PS Acid	24	<2	19	6,000
Hydro-PS Acid	4.0	<2	59	230
R-PSDA	12	<2	270	160
Hydrolyzed PSDA	86	4.2	1,200	2,500
R-PSDCA	<2	<2	2.7	<8.7
NVHOS	<2	<2	14	24
EVE Acid	12	<2	33	47
Hydro-EVE Acid	9.6	<2	14	7.4
R-EVE	4.8	<2	330	<36
PES	<2	<2	<2	<3.4
PFECA B	<2	<2	<2	<13
PFECA-G	<2	<2	<2	<24
Total Table 3+ (17 compounds)*	150	55	280	7,100
Total Table 3+ (20 compounds)*	260	59	2,100	9,700
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11Cl-PF3OUdS	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20 UJ	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	2.9
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9CI-PF3ONS	<2	<2	<2	<2
ADONA				
DONA	<2	<2	<2	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.1	4.6	2.4	4.4
Perfluorobutanoic Acid	6.0	5.8	<2 R	20
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	2.0
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2	<2	<2 <2	<2 4.1
	<2 <2	<2 <2	<2 <2	<b>4.1</b> <2
Perfluoroheptane sulfonic acid (PFHpS)  Perfluoroheptanoic Acid	3.8	3.6	2.1	4.6
Perfluoroneptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	3.8	<b>3.6</b> <2	2.1 	4.6
Perfluoronexadecanoic acid (PFHXDA)  Perfluorohexane Sulfonic Acid	4.2	4.2	<2	3.8
Perfluoronexanoic Acid Perfluorohexanoic Acid	7.1	7.3	3.7 J	8.3
Perfluoronoanesulfonic acid	<2	<2	<b>3.7 J</b> <2	<b>8.3</b> <2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2 UJ	<2
Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2 03	2.1
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	10	9.1	15 J	11
Perfluorotetradecanoic Acid Perfluorotetradecanoic Acid	<2	<b>9.1</b> <2	<2	3.4
Perfluorotridecanoic Acid Perfluorotridecanoic Acid	<2	<2	<2	3.7
Perfluoroundecanoic Acid	<2	<2	<2	2.4
PFOA	6.2	6.5	4.0	23
PFOS	11	5.4	4.7	17

#### Notes:

 $\ast$  - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

**Bold** - Analyte detected above associated reporting limit

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathsf{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

T (1 T)	22D	1		240
Location ID	23B		4A	24B
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID	STW-LOC-23B-082620	STW-LOC-24A-082620	STW-LOC-24A-082620-D	STW-LOC-24B-082620
Date Sampled		8/26/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC			Field Duplicate	
Table 3+ SOP (ng/L)		<del></del>	Ticia Duplicate	<del></del>
HFPODA	25	28	30	15
PFMOAA	<2	18 J	18	<2
PFO2HxA	18	26 J	14 J	13
PFO3OA	2.8	4.1	2.2	2.1
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	32	53 J	21 J	22
PEPA	<10	18 J	<10	<10
PS Acid	33	<2	<2	<2
Hydro-PS Acid	2.0	<2	<2	<2
R-PSDA	<2	<2	2.5	15
Hydrolyzed PSDA	35	7.9 J	4 J	5.5
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	35 J	<2	<2
PES PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ (17 compounds)*	110	150	85	52
Total Table 3+ (20 compounds)*	150	190	92	73
Other PFAS (ng/L)	100	150	/ <del>-</del>	70
10:2 Fluorotelomer sulfonate	<2	-2	<2	
	<2 <2	<2 <2	<2	<2 <2
11Cl-PF3OUdS 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9Cl-PF3ONS	<20	<2	<20	<20
ADONA				
DONA	<2	<2	<2	<2
NaDONA	<u></u>			<u></u>
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide	<2	<2 <2	<2 <2	<2 <2
N-methyl perfluoro-1-octanesulfonamide  N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-metnyl perfluorooctane suffonamidoacetic acid  Perfluorobutane Sulfonic Acid	4.4	4.3	4.5	4.1
Perfluorobutanoic Acid Perfluorobutanoic Acid	5.5	6.1	6.2	5.3
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid Perfluorodecanoic Acid	<2	<2 <2	<2	<2
Perfluorodecanoic Acid  Perfluorododecane sulfonic acid (PFDoS)	<2	<2 <2	<2	<2
Perfluorododecanoic Acid  Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2	<2 <2	<2	<2
Perfluoroneptane surionic acid (PFHps)  Perfluoroheptanoic Acid	3.6	3.5	3.3	3.3
Perfluoroneptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<b>3.6</b> <2	3.5 	3.3 	<b>3.3</b> <2
Perfluoronexadecanoic acid (PFHXDA)  Perfluorohexane Sulfonic Acid	4.0	4.3	4.3	4.1
Perfluoronexane Sullonic Acid  Perfluorohexanoic Acid	7.5	7.2	7.7	6.7
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<2	<2	<2	<b>6.</b> 7 <2
Perfluorononanesulionic acid Perfluorononanoic Acid	<2	<2 <2	<2	<2
Perfluorononanoic Acid Perfluorooctadecanoic acid	<2	<2 <2	<2	<2
Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide	<2	<2 <2	<2 <2	<2 <2
		<2 <2	<2 <2	<2 <2
Perfluoropentane sulfonic acid (PFPeS)	<2			
Perfluoropentanoic Acid	7.9	8.7	8.2	8.0
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	6.9	6.6	6.3	6.0
PFOS	12	13	11	12

#### Notes:

 $\ast$  - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

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J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathsf{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

Location ID	24C	EB	EB	EB
Sample Event	August 2020	August 2020	August 2020	August 2020
Field Sample ID		a grant to t		<u> </u>
-	STW-LOC-24C-082620	STW-EQBLK-DR-082620	STW-EQBLK-IS-082620	STW-EQBLK-PP-082620
Date Sampled		8/26/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica Equipment Blank	TestAmerica Equipment Blank	TestAmerica Equipment Blank
QA/QC <i>Table 3+SOP (ng/L)</i>		Едигричент Біанк	Едигричент Біанк	Едигритент Бтанк
HFPODA	14	<4	<4	<4
PFMOAA	7.4	<2	<2	<2
PFO2HxA	13	<2	<2	<2
PFO3OA	2.1	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	47	<20	<20	<20
PEPA	<10	<10	<10	<10
PS Acid	2.7	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	20 14	<2 <2	<2 <2	<2 <2
Hydrolyzed PSDA  R-PSDCA	<2	<2 <2	<2	<2 <2
NVHOS	7.5	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	11	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ (17 compounds)*	94	ND	ND	ND
Total Table 3+ (20 compounds)*	140	ND	ND	ND
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11Cl-PF3OUdS 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2 <20	<2 <20	<2 <20	<2 <20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9CI-PF3ONS	<2	<2	<2	<2
ADONA				-
DONA	<2	<2	<2	<2
NaDONA			-	-
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide  N-methyl perfluorooctane sulfonamidoacetic acid	<2	<2 <20	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid  Perfluorobutane Sulfonic Acid	<20 <b>4.0</b>	<20 <2	<20 <2	<20 <2
Perfluorobutanoic Acid  Perfluorobutanoic Acid	4.8	<2 <2	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.3	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)				-
Perfluorohexane Sulfonic Acid	4.0	<2	<2	<2
Perfluorohexanoic Acid	6.5	<2	<2	<2
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2	<2	<2 <2	<2
Perfluoronoanoic Acid Perfluorooctadecanoic acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2	<2 <2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	7.2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	5.5	<2	<2	<2
PFOS	9.2	<2	<2	<2

#### Notes:

\* - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

**Bold** - Analyte detected above associated reporting limit

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathsf{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

Location ID	FBLK	ТВ
Sample Event	August 2020	August 2020
Field Sample ID	OTHER PRESENTATION	COMMANDA VA COCACO
Date Sampled	STW-FBLK-082620 8/26/2020	STW-TBLK-082620 8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica
QA/QC	Field Blank	Trip Blank
Table 3+ SOP (ng/L)	11000 20000	114 2
HFPODA	<4	<4
PFMOAA	<2	<2
PFO2HxA	<2	<2
PFO3OA	<2	<2
PFO4DA PFO4DA	<2	<2
PFO5DA	<2	<2 <20
PMPA PEPA	<20 <10	<10
PS Acid	<2	<2
Hydro-PS Acid	<2	<2
R-PSDA	<2	<2
Hydrolyzed PSDA	<2	<2
R-PSDCA	<2	<2
NVHOS	<2	<2
EVE Acid	<2	<2
Hydro-EVE Acid	<2	<2
R-EVE	<2	<2
PES PEGA P	<2	<2
PFECA B PFECA-G	<2 <2	<2 <2
Total Table 3+ (17 compounds)*	ND	ND
Total Table 3+ (20 compounds)*	ND	ND
Other PFAS (ng/L)		
10:2 Fluorotelomer sulfonate	<2	<2
11Cl-PF3OUdS	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20
9CI-PF3ONS ADONA	<2	<2
DONA	 <2	 <2
NaDONA		
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2
Perfluorobutanoic Acid	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2 <2
Perfluorododecanic Acid	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2
Perfluoroheptanoic Acid	<2	<2
Perfluorohexadecanoic acid (PFHxDA)		
Perfluorohexane Sulfonic Acid	<2	<2
Perfluorohexanoic Acid	<2	<2
Perfluorononanesulfonic acid	<2	<2
Perfluorononanoic Acid	<2	<2
Perfluorooctadecanoic acid	<2	<2
Perfluorooctane Sulfonamide	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2 <2	<2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2
	<2	<2
Perfluoroundecanoic Acid		- ~~
Perfluoroundecanoic Acid PFOA	<2	<2

#### Notes:

 $\ast$  - Total Table 3+ was calculated including J qualified data but not non-detect data. The total Table 3+ sum is rounded to two significant figures.

Locations sampled in August 2020 were collected on August 26, 2020.

**Bold** - Analyte detected above associated reporting limit

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

 $\ensuremath{\mathrm{ND}}$  - No Table 3+ compounds were detected above their associated reporting limits.

ng/L - nanograms per liter

 $\ensuremath{\mathsf{QA/QC}}$  - Quality assurance/ quality control

R - Reject. The present or absence of the analyte cannot be verified.

SOP - standard operating procedure

- -- No data reported
- < Analyte not detected above associated reporting limit.

## TABLE A2 TOTAL DAILY PRECIPITATION - 2020 QUARTER 3 Chemours Fayetteville Works, North Carolina

0.02	, ,
	21
	22
	22
	19
	21
	21
0.13	21
	22
	21
	26
	20
	21
0.68	21
	21
	21
	20
	21
	21
	20
0.69	
0.68	22
	22
	21
	23
	21
	21
	21
	21
0.01	
	20
	20
1.84	27
0.36	21
	20
0.02	21
1.08	22
0.01	19
0.07	20
1.1	24
0.01	20
	19
	20
0.05	20
0.47	20
	18
	22
	20
	20
	20
	0.13 0.03 0.03 1.03 0.02 0.68 1.2 0.68 1.2 0.14 0.01 0.01 0.01 1.84 0.36 0.02 1.08 0.01 0.07 1.1 0.01 0.07 1.1 0.01 0.05

### TABLE A2 TOTAL DAILY PRECIPITATION - 2020 QUARTER 3 Chemours Fayetteville Works, North Carolina

Date	Total Precipitation (inches)	Measured Outfall Flow (MGD)
8/21/2020	0.06	19
8/22/2020		17
8/23/2020		18
8/24/2020	0.2	18
8/25/2020		19
8/26/2020		18
8/27/2020	0.01	19
8/28/2020		21
8/29/2020	0.04	16
8/30/2020		17
8/31/2020	0.02	17
9/1/2020		17
9/2/2020		16
9/3/2020		16
9/4/2020		16
9/5/2020		16
9/6/2020		16
9/7/2020		16
9/8/2020	0.02	14
9/9/2020	0.37	17
9/10/2020		16
9/11/2020	0.65	16
9/12/2020		16
9/13/2020		15
9/14/2020		15
9/15/2020		16
9/16/2020	0.02	16
9/17/2020	1.69	22
9/18/2020	0.09	15
9/19/2020		15
9/20/2020		17
9/21/2020		16
9/22/2020		16
9/23/2020		16
9/24/2020		16
9/25/2020	2	24
9/26/2020	0.01	16
9/27/2020	0.02	17
9/28/2020	0.02	17
9/29/2020		22
9/30/2020	0.01	16

#### Notes:

Precipitation data obtained from USGS rain gauge at W.O. Huske Dam.

MGD - million gallons per day

USGS - United States Geological Survey

-- - below USGS measurement threshold

72 hour period prior to sample collection date

Sample collection date

# TABLE A3 FIELD PARAMETERS - 2020 QUARTER 3 - AUGUST 2020 EVENT Chemours Fayetteville Works, North Carolina

Location	Sampling Method	рН	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)
1	Temporal Composite	8.3	30	0.3	5.0	25	18
6A	Grab	8.0	32	2.4	0.0	47	149
6B	Grab	7.7	33	0.3	6.2	31	106
7A	Temporal Composite	8.2	31	0.2	6.9	10	19
7B	Temporal Composite	8.2	31	0.3	6.6	3.6	15
7C	Temporal Composite	8.0	32	0.2	6.6	21	31
8	Temporal Composite	8.2	33	2.9	0.4	51	5.7
9	Temporal Composite	8.1	31	0.2	5.8	18	29
10A	Temporal Composite	8.5	30	0.5	5.4	-7.1	29
12	Temporal Composite	8.2	33	0.7	5.9	54	2.0
14	Temporal Composite	8.6	34	0.7	8.4	71	14
15	Temporal Composite	7.7	32	0.1	6.8	30	51
18	Temporal Composite	9.1	31	0.7	6.5	34	49
19A	Grab	7.3	40	0.1	5.6	49	21
19B	Grab	7.6	39	0.2	7.0	40	237
20	Temporal Composite	7.9	32	0.2	7.4	39	12
21A	Grab	5.7	38	0.1	1.5	179	679
22	Temporal Composite	10.2	33	2.0	6.1	5.1	98
23A	Temporal Composite	7.9	30	1.1	2.5	31	1.5
23B	Grab	8.2	34	0.4	5.8	27	3.4
24A	Grab	6.9	30	0.2	7.5	78	18
24B	Grab	7.3	31	0.2	7.1	77	1.2
24C	Grab	7.5	35	0.2	6.6	58	2.0

#### Notes:

°C - degrees Celsius

mg/L - milligrams per liter

mS/cm - milliSiemens per centimeter

mV - millivolt

NTU - nephelometric turbidity units

ORP - oxidation reduction potential

Field parameters for the temporal composite samples were collected during sampling directly from the water stream only.

# ATTACHMENT A Laboratory Reports and Data Review Narrative Whitebooks

Laboratory reports are provided on a USB memory storage drive that was shipped with the hard copies provided to NCDEQ

### ADQM DATA REVIEW NARRATIVE

Site Chemours FAY – Fayetteville

**Project** Stormwater Sampling 8/20

Project Reviewer Michael Aucoin, AECOM as a Chemours contractor

Sampling Dates August 26, 2020

#### **Analytical Protocol**

<u>Laboratory</u>	Analytical Method	Parameter(s)
TestAmerica - Sacramento	537 Modified	PFAS <sup>1</sup>
TestAmerica - Sacramento	Cl. Spec. Table 3 Compound SOP	Table 3+ compounds

<sup>&</sup>lt;sup>1</sup> Perfluoroalkylsubstances, a list of 35 compounds including HFPO-DA.

#### Sample Receipt

The following items are noted for this data set:

• All samples were received in satisfactory condition and within EPA temperature guidelines on August 28, 2020.

#### **Data Review**

The electronic data submitted for this project was reviewed via the Data Verification Module (DVM) process.

Overall the data is acceptable for use without qualification, except as noted below:

- The non-detect result for PFBA in one sample was qualified R and should be considered to be unusable due to a very poor surrogate (isotope dilution analyte) recovery.
- Several analytical results have been qualified J as estimated, and non-detect results qualified UJ indicating an estimated reporting limit, due to poor recovery of a surrogate or matrix spike, a transition mass ratio for the indicated analyte outside of the established ratio limits, and; poor field duplicate precision. See the Data Verification Module (DVM) Narrative Report for which samples were qualified, the specific reasons for qualification, and potential bias in reported results.

#### **Attachments**

The DVM Narrative report is attached. The lab reports due to a large page count are stored on an AECOM network shared drive and are available to be posted on external shared drives, or on a flash drive.

#### Data Verification Module (DVM)

The DVM is an internal review process used by the ADQM group to assist with the determination of data usability. The electronic data deliverables received from the laboratory are loaded into the Locus EIM<sup>TM</sup> database and processed through a series of data quality checks, which are a combination of software (Locus EIM<sup>TM</sup> database Data Verification Module (DVM)) and manual reviewer evaluations. The data is evaluated against the following data usability checks:

- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike(MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample(LCS)/control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference / percent difference between total and dissolved sample pairs.

#### There are two qualifier fields in EIM:

**Lab Qualifier** is the qualifier assigned by the lab and may not reflect the usability of the data. This qualifier may have many different meanings and can vary between labs and over time within the same lab. Please refer to the laboratory report for a description of the lab qualifiers. As they are lab descriptors they are not to be used when evaluating the data.

**Validation Qualifier** is the 3rd party formal validation qualifier if this was performed. Otherwise this field contains the qualifier resulting from the ADQM DVM review process. This qualifier assesses the usability of the data and may not equal the lab qualifier. The DVM applies the following data evaluation qualifiers to analysis results, as warranted:

Qualifier	Definition
В	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
J	Analyte present. Reported value may not be accurate or precise.
UJ	Not detected. Reporting limit may not be accurate or precise.

The **Validation Status Code** field is set to "DVM" if the ADQM DVM process has been performed. If the DVM has not been run, the field will be blank.

If the DVM has been run (Validation Status Code equals "DVM"), use the Validation Qualifier.

#### **DVM Narrative Report**

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

**Validation Reason** One or more surrogates had relative percent recovery (RPR) values less than the data rejection level. The reported result is unusable.

	Date					Validation	Analytical		
Field Sample ID	Sampled Lab Sample ID	Analyte	Result Units Type	MDL	PQL	Qualifier	Method	Pre-prep	Prep
STW-LOC-22-4-082620	08/26/2020 320-64117-4	Perfluorobutanoic Acid	0.0020 UG/L PQL		0.0020	R	537 Modified		3535 PFC

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason High relative percent difference (RPD) observed between field duplicate and parent sample. The reported result may be imprecise.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result Units	Туре	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
STW-LOC-12-4-082620-D	08/26/2020 320-64096-2	NVHOS	0.0020 UG/L	PQL		0.0020	UJ	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620-D	08/26/2020 320-64096-2	R-PSDA	0.0020 UG/L	PQL		0.0020	UJ	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620-D	08/26/2020 320-64096-2	R-EVE	0.0020 UG/L	PQL		0.0020	UJ	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

**Validation Reason** Only one surrogate has relative percent recovery (RPR) values outside control limits and the parameter is a PFC (Nondetects).

	Date							Validation	Analytical		
Field Sample ID	Sampled Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Qualifier	Method	Pre-prep	Prep
STW-LOC-22-4-082620	08/26/2020 320-64117-4	1H,1H,2H,2H- perfluorohexanesulfon ate (4:2 FTS)	0.020	ug/L	PQL		0.020	UJ	537 Modified		3535_PFC
STW-LOC-10A-4-082620	08/26/2020 320-64093-3	Perfluorooctadecanoic acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
STW-LOC-18-4-082620	08/26/2020 320-64117-2	Perfluorooctadecanoic acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19A-082620	08/26/2020 320-64119-4	Perfluorooctadecanoic acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	N-methyl perfluoro-1- octanesulfonamide	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
STW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorohexane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluoroheptane sulfonic acid (PFHpS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorononanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorotetradecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	N-ethylperfluoro-1- octanesulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorononanesulfon ic acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorooctane Sulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	9CI-PF3ONS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	11CI-PF3OUdS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	Perfluorododecane sulfonic acid (PFDoS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-19B-082620	08/26/2020 320-64118-1	DONA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
TW-LOC-22-4-082620	08/26/2020 320-64117-4	Perfluorooctadecanoic acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason Associated MS and/or MSD analysis had relative percent recovery (RPR) values less than the lower control limit. The actual detection limits may be

higher than reported.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result Units	Туре	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	Perfluorononanesulfon ic acid	0.0020 ug/L	PQL		0.0020	UJ	537 Modified		3535_PFC
STW-LOC-12-4-082620	08/26/2020 320-64096-1	Perfluorotridecanoic	0.0020 UG/L	PQL		0.0020	UJ	537 Modified		3535_PFC

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason Associated MS and/or MSD analysis had relative percent recovery (RPR) values higher than the upper control limit. The reported result may be biased

high.

	Date							Validation	Analytical		
Field Sample ID	Sampled Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Qualifier	Method	Pre-prep	Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	R-PSDA	0.023	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	Hydrolyzed PSDA	0.0041	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	Hydrolyzed PSDA	0.0038	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	R-EVE	0.0074	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	Hydrolyzed PSDA	0.0079	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	R-EVE	0.035	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason High relative percent difference (RPD) observed between field duplicate and parent sample. The reported result may be imprecise.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result	Units	Туре	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	NVHOS	0.011	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	NVHOS	0.012	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	R-PSDA	0.025	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	R-EVE	0.0071	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PMPA	0.053	UG/L	PQL		0.020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PMPA	0.045	UG/L	PQL		0.020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	Hydrolyzed PSDA	0.0084	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	R-EVE	0.035	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PEPA	0.018	UG/L	PQL		0.010	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PEPA	0.023	UG/L	PQL		0.010	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PFO2HxA	0.026	ug/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PFO2HxA	0.027	ug/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620-D	08/26/2020 320-64103-2	PMPA	0.021	UG/L	PQL		0.020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620-D	08/26/2020 320-64103-2	Hydrolyzed PSDA	0.0040	UG/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620-D	08/26/2020 320-64103-2	PFO2HxA	0.014	ug/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason Only one surrogate has relative percent recovery (RPR) values outside control limits and the parameter is a PFC (Detects).

	Date							Validation	Analytical		
Field Sample ID	Sampled Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Qualifier	Method	Pre-prep	Prep
STW-LOC-22-4-082620	08/26/2020 320-64117-4	Perfluorohexanoic Acid	0.0037	UG/L	PQL		0.0020	J	537 Modified		3535_PFC
STW-LOC-22-4-082620	08/26/2020 320-64117-4	Hfpo Dimer Acid	0.099	UG/L	PQL		0.0040	J	537 Modified		3535_PFC
STW-LOC-19B-082620	08/26/2020 320-64118-1	PFOA	0.0034	UG/L	PQL		0.0020	J	537 Modified		3535_PFC
STW-LOC-19B-082620	08/26/2020 320-64118-1	PFOS	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535_PFC
STW-LOC-18-4-082620	08/26/2020 320-64117-2	Perfluorobutanoic Acid	0.0048	UG/L	PQL		0.0020	J	537 Modified		3535_PFC

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason Associated MS and/or MSD analysis had relative percent recovery (RPR) values less than the lower control limit but above the rejection limit. The

reported result may be biased low.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result	Units	Туре	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	PFMOAA	0.012	ug/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-12-4-082620	08/26/2020 320-64096-1	PFMOAA	0.012	ug/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PFMOAA	0.018	ug/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
STW-LOC-24A-082620	08/26/2020 320-64103-1	PFMOAA	0.018	ug/L	PQL		0.0020	J	CI. Spec. Table 3 Compound SOP		PFAS_DI_Prep

Site: Fayetteville Sampling Program: STORMWATER SAMPLING 8/20 Validation Options: LABSTATS

Validation Reason One or more surrogates had relative percent recovery (RPR) values less than the data rejection level. The reported result may be biased low.

Field Sample ID	Date Sampled Lab Sample ID	Analyte	Result Units	Туре	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
STW-LOC-22-4-082620	08/26/2020 320-64117-4	Perfluoropentanoic Acid	0.015 UG/L	PQL		0.0020	J	537 Modified		3535_PFC

# APPENDIX B Sitewide and Targeted Stormwater Sampling Summary



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#### APPENDIX B

#### SITEWIDE AND TARGETED STORMWATER SAMPLING OCTOBER 2019 AND MARCH 2020

#### **INTRODUCTION**

This memorandum was prepared by Geosyntec Consultants of NC, P.C. (Geosyntec) for The Chemours Company, FC, LLC (Chemours) to describe the results from two wet weather sampling events conducted at locations representing stormwater-only runoff at the Chemours Fayetteville Works, North Carolina site (the Site). Sampling was conducted to assess per- and polyfluoroalkyl substances (PFAS) concentrations from stormwater locations at the Site (i.e., from drainage ditches or channels before stormwater enters the Site Conveyance Network and mixes with dry weather flows).

An initial sitewide stormwater sampling event occurred in June 2019, and results were reported in the *Assessment of HFPO-DA and PFMOAA in Outfall 002 Discharge and Evaluations of Potential Control Options*<sup>1</sup> (2019 Outfall 002 Assessment). In the 2019 Outfall 002 Assessment, hexafluoropropylene oxide dimer acid (HFPO-DA) and perfluoro-2-methoxyaceticacid (PFMOAA) analytical results from samples collected from Outfall 002 and from the Cape Fear River (at a location representing the river intake), between June 2017 and July 2019, were evaluated. HFPO-DA concentrations generally increased during wet weather, indicating that stormwater is a source of HFPO-DA loading to Outfall 002. Results from the June 2019 sitewide stormwater sampling event (presented in the 2019 Outfall 002 Assessment) showed that stormwater concentrations were generally higher than those measured at Outfall 002, particularly during dry weather. Stormwater concentrations were spatially variable throughout the Site, with certain sample clusters indicating potential areas of higher concentration and loading.

Subsequent stormwater sampling events (described herein) were conducted sitewide (October 2019) and from within targeted areas (March 2020). Stormwater sampling was conducted to continue to support the investigations related to Paragraph 12 in the executed Consent Order entered February 25, 2019 amongst Chemours and the North Carolina Department of Environmental Quality (NCDEQ) and Cape Fear River Watch (CFRW). These data are also being used by Chemours in preparing to implement the stormwater capture and treatment requirements pursuant to Paragraph 4(a) of the Addendum to Consent Order Paragraph 12 (CO Addendum), entered into court on August 13, 2020.

<sup>&</sup>lt;sup>1</sup> Submitted as Attachment 3 to the *Cape Fear River PFAS Loading Reduction Plan* (August 2019) (Reduction Plan).



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The sitewide stormwater grab sampling, conducted in June 2019 and again in October 2019, sampled stormwater representing comingled runoff from various "surface types" (e.g., roofs, plant equipment, paved areas, pervious area, walkways). A subsequent event was conducted in March 2020 to assess investigate PFAS concentrations in stormwater runoff from the various surface types individually in the Chemours Monomers Ion Exchange Materials (IXM) area (Monomers area) and Chemours Polymer Processing Aid (PPA) area as these two areas showed the most elevated PFAS concentrations in prior sampling events.

This appendix presents information from the sitewide stormwater sampling event conducted in October 2019, in addition to the targeted surface type stormwater sampling event in March 2020. As previously noted, the June 2019 sitewide stormwater sampling event was reported in the 2019 Outfall 002 Assessment.

#### **SAMPLING OBJECTIVES**

The objective of the sitewide stormwater sampling conducted in October 2019 was to continue to characterize PFAS concentrations in stormwater only flow across the Site. Informed by the results of the June and October 2019 sitewide stormwater sampling, the objective of the targeted surface type stormwater sampling conducted in March 2020 was to perform a more detailed investigation of stormwater runoff concentrations within the Monomers and PPA areas and examine the distribution of PFAS by surface type within these areas.

#### **SAMPLING LOCATIONS**

#### October 2019 Sitewide Stormwater Sampling Locations

Stormwater-only grab and time series samples were collected during the October 2019 sitewide sampling event. The stormwater-only grab samples represented stormwater points of entry into the Site Conveyance Network and did not include any dry weather flows (i.e., non-contact cooling water [NCCW], river discharge, other process water). Samples were collected from 24 stormwater-only locations throughout the Site. The time series samples (also obtained as grab samples) were collected at four grab sample locations at equally spaced intervals throughout the duration of the storm event and subsequent wash out. The sample locations are shown in Figure B1 and listed in Table B1.

#### March 2020 Targeted Surface Type Stormwater Sampling Locations

Stormwater-only grab samples were collected during this sampling event, from within the Monomers and PPA areas. The drainage areas to each sampling location represented various surface types (i.e., overhead piping, pavement, pervious/gravel, rooftop, miscellaneous). The sample locations are shown in Figures B2 and B3 and listed in Table B2.



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There were 31 locations sampled during the targeted surface type stormwater sampling event, with 25 locations in the Monomers area and six locations in the PPA area. In the Monomers area, the following surface types were represented by sample locations:

- Overhead piping: One (1) sample location (gutter/pipe discharge);
- Pavement: Three (3) sample locations (all sheet flow);
- Pervious and gravel: Six (6) sample locations (all sheet flow);
- Roof: 11 sample locations (all gutter/pipe discharge);
- Miscellaneous inlets: One (1) sample location (sheet flow); and
- Mixed surface types: Three (3) sample locations (two or more surface types).

In the PPA area, the following surface types were represented by sample locations:

- Pavement: One (1) sample location (sheet flow);
- Pavement and pervious/gravel: One (1) sample location (sheet flow);
- Roof: Three (3) sample locations (all gutter/pipe discharge); and
- Miscellaneous inlet: One (1) sample location (sheet flow).

#### SAMPLING PROCEDURES

The sitewide and targeted surface type stormwater sampling involved collecting stormwater runoff samples from sampling locations during a rain event. Samples were collected for laboratory analysis, and water quality parameters were also collected. Methods are described below in the Methods section.

Parsons of NC conducted the field work and sampling described in this memorandum. All work was performed according to the project health and safety plan prepared by Parsons (Parsons Health and Safety Plan Chemours Fayetteville Site, 2018). A Plan on Action Discussion and Project Safety Analysis was held prior to commencing field activities.

#### **Sample Collection**

Sitewide stormwater samples were collected from the locations specified in Table B1 and shown in Figure B1. Targeted surface type stormwater samples were collected from the locations specified in Table B2 and shown in Figures B2 and B3. Time-series samples are denoted in the figures as "-1", "-2", and "-3" in order of sample time. Grab samples were collected in 250 milliliter (mL) high density polyethylene (HDPE) bottles with a wide-mouth screw-cap. Bottles were either filled by hand or using a properly decontaminated dip rod with the bottle attached with



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a nylon zip tie. Sample bottle caps were securely fastened after sample collection. Sample collection began once 0.1 inches of rainfall had fallen. Each sample was labelled with a unique sample identification number, date, time and location of sampling, and the initials of the individual collecting the sample. A field notebook was used to record information regarding additional items such as quality assurance/ quality control (QA/QC), sample identifications, field parameters, and other observations.

#### **Water Quality Parameter Assessment**

Water quality parameters were also collected at the locations where samples were collected. All equipment was inspected by the field program on-Site supervisor and calibrated at least daily prior to use in the field according to the manufacturer's recommended guidelines. Calibration information was recorded in a field logbook. Field parameters were measured with a water quality meter after sample collection and include the following:

- pH;
- Total dissolved solids [TDS] (milligrams per liter, mg/L); and
- Turbidity (nephelometric turbidity units, NTU).

#### **Decontamination Methods**

Sample containers were new and used only once for each sample. Disposable equipment (e.g., gloves, tubing, etc.) was not reused and these items did not require decontamination. All non-dedicated or non-disposable sampling equipment was decontaminated immediately before sample collection in the following manner:

- De-ionized water rinse;
- Scrub with de-ionized water containing non-phosphate detergent (i.e., Alconox®); and
- De-ionized water rinse.

#### Sample Shipping, Chain of Custody, and Holding Times

Upon sample collection, each labelled, containerized sample was placed into a plastic bag inside an insulated sample cooler with ice. Prior to shipment of the samples to the laboratory, a chain of custody (COC) form was completed by the field sample custodian. Sample locations, sample identification numbers, description of samples, number of samples collected, and specific laboratory analyses to be performed on the samples were recorded on the COC form. The COC was signed by the field personnel relinquishing the samples to the courier and was signed by the laboratory upon receipt of the cooler.

#### Field QA/QC Samples

The following field QA/QC samples were collected and analyzed during each sampling event:



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- Two blind field duplicates (one for every 20 samples);
- One equipment blank for the dip rod;
- One field blank; and
- One trip blank<sup>2</sup>.

#### **Documentation**

The project field team kept a daily record of field activities during the execution of field work including sampling notes and observations, instrument calibration records, measured field parameters, sample COC, and shipping records.

#### **Laboratory Analyses**

Laboratory analyses varied between the two sampling events.

#### **Sitewide Stormwater Sampling**

Stormwater samples from the sitewide stormwater sampling event in October 2019 were analyzed for PFAS by the Table 3+ Laboratory Standard Operating Procedure (SOP) and EPA Method 537 Mod (Laboratory SOP). PFAS reported under each of these methods are listed in Table B3. Samples were analyzed by TestAmerica Sacramento.

The SOP for laboratory analysis of Table 3+ parameters includes filtering all samples through a 0.2 micrometer ( $\mu$ m) filter. Therefore, stormwater samples from the October 2019 sitewide sampling event were filtered with a 0.2  $\mu$ m filter.

#### **Targeted Surface Type Stormwater Sampling**

Stormwater samples from the targeted surface type stormwater sampling event in March 2020 were analyzed for total PFAS by the Table 3+ SOP. PFAS reported under this method are listed in Table B3. Samples were analyzed by Lancaster Laboratories. Stormwater samples from the targeted surface type stormwater sampling event, representing "total" PFAS, were not filtered (through the typical Table 3+ SOP requirement of a  $0.2~\mu m$  filter) in the field or upon arrival at the laboratory. Select grab samples from the targeted surface type stormwater sampling event

5 December 2020

<sup>&</sup>lt;sup>2</sup> Only collected during the October 2019 sampling event.

 $<sup>^3</sup>$  Due to a high level of visible suspended solids in the samples from locations 68 and 85, the "total" PFAS samples from these locations were filtered with a 0.45  $\mu$ m filter prior to analysis. These results are presented with other "total" PFAS concentrations in the maps and bar plots, including notes to specify the varying filtering protocol. However, these data are not included in the boxplots or statistical analyses because the analytical methods are not consistent with the other "total" PFAS samples.



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were also analyzed for dissolved (i.e., filtrate) PFAS.<sup>4</sup> These samples were filtered at the laboratory with a  $0.45~\mu m$  filter.

#### RESULTS AND DISCUSSION

This section discusses the data quality protocols, Table 3+ compounds analyzed, and discussion of the results from each stormwater sampling event.

#### **Data Quality**

The analytical data were reviewed using the Data Verification Module (DVM) within the Locus<sup>TM</sup> Environmental Information Management (EIM) system, a commercial software program used to manage data. Following the DVM process, a manual review of the data was conducted. The DVM and the manual review results were combined in a data review narrative report for each set of sample results, which were consistent with Stage 2b of the USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (USEPA-540-R-08-005, 2009). The narrative report summarizes which samples were qualified (if any), the specific reasons for the qualification, and any potential bias in reported results. The data usability, in view of the project's data quality objectives (DQOs), was assessed, and the data were entered into the EIM system.

The data were evaluated by the DVM against the following data usability checks:

- Hold time criteria;
- Field and laboratory blank contamination;
- Completeness of quality assurance/quality control samples;
- Matrix spike/matrix spike duplicate recoveries and the relative percent differences (RPDs) between these spikes;
- Laboratory control sample/control sample duplicate recoveries and the RPD between these spikes;
- Surrogate spike recoveries for organic analyses; and
- RPD between field duplicate sample pairs.

A manual review of the data was also conducted and includes instrument-related quality control results for calibration standards, blanks, and recoveries. The data review process (DVM plus manual review) applied the following data evaluation qualifiers to the analytical results as required:

• J Analyte present, reported value may not be accurate or precise;

<sup>&</sup>lt;sup>4</sup> Select grab samples (as specified in Table B2) were also analyzed for Total Suspended Solids (TSS) and solid residue collected on the filter (particulate PFAS). Results for these analyses are included in Attachment B-2.



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- UJ Analyte not present below the reporting limit, reporting limit may not be accurate or precise; and
- B Analyte present in a blank sample, reported value may have a high bias.

The data review process described above was performed for all laboratory chemical analytical data generated for the sampling events. The DQOs were met for the analytical results for accuracy and precision. The data collected are believed to be complete, representative and comparable, with the exception of R-PSDA, Hydrolyzed PSDA, and R-EVE.

#### **Table 3+ Compounds**

As reported in the Matrix Interference During Analysis of Table 3+ Compounds memorandum (Geosyntec, 2020a), matrix interference studies conducted by the analytical laboratory (TestAmerica, Sacramento) have shown that the quantitation of three compounds (R-PSDA [formerly Byproduct 4], Hydrolyzed PSDA [formerly Byproduct 5], and R-EVE) is inaccurate due to interferences by the sample matrix in both groundwater and surface water. Given the matrix interference issues, Total Table 3+ PFAS concentrations are calculated in two ways: (i) summing over 17 of the 20 Table 3+ compounds "Total Table 3+ (sum of 17 compounds)", i.e., excluding results of R-PSDA, Hydrolyzed PSDA, and R-EVE, and (ii) summing over 20 of the Table 3+ compounds "Total Table 3+ (sum of 20 compounds)". Expressing these data as a range represents possible values of what these results might be without matrix interferences. In other words, the sum of all 17 compounds is an underestimate of the actual value while the sum of the 20 compounds is likely an overestimate of the actual value.

For clarity the text and figures of this report describe the Total Table 3+ (sum of 17 compounds). The tables include both the Total Table 3+ (sum of 17 compounds) and Total Table 3+ (sum of 20 compounds).

#### **Sitewide Stormwater Sampling**

Sampling was conducted between 9:50 AM and 12:45 PM on October 16, 2019. Prior to the sampled rain event, there was an antecedent dry period of 48 hrs. Sampling began after 0.3 inches of rain had fallen and throughout the sampling event, there was an additional 0.07 inches of rainfall. The cumulative rainfall throughout the rain event, in addition to the period when sampling occurred, is shown in Figure B4. At each sampling location, the project field team recorded field parameter measurements and observations. Field notes and measurements are shown in Table B4 and the full field forms, including photographs, are included in Attachment A-1.

Compared to the June 2019 sitewide stormwater sampling event (average Total Table 3+ concentration = 17,000 ng/L), PFAS concentrations in stormwater during the October 2019 sampling event were generally higher (average Total Table 3+ concentration = 45,000 ng/L). Consistent with the June 2019 results, the highest concentrations in stormwater were observed in the Monomers area, as shown in the map in Figure B1 and the plots in Figure B5 and Figure B6.



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The average Total Table 3+ concentration in the Monomers area was 330,000 nanograms per liter (ng/L), which was higher than the average at the rest of the Site (excluding the Monomers area) (19,000 ng/L).

Two locations were sampled in the Monomers area (Locations 10 and 42) in October 2019. Three time series samples were collected from Location 42. Sample results showed that concentrations at this location were elevated throughout the sampling event; Total Table 3+ concentrations ranged from 340,000 ng/L (second of the three times series samples) to 530,000 ng/L (first of the three samples). Furthermore, Locations 10 and 42 had the two highest PFMOAA and Total Table 3+ concentrations of any location sampled during the event, and Location 10 had the highest HFPO-DA concentration. This is consistent with the June 2019 stormwater sampling results, where the highest stormwater concentrations were observed in the Monomers area.

The PPA area was also identified in the June 2019 event as another area with elevated PFAS concentrations in stormwater, although not as elevated as in the Monomers area. During the October 2019 sitewide sampling event, this spatial trend was not as evident. Stormwater concentrations in the PPA area were within the range of concentrations at the rest of the Site for HFPO-DA (range of 820 to 2,300 ng/L, range at locations not within the PPA or Monomers areas was 180 to 80,000 ng/L), as shown in Figure B6. Further, the average Total Table 3+ concentration in the PPA area (2,500 ng/L) was actually lower compared to the rest of the Site (excluding the Monomers and PPA areas) (21,000 ng/L).

Location 54 in the southwestern portion of the Site also exhibited elevated PFAS concentrations during the October 2019 stormwater sampling event, with concentrations of 80,000 ng/L, 650 ng/L, and 96,000 ng/L for HFPO-DA, PFMOAA, and Total Table 3+, respectively. Location 52 also exhibited elevated concentrations during both the June and October 2019 stormwater sampling events. Stormwater concentrations in October 2019 were 23,000 ng/L, 3,100 ng/L, and 85,000 ng/L, for HFPO-DA, PFMOAA, and Total Table 3+, respectively. This sampling location drains a small area north of the cooling water channel in the Monomers area, in the northeast corner of the Site (just east of the north easternmost building on Site), which ultimately drains to the seeps. These waters will be treated pursuant to the requirements of the CO Addendum Paragraph 2(c)(i).

#### **Targeted Surface Type Stormwater Sampling**

Targeted surface type stormwater sampling was conducted between 10:45 AM and 3:30 PM on March 5, 2020. Prior to the sampled storm, there was an antecedent dry period of 31 hrs. There was 0.14 inches of rain before sampling began. During the sampling period, there was approximately 0.1 inches of rain and rainfall intensity ranged from 0.01 to 0.05 inches per hour, as shown in Figure B7. Rainfall intensity was fairly constant throughout the sampling period. At each sampling location, the project field team recorded field parameter measurements and observations. Field notes and measurements are shown in Table B5 and the full field forms,



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including photographs, are included in Attachment A-2. Observations regarding surface types were used to verify and revise the original designations for each sampling location.

Results from the targeted surface type stormwater sampling event in March 2020, in the Monomers area, are shown in Figure B2 and the plots in Figure B8 and Figure B9. The plots are colored based on the surface types of the sampling location drainage areas. In the Monomers area, average Total Table 3+ concentrations during the targeted surface type stormwater sampling event (53,000 ng/L) were lower than during the June 2019 and October 2019 sitewide sampling events (74,000 ng/L and 330,000 ng/L, respectively). A similar trend was observed at the sample location in the Monomers area that was sampled during all three stormwater sampling events (Location 42), where the Total Table 3+ concentrations were 150,000 ng/L (average of time-series samples), 440,000 ng/L (average of time-series samples), and 130,000 ng/L, in June 2019, October 2019, and March 2020, respectively.

Consistent with the results from the sitewide sampling event, concentrations were highest in the Monomers area. During the targeted surface type stormwater sampling event, trends between surface types (i.e., overhead piping, pavement, pervious/gravel, rooftop, miscellaneous) were consistent for HFPO-DA, PFMOAA, and Total Table 3+ concentrations. Total Table 3+ concentrations for areas draining pavement were compared against locations draining other surface types using a Mann Whitney U test with a significance level of 0.05. While the median Total Table 3+ concentration for locations draining pavement (73,000 ng/L, n = 5) was higher than the median concentration for locations draining other surface types (10,000 ng/L, n = 19), the Mann Whitney U test revealed no statistically significant difference (p-value = 0.08). Elevated concentrations were measured at locations draining various surface types, suggesting that all surface types evaluated contributed to the PFAS concentrations observed in Monomers area stormwater.

Concentrations in stormwater samples from the PPA area were lower than concentrations in samples from the Monomers area, as shown in the map in Figure B3 and the charts in Figure B8 and Figure B9. The average Total Table 3+ concentration in the PPA area was 480 ng/L compared to 53,000 ng/L in the Monomers area. In the PPA area, the concentration at the sampling location draining pavement was slightly higher than concentrations at sampling locations draining other surface types<sup>5</sup>. However, even the concentration in the area with pavement (Total Table 3+ concentration = 900 ng/L) was lower than the concentrations in the majority of samples (from all surface types) in the Monomers area.

Select grab samples from the targeted surface type stormwater sampling event were also analyzed for dissolved (i.e., filtrate) PFAS. Dissolved concentrations were compared against total concentrations for HFPO-DA, PFMOAA, and Total Table 3+. As shown in Figure B10, total and dissolved PFAS concentrations were generally equivalent for each sample. The average dissolved

<sup>&</sup>lt;sup>5</sup> Sample sizes were not sufficiently large to perform statistical tests on surface type data from the PPA area.



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fraction for Total Table 3+ was 92%, indicating that PFAS in stormwater is primarily in the dissolved form.

#### **CONCLUSIONS**

Wet weather sampling was conducted at locations representing stormwater-only runoff at the Site, in order to assess PFAS concentrations from stormwater locations. Stormwater sampling was conducted at sitewide locations in June and October 2019, and sampling was again conducted in March 2020, in targeted areas only (Monomers and PPA areas), to investigate PFAS concentrations in stormwater runoff from the various surface types. The June 2019 sampling event was reported in the 2019 Outfall 002 Assessment, and the October 2019 and March 2020 sampling events are presented herein.

The sitewide stormwater sampling results from October 2019 showed that PFAS concentrations in stormwater were highest in the Monomers area, consistent with findings from the June 2019 stormwater sampling event. During the October 2019 and March 2020 sampling events, stormwater concentrations in the PPA area were consistent with the rest of the Site and notably lower than the Monomers area. Because the stormwater sampling locations from the two sitewide sampling events represented comingled runoff from various surface types (e.g., roofs, paved areas, pervious areas), a targeted surface stormwater sampling event was conducted, in the Monomers and PPA areas, to determine if certain surface types were contributing higher concentrations of PFAS in stormwater.

Stormwater runoff concentrations exhibited notable spatial variation during the targeted surface type sampling event, between the two areas assessed. The sitewide average stormwater concentration, excluding the Monomers area, was 19,000 ng/L for Total Table 3+ during the October 2019 stormwater sampling event. Additionally, as discussed in the 2019 Outfall 002 Assessment, the concentrations measured at Outfall 002 were separated into estimated concentrations and flows from stormwater versus dry weather flows. Based on the approach outlined in the 2019 Outfall 002 Assessment, the average concentration of stormwater at Outfall 002 was estimated to be 9,600 ng/L (considering Outfall 002 data from August 2019 through May 2020). This estimated average stormwater concentration includes contributions from the Monomers area.

As presented herein, the average Total Table 3+ stormwater concentration from the Monomers area was 330,000 ng/L and 53,000 ng/L during the October 2019 and March 2020 stormwater sampling events, respectively. This data suggest that average PFAS stormwater concentrations measured in the Monomers area are consistently higher than the sitewide average stormwater concentrations, as estimated from concentrations measured at Outfall 002 and as measured during sitewide stormwater sampling. PFAS concentrations were consistently higher in the Monomers area than the PPA area. Given that the two areas are similar in size and therefore contribute similar



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flows, this indicates that the Monomers area is likely the most significant contributor of PFAS concentrations to stormwater at Outfall 002.

Within the Monomers area, there was no clear relationship between concentrations and surface types. Within the Monomers area, surface type did not appear to affect concentrations in stormwater. Additionally, PFAS concentrations in stormwater were found to be predominantly in the dissolved fraction.



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#### REFERENCES

Geosyntec, 2020a. Matrix Interference During Analysis of Table 3+ Compounds. Chemours Fayetteville Works. June 30, 2020.

Parsons, 2018. Health and Safety Plan Chemours Fayetteville Site.

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#### **Enclosures:**

Table B1: October 2019 Sitewide Stormwater Sampling Locations

Table B2: March 2020 Targeted Surface Type Sampling Locations

Table B3: PFAS and Associated Analytical Methods

Table B4: October 2019 Sitewide Stormwater Sampling Field Notes

Table B5: March 2020 Targeted Surface Type Sampling Field Notes

Figure B1: Map of Sitewide Stormwater Sampling – October 2019: HFPO-DA, PFMOAA, and Total Table 3+ Concentrations

Figure B2: Map of Chemours Monomers/IXM Area – March 2020: HFPO-DA, PFMOAA, and Total Table 3+ Concentrations

Figure B3: Map of Kuraray SentryGlas and Chemours PPA Area – March 2020: HFPO-DA,

PFMOAA, and Total Table 3+ Concentrations

Figure B4: Cumulative Rainfall of 10/16/2019 at Chemours Fayetteville

Figure B5: Sitewide Stormwater Samples by Location: HFPO-DA, PFMOAA, and Total Table 3+ Concentrations

Figure B6: Sitewide Stormwater Samples by Site Region: HFPO-DA, PFMOAA, and Total

Table 3+ Concentrations

Figure B7: Cumulative Rainfall on 3/5/2020 at USGS station 02105500

Figure B8: Targeted Surface Type Samples by Location: HFPO-DA, PFMOAA, and Total Table 3+ Concentrations

Figure B9: Sitewide Stormwater Samples by Surface Type: HFPO-DA, PFMOAA, and Total

Table 3+ Concentrations

Figure B10: Dissolved vs Total: HFPO-DA, PFMOAA, and Total Table 3+ Concentrations

Attachment A: Field Forms

Attachment B: Analytical Results

December 2020

## **TABLES**

# TABLE B1 OCTOBER 2019 SITEWIDE STORMWATER SAMPLING LOCATIONS Chemours Fayetteville Works, North Carolina

Location	Individual Grab Sample <sup>1</sup>	Time Series Samples <sup>2</sup>
2	✓	
3	✓	
5	✓	
10	✓	
13	✓	
25	✓	
26	✓	
27	✓	
28	✓	
29	✓	
30	✓	
31	✓	
32	✓	
33	✓	
34	✓	
35	✓	✓
36	✓	
37	✓	
38	✓	✓
39	✓	✓
40	✓	
41	✓	
42	✓	✓
43	✓	
44	✓	
45	<b>√</b>	
46	✓	
47	✓	
52	✓	
53	✓	
54	✓	
55	✓	

1 - Samples were collected for:

Total PFAS, by EPA Method 537 Mod and Table 3+ Lab SOP.

2 - Collected 3 separate grab samples at equally spaced intervals throughout the duration of the storm event and subsequent wash out.

# TABLE B2 MARCH 2020 TARGETED SURFACE TYPE SAMPLING LOCATIONS Chemours Fayetteville Works, North Carolina

Location	Surface Type <sup>1</sup>	Sample Type <sup>2</sup>	Individual Grab	Dissolved PFAS, Solid		
Location	зигиес турс	Sample Type	Sample <sup>3</sup>	Residue, and TSS <sup>4</sup>		
61	Grass, Pavement, and Pervious/Gravel	Sheet flow	✓			
79	Micellaneous Inlet	Sheet flow	✓			
83	Miscellaneous Inlet	Sheet flow	✓			
78	Overhead Piping	Gutter/Pipe Discharge	✓			
68	Pavement	Sheet flow	✓			
71	Pavement	Sheet flow	✓	✓		
80	Pavement	Sheet flow	✓			
84	Pavement	Sheet flow	✓			
85	Pavement and Pervious/Gravel	Sheet flow	✓			
62	Pervious/Gravel	Sheet flow	✓	✓		
63	Pervious/Gravel	Sheet flow	✓	✓		
64	Pervious/Gravel	Sheet flow	✓	✓		
65	Pervious/Gravel	Sheet flow	✓	✓		
77	Pervious/Gravel	Sheet flow	✓	✓		
63A	Pervious/Gravel	Sheet flow	✓	✓		
42	Roof	Gutter/Pipe Discharge	✓	✓		
43	Roof	Gutter/Pipe Discharge	✓			
58	Roof	Gutter/Pipe Discharge	✓	✓		
59	Roof	Gutter/Pipe Discharge	✓			
60	Roof	Gutter/Pipe Discharge	✓			
66	Roof	Gutter/Pipe Discharge	✓			
67	Roof	Gutter/Pipe Discharge	✓			
72	Roof	Gutter/Pipe Discharge	✓	✓		
73	Roof	Gutter/Pipe Discharge	✓			
75	Roof	Gutter/Pipe Discharge	✓			
76	Roof	Gutter/Pipe Discharge	✓			
86	Roof	Gutter/Pipe Discharge	✓			
87	Roof	Gutter/Pipe Discharge	✓			
88	Roof	Gutter/Pipe Discharge	✓			
69	Roof and Pavement	Sheet flow	✓	✓		
70	Roof, Pervious/Gravel, and Pavement	Sheet flow	✓			

- 1 Surface type corresponds to source material of stormwater at specified location.
- 2 Sample type corresponds to type of discharge and collection method.
- 3 For the stormwater source area sampling event, samples were collected for:

Total PFAS by Table 3+ Lab SOP. Samples were shipped to Lancaster Laboratories. Samples were not filtered (through the typical Table 3+ SOP requirement of a 0.2 µm filter) upon arrival at the laboratory.

4 - Select grab samples were also analyzed for the following:

Dissolved PFAS by Table 3+ Lab SOP using a 0.45  $\mu m$  filter (dissolved or filtrate PFAS, in ng/L).

Filtering was conducted at the lab.

Total Suspended Solids (TSS, in mg/L)

Solid residue collected on the filter (particulate PFAS, in ng/mL)

TR0795A

## TABLE B3 PFAS AND ASSOCIATED ANALYTICAL METHODS Chemours Fayetteville Works, North Carolina

Analytical Method	Common Name	Chemical Name	CASN	Chemical Formula
	HFPO-DA*	Hexafluoropropylene oxide dimer acid	13252-13-6	C6HF11O3
ŀ	PEPA	Perfluoro-2-ethoxypropionic acid	267239-61-2	C5HF9O3
	PFECA-G	Perfluoro-4-isopropoxybutanoic acid	801212-59-9	C12H9F9O3S
	PFMOAA	Perfluoro-2-methoxyacetic acid	674-13-5	C3HF5O3
	PFO2HxA	Perfluoro-3,5-dioxahexanoic acid	39492-88-1	C4HF7O4
	PFO3OA	Perfluoro-3,5,7-trioxaoctanoic acid	39492-89-2	C5HF9O5
-	PFO4DA PMPA	Perfluoro-3,5,7,9-tetraoxadecanoic acid	39492-90-5 13140-29-9	C6HF11O6 C4HF7O3
•		Perfluoro-2-methoxypropionic acid 2,2,3,3-tetrafluoro-3-({1,1,1,2,3,3-hexafluoro-3-[(1,2,2,2-		
	Hydro-EVE Acid	tetrafluoroethyl)oxy]propan-2-yl oxy)propionic acid 2,2,3,3-tetrafluoro-3-{[1,1,1,2,3,3-hexafluoro-3-[(1,2,2-	773804-62-9	C8H2F14O4
	EVE Acid	trifluoroethenyl)oxy]propan-2-yl}oxy)propionic acid	69087-46-3	C8HF13O4
	PFECA B	Perfluoro-3,6-dioxaheptanoic acid	151772-58-6	C5HF9O4
	R-EVE	Pentanoic acid, 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-	2416366-22-6	C8H2F12O5
		2,2,3,3,4,5,5,5-octafluoro		
Table 3+ Lab SOP	PFO5DA R-PSDA	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid Pentanoic acid, 2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-	39492-91-6 2416366-18-0	C7HF13O7 C7H2F12O6S
	R-PSDCA	2-sulfoethoxy) Ethanesulfonic acid, 1,1,2,2-tetrafluoro-2-[1,2,2,3,3-pentafluoro-	2416366-21-5	C6H2F12O4S
-		1-(trifluoromethyl)propoxy] Acetic acid, 2-fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2-		
	Hydrolyzed PSDA	tetrafluoro-2-sulfoethoxy)propoxy]  1,1,2,2,4,5,5,5-heptafluoro-3-oxapentanesulfonic acid; or 2-	2416366-19-1	C7H3F11O7S
	NVHOS	(1,2,2,4,3,3,5-nephariuoro-3-oxapenianesunonic acid; or 1-(1,1,2,2-tetrafluoro-2-sulfoethoxy)-1,2,2,2-tetafluoroethane	1132933-86-8	C4H2F8O4S
	PES	Perfluoro-2-ethoxyethanesulfonic acid	113507-82-7	C4HF9O4S
	PS Acid	Ethanesulfonic acid, 2-[1-[difluoro[(1,2,2-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro	29311-67-9	C7HF13O5S
	Hydro-PS Acid	Ethanesulfonic acid, 2-[1-[difluoro(1,2,2,2- tetrafluoroethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2- tetrafluoro	749836-20-2	C7H2F14O5S
	PFBA	Perfluorobutanoic acid	375-22-4	C4HF7O2
	PFDA	Perfluorodecanoic acid	335-76-2	C10HF19O2
	PFDoA	Perfluorododecanoic acid	307-55-1	C12HF23O2
	PFHpA	Perfluoroheptanoic acid	375-85-9	C7HF13O2
	PFNA	Perfluorononanoic acid	375-95-1	C9HF17O2
	PFOA	Perfluorooctanoic acid	335-67-1	C8HF15O
	PFHxA	Perfluorohexanoic acid	307-24-4	C6HF11O2
	PFPeA	Perfluoropentanoic acid	2706-90-3	C5HF9O2
	PFTeA	Perfluorotetradecanoic acid	376-06-7	C14HF27O2
•	PFTriA	Perfluorotridecanoic acid	72629-94-8	C13HF25O2
•	PFUnA	Perfluoroundecanoic acid	2058-94-8	C11HF21O2
	PFBS PFDS	Perfluorobutanesulfonate  Perfluorodecanesulfonate	375-73-5 335-77-3	C4HF9SO C10HF21O3S
•	PFHpS	Perfluoroheptanesulfonic acid	375-92-8	C7HF15O3S
-	PFHxS	Perfluorohexanesulfonic acid	355-46-4	C6HF13SO3
•	PFNS	Perfluorononanesulfonate	68259-12-1	C9HF19O3S
	PFOS	Perfluorosulfonic acid	1763-23-1	C8HF17SO3
	PFPeS	Perfluoropentane sulfonic acid	2706-91-4	C5HF11O3S
EPA Method 537 Mod	10:2 FTS	Fluorotelomer sulfonate 10:2	120226-60-0	C12H5F21O3
	4:2 FTS	Fluorotelomer sulfonate 4:2	757124-72-4	C6H5F9O3S
	6:2 FTS	Fluorotelomer sulfonate 6:2	27619-97-2	C8H5F13SO3
	8:2 FTS	Fluorotelomer sulfonate 8:2	39108-34-4	C10H5F17O3S
[	NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid	2991-50-6	C12H8F17NO4S
	NEtPFOSA	N-ethylperfluoro-1-octanesulfonamide	4151-50-2	C10H6F17NO2S
Ţ	NEtPFOSAE	N-ethyl perfluorooctane sulphonamidoethanol	1691-99-2	C12H10F17NO3S
	NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid	2355-31-9	C11H6F17NO4S
	NMePFOSA	N-methyl perfluoro-1-octanesulfonamide	31506-32-8	C9H4F17NO2S
	NMePFOSAE	N-methyl perfluorooctane sulfonamidoethanol	24448-09-7	C11H8F17NO3S
	PFDOS	Perfluorododecanesulfonic acid	79780-39-5	C12HF25O3S
	PFHxDA	Perfluorohexadecanoic acid	67905-19-5	C16HF31O2
	PFODA	Perfluoroctadecanoic acid	16517-11-6	C18HF35O2
	PFOSA E 53P Major	Perfluorooctane Sulfonamide	754-91-6	C8H2F17NO2S
	F-53B Major F-53B Minor	F-53B Major F-53B Minor	73606-19-6 83329-89-9	C8HCIF16O4S C10HCIF20O4S
	ADONA	4,8-dioxa-3H-perfluorononanoate	958445-44-8	C7H2F12O4
	NaDONA	4,8-dioxa-5H-periluorononanoate  NaDONA	EVS1361	C/H2F12O4 
	DONA	DONA	919005-14-4	
	DONA	DOMA	71700J-1 <del>4-4</del>	

Notes:

\*HFPO-DA may also appear on the EPA Method 537 Mod analyte list EPA - Environmental Protection Agency
PFAS - per- and polyfluoroalkyl substances
SOP - Standard Operating Procedure

# TABLE B4 OCTOBER 2019 SITEWIDE STORMWATER SAMPLING FIELD NOTES Chemours Fayetteville

Works, North Carolina

	Works, North Carolina									
<b>Location ID</b>	Sample Date and Time	Temperature (°C)	Sky	Precipitation	Wind (mph)	pН	TDS	Turbidity	Observations	
55	10/16/19 9:48	18	Cloudy	Rain	5.00	4.95	0.066	255		
52	10/16/19 10:10	20	Cloudy	Rain	5.00	5.36	0.023	608		
10	10/16/19 10:30	19	Cloudy	Rain	6.00	5.68	0.037	53.5	Taken further up from road because of vac truck	
40	10/16/19 10:42	19	Cloudy	Rain	6.00	5.86	0.057	11.3		
41	10/16/19 10:45	19	Cloudy	Rain	6.00	5.9	0.049	80		
2	10/16/19 11:00	19	Cloudy	Rain	6.00	6.09	0.027	100		
25	10/16/19 11:05	19	Cloudy	Rain	6.00	5.97	0.016	16.2		
3	10/16/19 11:10	19	Cloudy	Rain	6.00	6	0.011	136		
27	10/16/19 11:25	19	Cloudy	Rain	6.00	6.07	0.012	1000	Great deal of leaf litter in ditch	
28	10/16/19 11:30	19	Cloudy	Rain	6.00	6.07	0.014	105		
5	10/16/19 11:50	21	Cloudy	Rain	6.00	6.36	0.016	15.4		
30	10/16/19 11:55	21	Cloudy	Rain	6.00	5.85	0.024	151		
31	10/16/19 12:10	21	Cloudy	Rain	8.00	5.83	0.013	154	MS/REP/DUP	
32	10/16/19 12:20	21	Cloudy	Rain	8.00	6.26	0.019	1000	MS REP DUP	
34	10/16/19 12:45	21	Cloudy	None	8.00	6.34	0.032	890		
33	10/16/19 12:40	21	Cloudy	None	8.00	6.25	0.026	822		
54	10/16/19 12:55	21	Cloudy	None	8.00	6.55	0.023	1000		
36	10/16/19 13:05	21	Cloudy	None	8.00	6.57	0.036	12.1		
13	10/16/19 13:20	21	Cloudy	Rain	8.00	6.69	0.017	9.5		
37	10/16/19 13:27	22	Cloudy	None	9.00	6.43	0.05	1000		
39	10/16/19 13:50	22	Cloudy	None	5.00	6.78	0.047	0.8		
38	10/16/19 13:35	22	Cloudy	None	3.00	6.07	0.026	0.2		
35	10/16/19 13:20	22	Cloudy	None	2.00	6.71	0.025	86.4		
42	10/16/19 10:26	19	Cloudy	Rain	3.00	5.4	0.048	16.3	Took from larger white plastic pipe (East side)	
35	10/16/19 10:55	19	Cloudy	None	6.00	5.81	0.024	66.4	Taken from opposing side of 35	
38	10/16/19 11:13	20	Cloudy	Rain	3.00	5.91	0.036	14.4		
39	10/16/19 11:23	20	Cloudy	Rain	3.00	6.28	0.061	1.8		
42	10/16/19 11:50	21	Cloudy	None	5.00	6.55	0.023	13.2		
35	10/16/19 12:10	21	Cloudy	None	5.00	6.52	0.023	52.4		
38	10/16/19 12:25	21	Cloudy	None	3.00	6.46	0.032	0		
39	10/16/19 12:35	21	Cloudy	None	4.00	6.71	0.049	7.2		
42	10/16/19 12:45		Cloudy	None		6.72	0.03	7		

# TABLE B5 MARCH 2020 TARGETED SURFACE TYPE SAMPLING FIELD NOTES Chemours Fayetteville Works, North

Carolina

							Caronna			
Location ID	Sample Date and Time	Temperature (°C)	Sky	Precipitation	Wind (mph)	Measured Flow Rate (L/min)	pН	TDS	Turbidity	Observations
42	3/5/20 11:20	11	Cloudy	Rain	4.00	1.8	7.72	0.15	7.99	Flow from pipe
43	3/5/20 11:30	11	Cloudy	Rain	4.00	2.1	7.85	0.13	126.35	Flow from pipe
58	3/5/20 12:45	10	Cloudy	Rain	4.00	2.3	7.71	0	1.83	Sample from roof of building
59	3/5/20 12:50	10	Cloudy	Rain	4.00	1.4	7.6	0.03	33.56	Sample most likely from pavement
60	3/5/20 12:55	10	Cloudy	Rain	4.00	1.3	7.66	0.02	1.72	Sample coing from roof of building
61	3/5/20 11:15	11	Cloudy	Rain	2.00	NS	7.83	0.11	139.87	Sample taken from beneath grate. Flow coming from gravel/sand/grass field to the NW. Couldn't get flow due to multiple entry locations into grate.
62	3/5/20 15:00	10	Cloudy	Rain	4.00	0.3	8.39	0.12	49.77	None
63	3/5/20 10:45	11	Cloudy	Rain	6.00	NS	7.99	0.23	189.88	Collected sample from water flowing into drainage ditch. Water flowing from gravel area to the north. Could not get flow rate.Sample from imperious surface
63A	3/5/20 13:45	9	Cloudy	Rain	8.00	3.1	7.22	0.01	4.34	Sample coming from gravel area west of pipe, sampled from pipe.
64	3/5/20 13:20	11	Cloudy	Rain	8.00	3	7.28	0.02	38.7	Sample flowing from gravel area south of culvert
65	3/5/20 13:30	11	Cloudy	Rain	8.00	NS	7.52	0.04	338	Sample coming from gravel area south of colvert and also from pavement (road) west of location. Can't get flow rate due to rocks
66	3/5/20 13:50	9	Cloudy	Rain	7.00	0.25	7.08	0.01	1.64	Sample from roof of building
67	3/5/20 14:00	9	Cloudy	Rain	7.00	0.57	7.03	0.02	1.61	Sample from roof
68	3/5/20 14:30	9	Cloudy	Rain	7.00	NS	6.7	0.04	420.72	Sample coming from pavement to the NW of grateUnable to get flow rate due to multiple entry's into grate
69	3/5/20 14:40	11	Cloudy	Rain	7.00	NS	7.69	0.02	23.73	No flow due to multiple entry waysSample from pavement coming from road and processing area
70	3/5/20 14:50	11	Cloudy	Rain	7.00		7.55	0.05	32.54	No flow rate. Sample coming from runoff from gravel area
71	3/5/20 13:20	11	Cloudy	Rain	4.00	0.3	7.85	0.13	163.16	Sample taken by dip rod. Flow coming from crack in the concrete, seeping from puddles around grate
72	3/5/20 23:10	10	Cloudy	Rain	3.00	0.2	7.79	0.1	2.57	Flow from roof
73	3/5/20 11:00	11	Cloudy	Rain	3.00	0.3	7.76	0.06	0.54	Flow from roof
75	3/5/20 14:30	10	Cloudy	Rain	6.00	0.2	7.54	0.06	0.3	Water coming from roof
76	3/5/20 14:00	10	Cloudy	Rain	6.00	0.2	7.69	0.16	4.51	Flow from rooftop
77	3/5/20 12:50	12	Cloudy	Rain	6.00	0.5	7,52	0.04	29.75	Flow coming from road run off into drain
78	3/5/20 12:40	11	Cloudy	Rain	5.00	0.1	7.25	0.05	1.29	Flow estimated by volume in tray after 30 seconds, sample taken from downspout from steel tray attached below overhead pipes. Sample taken from HDPE tray seen in photo.
79	3/5/20 23:40	11	Cloudy	Rain	5.00	NS	7.68	0.05	28.28	Sample coming from location 79. Under from trailer and into grate. Unclear if coming from pipe or from pool after the pipe.Couldn't get flow due to multiple entry points
80	3/5/20 11:45	10	Cloudy	Rain	5.00	NS	8.04	0.07	99.64	Sample coming from imperious surface. Loading/unloading area at IXM.Couldn't get flow due to multiple entrys into grate
83	3/5/20 14:15	9	Cloudy	Rain	8.00	1.1	7.27	0.07	15.24	Drain from ppa lab gutter, closest to ppa
84	3/5/20 12:20	10	Cloudy	Rain	8.00	1.7	7.13	0.05	15.97	Sentry glass sheet flow sampled with dip rod at pipe in ditch, located adjacent to ppa
85	3/5/20 15:30	9	Cloudy	Rain	7.00	0.2	6.53	0.01	27.82	Location flows into wood lined ditch, very light rain. Flow through the gravel

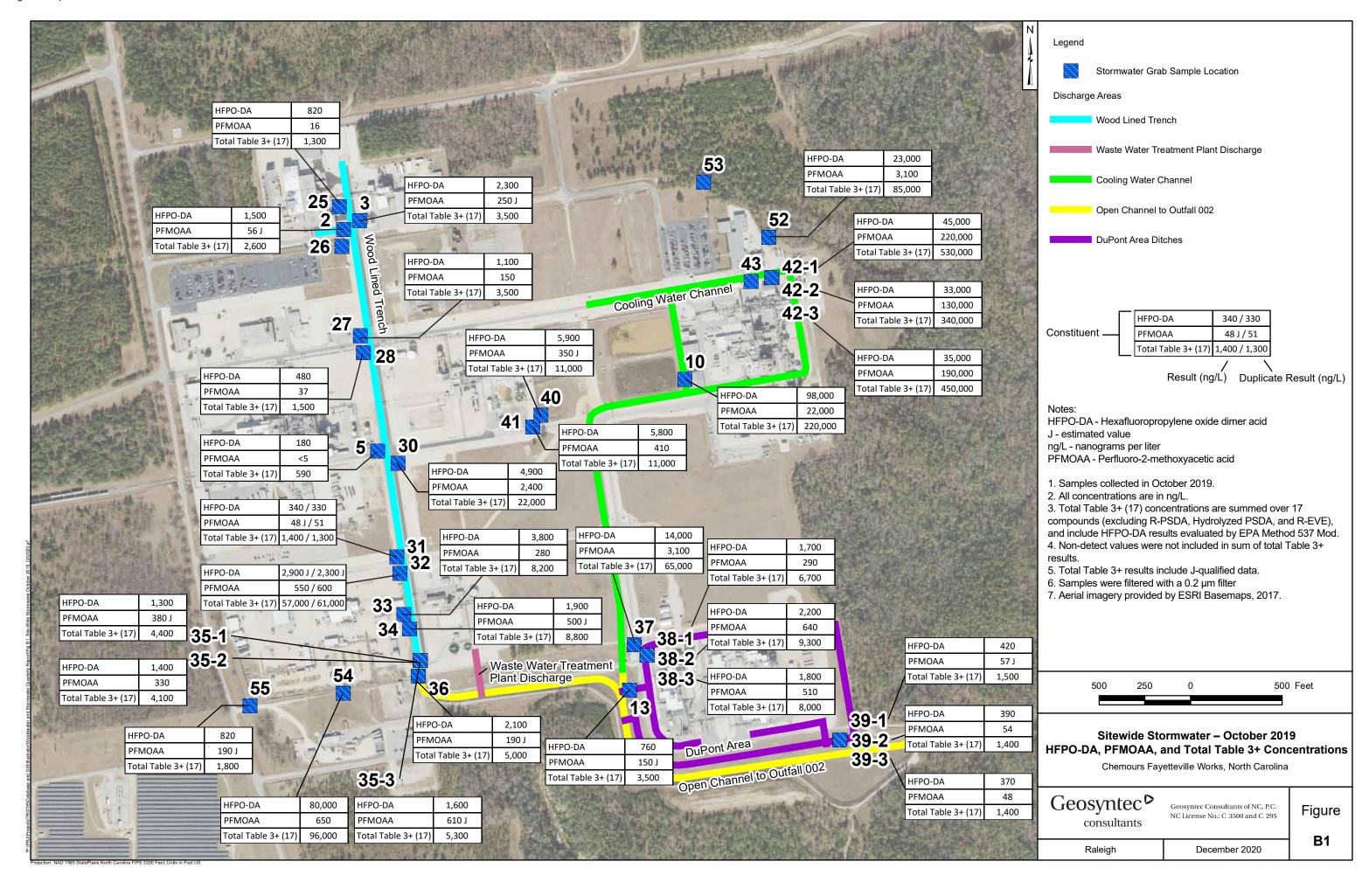
# TABLE B5 MARCH 2020 TARGETED SURFACE TYPE SAMPLING FIELD NOTES Chemours Fayetteville Works, North

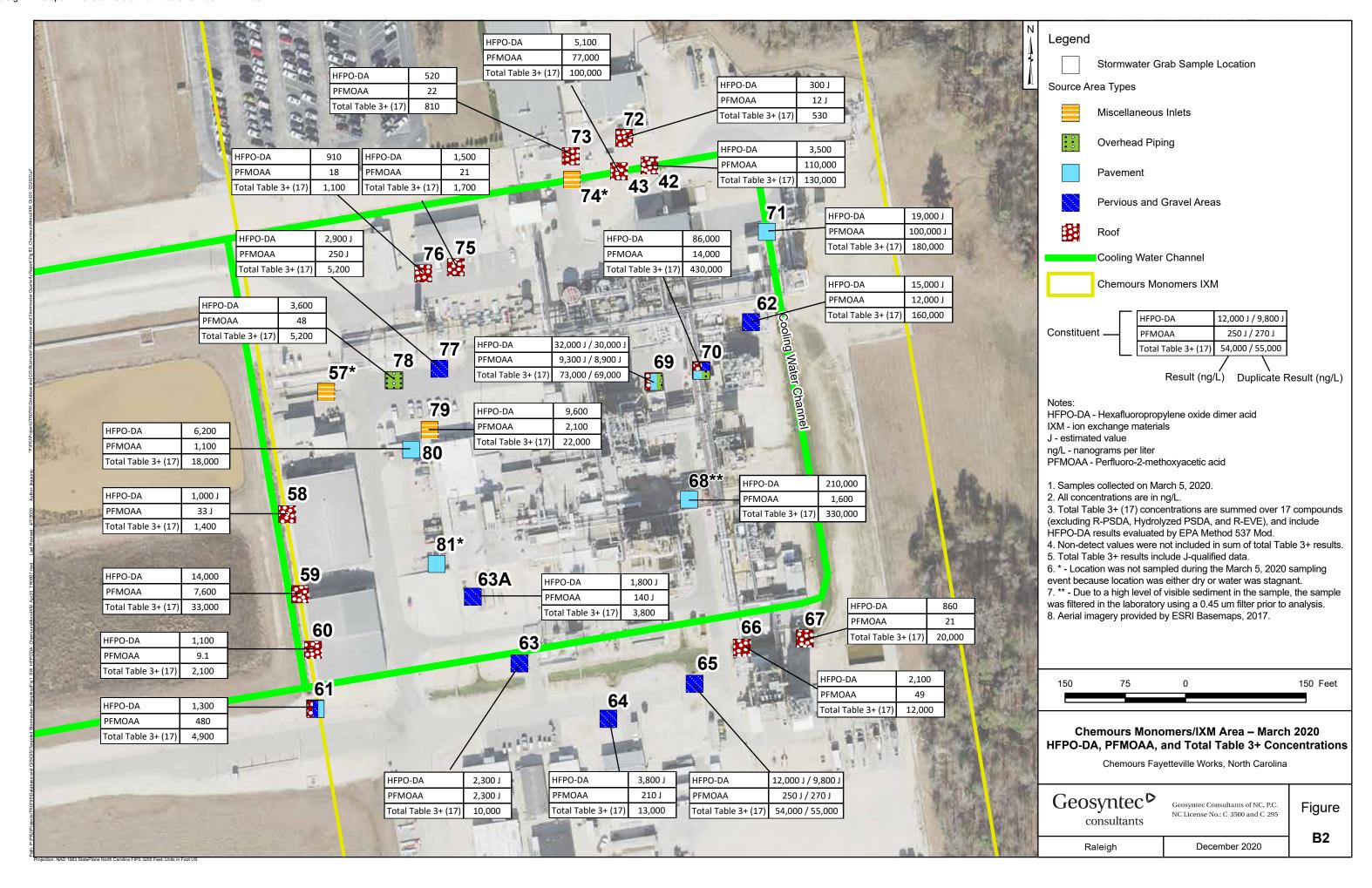
#### Carolina

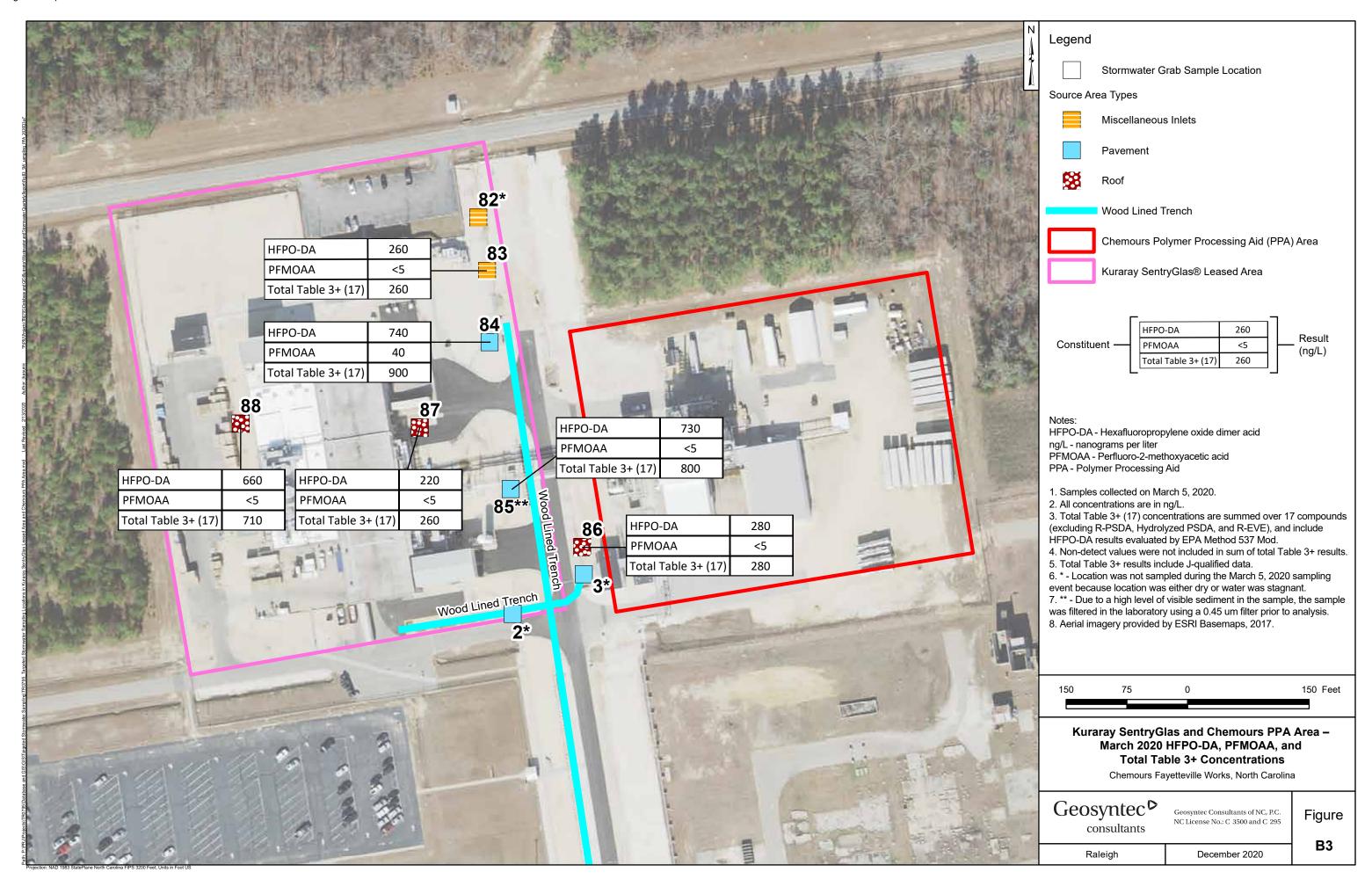
<b>Location ID</b>	Sample Date and Time	Temperature (°C)	Sky	Precipitation	Wind (mph)	Measured Flow Rate (L/min)	pН	TDS	Turbidity	Observations
86	3/5/20 13:43	10	Cloudy	Rain	7.00	0.061	6.87	0.1	5.82	Pipe coming from trailer roof at ppa. The pipe is the one closest to ppa not the entrance
87	3/5/20 11:40	11	Cloudy	Rain	7.00	13.2	7.59	0.07	4.13	Roof drain pipe drain from Sentry glass facing PPA
88	3/5/20 15:06	9	Cloudy	Rain	8.00	NS	6.87	0	411	second to last drainage pipe from roof at sentry glass, behind towards main gate. Could not measure flow, likely about 5 liters per minute

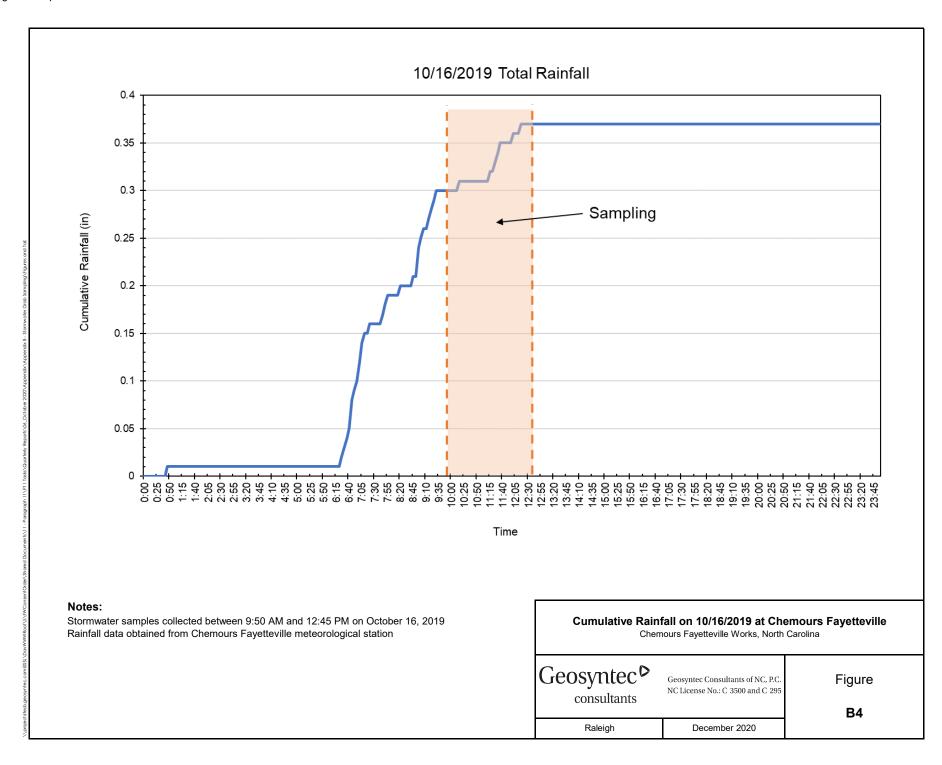
## **FIGURES**

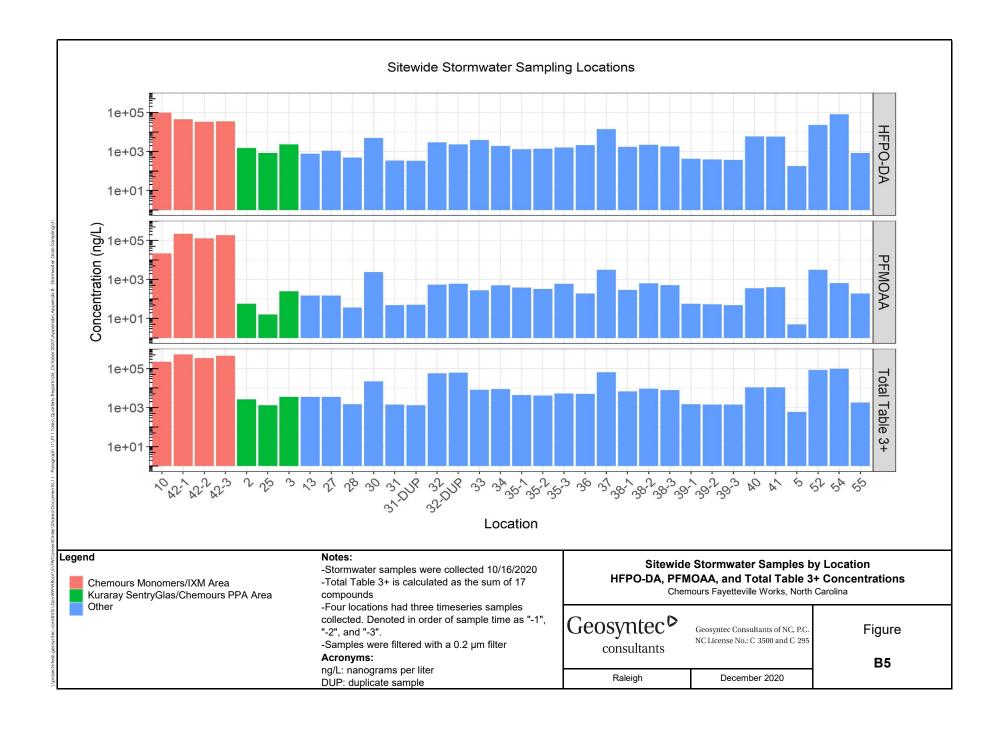
14 December 2020

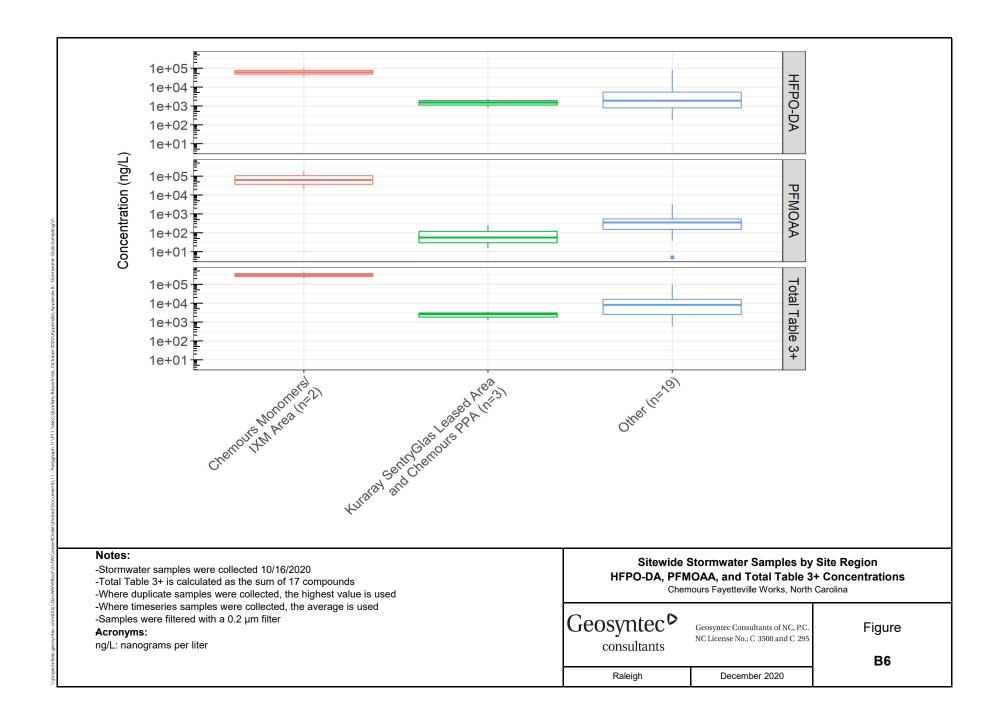


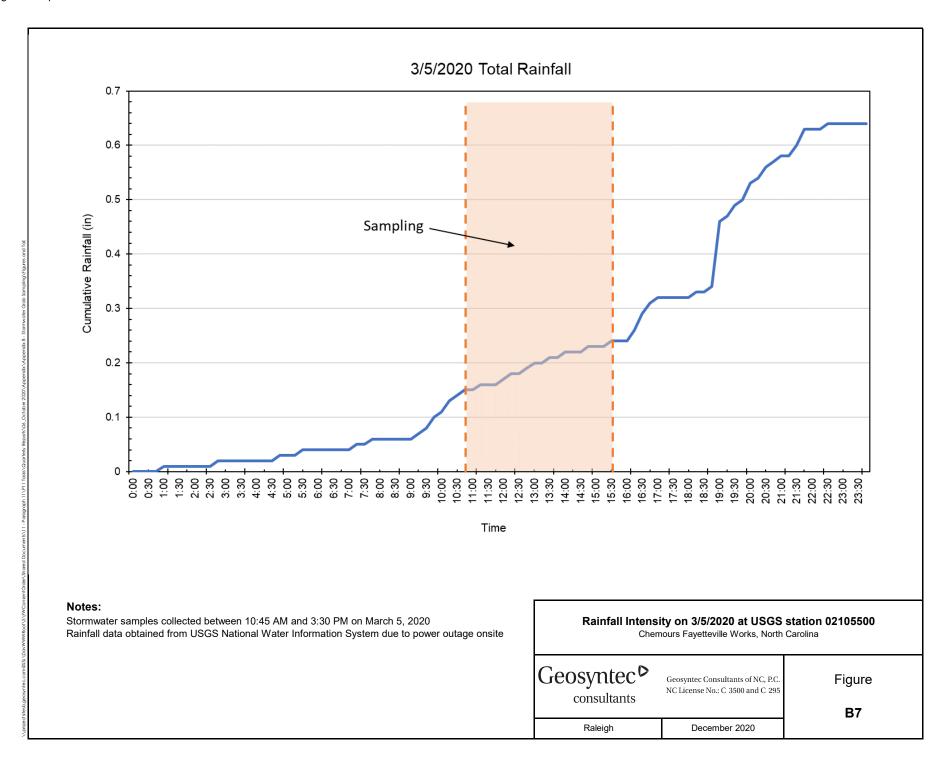


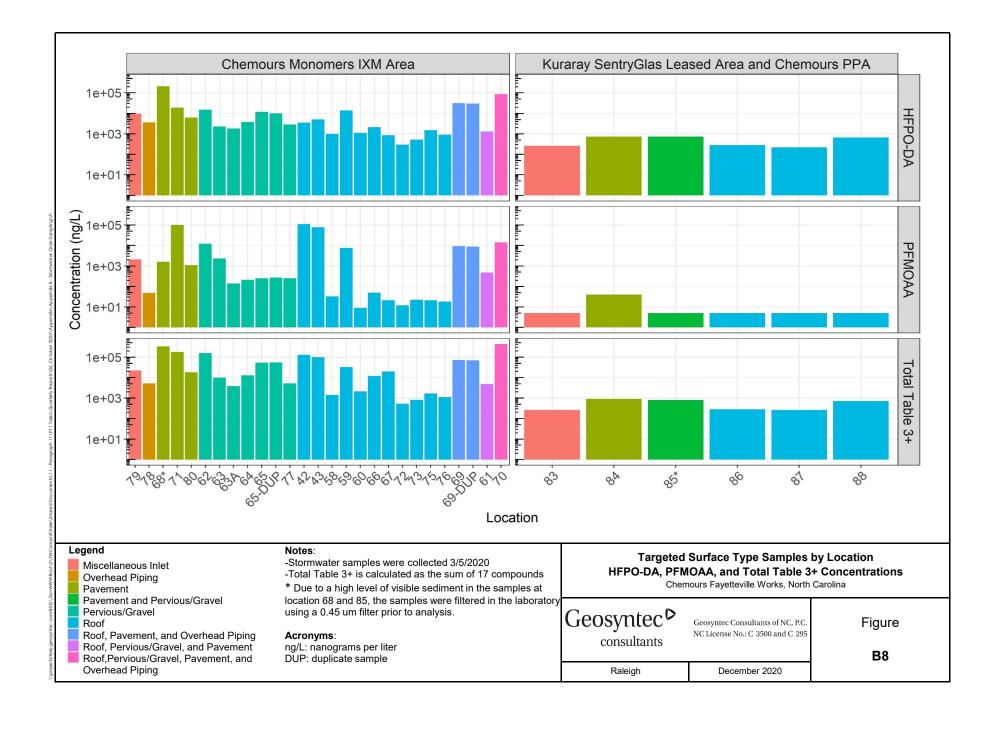


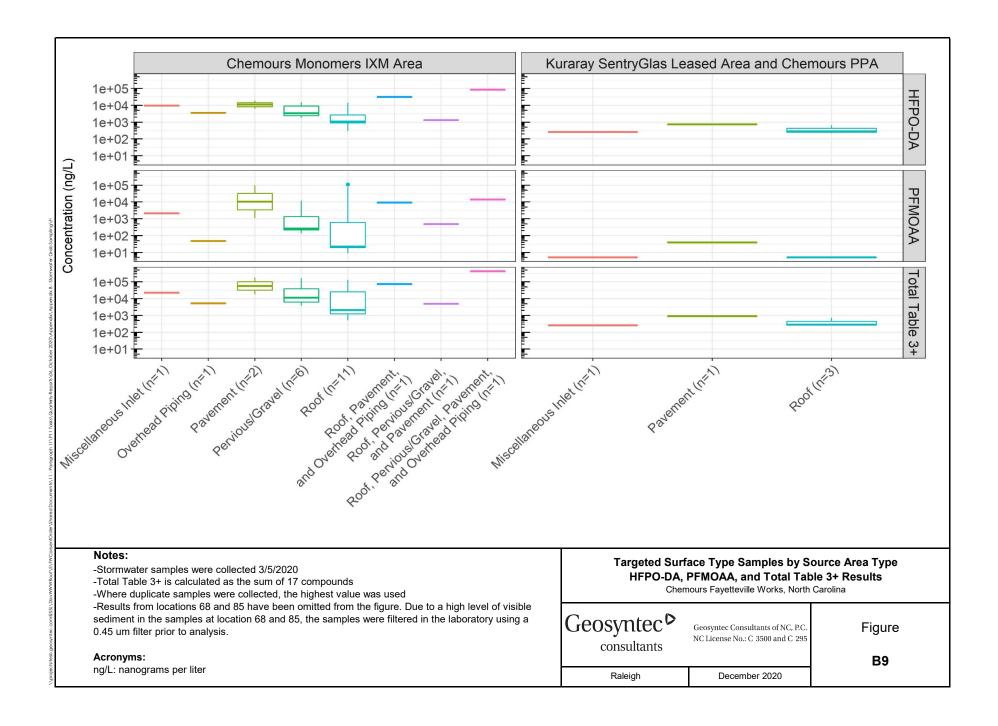


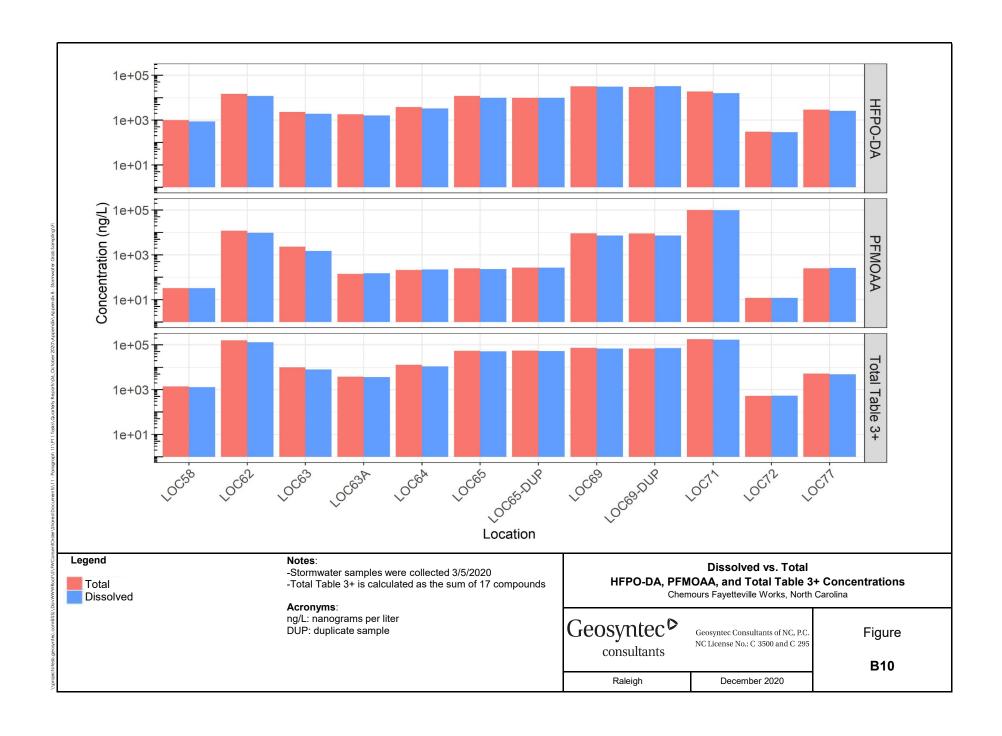












# **ATTACHMENT A: Field Forms**

December 2020

Attachment A-1

55	Title	Combined_Location_ID	sampling_date	sampling_time	samplers
10         10-16-2019         10:30         CHARLES PACE           40         10-16-2019         10:42         CHARLES PACE           41         10-16-2019         10:45         CHARLES PACE           2         10-16-2019         11:00         CHARLES PACE           25         10-16-2019         11:05         CHARLES PACE           3         10-16-2019         11:10         CHARLES PACE           27         10-16-2019         11:25         CHARLES PACE           28         10-16-2019         11:30         CHARLES PACE           28         10-16-2019         11:50         CHARLES PACE           30         10-16-2019         11:50         CHARLES PACE           31         10-16-2019         11:55         CHARLES PACE           31         10-16-2019         12:10         CHARLES PACE           32         10-16-2019         12:20         CHARLES PACE           34         10-16-2019         12:45         CHARLES PACE           33         10-16-2019         12:40         CHARLES PACE           54         10-16-2019         13:05         CHARLES PACE           36         10-16-2019         13:20         CHARLES PACE <t< td=""><td></td><td>55</td><td>10-16-2019</td><td>09:48</td><td>CHARLES PACE</td></t<>		55	10-16-2019	09:48	CHARLES PACE
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27       10-16-2019       11:25       CHARLES PACE         28       10-16-2019       11:30       CHARLES PACE         5       10-16-2019       11:50       CHARLES PACE         30       10-16-2019       11:55       CHARLES PACE         31       10-16-2019       12:10       CHARLES PACE         32       10-16-2019       12:20       CHARLES PACE         34       10-16-2019       12:45       CHARLES PACE         33       10-16-2019       12:40       CHARLES PACE         54       10-16-2019       12:55       CHARLES PACE         36       10-16-2019       13:05       CHARLES PACE         13       10-16-2019       13:20       CHARLES PACE         37       10-16-2019       13:20       CHARLES PACE         39       10-16-2019       13:50       BRANDON WEIDNER         38       10-16-2019       13:35       BRANDON WEIDNER         35       10-16-2019       13:20       BRANDON WEIDNER         35       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         39       10-16-2019       11:13       BRANDON WEIDNER		25	10-16-2019	11:05	CHARLES PACE
28       10-16-2019       11:30       CHARLES PACE         5       10-16-2019       11:50       CHARLES PACE         30       10-16-2019       11:55       CHARLES PACE         31       10-16-2019       12:10       CHARLES PACE         32       10-16-2019       12:20       CHARLES PACE         34       10-16-2019       12:45       CHARLES PACE         33       10-16-2019       12:40       CHARLES PACE         54       10-16-2019       12:55       CHARLES PACE         36       10-16-2019       13:05       CHARLES PACE         13       10-16-2019       13:20       CHARLES PACE         37       10-16-2019       13:27       CHARLES PACE         39       10-16-2019       13:50       BRANDON WEIDNER         38       10-16-2019       13:35       BRANDON WEIDNER         35       10-16-2019       13:20       BRANDON WEIDNER         35       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         39       10-16-2019       11:13       BRANDON WEIDNER         39       10-16-2019       11:23       BRANDON WEIDNER <td></td> <td>3</td> <td>10-16-2019</td> <td>11:10</td> <td>CHARLES PACE</td>		3	10-16-2019	11:10	CHARLES PACE
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31       10-16-2019       12:10       CHARLES PACE         32       10-16-2019       12:20       CHARLES PACE         34       10-16-2019       12:45       CHARLES PACE         33       10-16-2019       12:40       CHARLES PACE         54       10-16-2019       12:55       CHARLES PACE         36       10-16-2019       13:05       CHARLES PACE         13       10-16-2019       13:20       CHARLES PACE         37       10-16-2019       13:27       CHARLES PACE         39       10-16-2019       13:50       BRANDON WEIDNER         38       10-16-2019       13:35       BRANDON WEIDNER         35       10-16-2019       13:20       BRANDON WEIDNER         42       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         38       10-16-2019       11:13       BRANDON WEIDNER         39       10-16-2019       11:23       BRANDON WEIDNER         42       10-16-2019       11:23       BRANDON WEIDNER         35       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER <td></td> <td>5</td> <td>10-16-2019</td> <td>11:50</td> <td>CHARLES PACE</td>		5	10-16-2019	11:50	CHARLES PACE
32       10-16-2019       12:20       CHARLES PACE         34       10-16-2019       12:45       CHARLES PACE         33       10-16-2019       12:40       CHARLES PACE         54       10-16-2019       12:55       CHARLES PACE         36       10-16-2019       13:05       CHARLES PACE         13       10-16-2019       13:20       CHARLES PACE         37       10-16-2019       13:27       CHARLES PACE         39       10-16-2019       13:50       BRANDON WEIDNER         38       10-16-2019       13:35       BRANDON WEIDNER         35       10-16-2019       13:20       BRANDON WEIDNER         42       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         38       10-16-2019       11:13       BRANDON WEIDNER         39       10-16-2019       11:23       BRANDON WEIDNER         42       10-16-2019       11:23       BRANDON WEIDNER         39       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER         35       10-16-2019       12:25       BRANDON WEIDNER<		30	10-16-2019	11:55	CHARLES PACE
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35       10-16-2019       13:20       BRANDON WEIDNER         42       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         38       10-16-2019       11:13       BRANDON WEIDNER         39       10-16-2019       11:23       BRANDON WEIDNER         42       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER         38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		39	10-16-2019	13:50	BRANDON WEIDNER
42       10-16-2019       10:26       BRANDON WEIDNER         35       10-16-2019       10:55       BRANDON WEIDNER         38       10-16-2019       11:13       BRANDON WEIDNER         39       10-16-2019       11:23       BRANDON WEIDNER         42       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER         38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		38	10-16-2019	13:35	BRANDON WEIDNER
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39       10-16-2019       11:23       BRANDON WEIDNER         42       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER         38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		35	10-16-2019	10:55	BRANDON WEIDNER
42       10-16-2019       11:50       BRANDON WEIDNER         35       10-16-2019       12:10       BRANDON WEIDNER         38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		38	10-16-2019	11:13	BRANDON WEIDNER
35       10-16-2019       12:10       BRANDON WEIDNER         38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		39	10-16-2019	11:23	BRANDON WEIDNER
38       10-16-2019       12:25       BRANDON WEIDNER         39       10-16-2019       12:35       BRANDON WEIDNER		42	10-16-2019	11:50	BRANDON WEIDNER
39 10-16-2019 12:35 BRANDON WEIDNER		35	10-16-2019	12:10	BRANDON WEIDNER
		38	10-16-2019	12:25	BRANDON WEIDNER
42 10-16-2019 12:45 BRANDON WEIDNER		39	10-16-2019	12:35	BRANDON WEIDNER
		42	10-16-2019	12:45	BRANDON WEIDNER

additional	sky	precip	air_temp	wind	sampling_method	Sample_pH
	Cloudy	Rain	65	5	Grab	4.95
	Cloudy	Rain	68	5	Grab	5.36
	Cloudy	Rain	66	6	Grab	5.68
	Cloudy	Rain	66	6	Grab	5.86
	Cloudy	Rain	66	6	Grab	5.9
	Cloudy	Rain	66	6	Grab	6.09
	Cloudy	Rain	67	6	Grab	5.97
	Cloudy	Rain	67	6	Grab	6
	Cloudy	Rain	67	6	Grab	6.07
	Cloudy	Rain	67	6	Grab	6.07
	Cloudy	Rain	69	6	Grab	6.36
	Cloudy	Rain	69	6	Grab	5.85
	Cloudy	Rain	70	8	Grab	5.83
	Cloudy	Rain	70	8	Grab	6.26
	Cloudy	None	70	8	Grab	6.34
	Cloudy	None	70	8	Grab	6.25
	Cloudy	None	70	8	Grab	6.55
	Cloudy	None	70	8	Grab	6.57
	Cloudy	Rain	70	8	Grab	6.69
	Cloudy	None	72	9	Grab	6.43
Ed M.	Cloudy	None	71	5	Grab	6.78
	Cloudy	None	71	3	Grab	6.07
	Cloudy	None	72	2	Grab	6.71
Ed M.	Cloudy	Rain	66	3	Grab	5.4
Ed M.	Cloudy	None	67	6	Grab	5.81
Ed M.	Cloudy	Rain	68	3	Grab	5.91
Ed M.	Cloudy	Rain	68	3	Grab	6.28
Ed M.	Cloudy	None	69	5	Grab	6.55
	Cloudy	None	70	5	Grab	6.52
	Cloudy	None	70	3	Grab	6.46
Ed M.	Cloudy	None	70	4	Grab	6.71
	Cloudy	None			Grab	6.72

Sample_TDS	Sample_Tubidity	obs_spl_location	obs_misc
0.066	255		
0.023	608		
0.037	53.5	Taken further up from road because of vac truck	
0.057	11.3		
0.049	80		
0.027	100		
0.016	16.2		
0.011	136		
0.012	1000	Great deal of leaf litter in ditch	
0.014			
0.016	15.4		
0.024			
0.013		MS/REP/DUP	
0.019		MS REP DUP	
0.032	890		
0.026	822		
0.023	1000		
0.036			
0.017	9.5		
0.05	1000		
0.047			TS3
0.026			TS3
0.025	86.4		TS3
0.048		Took from larger white plastic pipe (East side)	
0.024	66.4	Taken from opposing side of 35	
0.036			
0.061	1.8		
0.023			TS2
0.023	52.4		TS2
0.032	0		TS2
0.049	7.2		TS2
0.03	7		TS3

Item Type	Path
Item	sites/Field_Tablet_Monitoring_Data/Lists/Fayetteville_Stormwater_Sampling_Data

Site Name: Chemours Fayetteville Location ID: 42

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2025 Sampling Time: 11:20

# WEATHER CONDITIONS

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

Sampling Method:	Grab		Flow Rate:	1.8	liters per minute	l
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.72	0.15	7.99

# **Photo at Sample Location**



### **Observation of Sample Location**

Flow from pipe





Site Name: Chemours Fayetteville Location ID: 43

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:30

# **WEATHER CONDITIONS**

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

Sampling Method:	Grab	Flow Rate:	2.1	liters per minute

pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.85	0.13	126.35

# **Photo at Sample Location**



### **Observation of Sample Location**

Flow from pipe





Site Name: Chemours Fayetteville Location ID: 58

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:45

# WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

	Sampling Method:	Grab		Flow Rate:			ì
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.71	0.00	1.83

### Photo at Sample Location



### **Observation of Sample Location**

250ml/6.56s

Sample from roof of building





Site Name: Chemours Fayetteville Location ID: 59

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:50

# WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

	Sampling Method:	Grab		Flow Rate:			ì
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.60	0.03	33.56

# Photo at Sample Location



### **Observation of Sample Location**

250ml/10.45s flow rate
Sample, most likely from pavement





Site Name: Chemours Fayetteville Location ID: 60

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:55

# WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

	Sampling Method:	Grab		Flow Rate:			ì
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.66	0.02	1.72

# **Photo at Sample Location**



### **Observation of Sample Location**

250ml/12s flow rate
Sample coming from roof of building





Site Name: Chemours Fayetteville Location ID: 61

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:15

### **WEATHER CONDITIONS**

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	2.00

Sampling Method:	Grab	Flow Rate:		
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.83	0.11	139.87

### Photo at Sample Location



### **Observation of Sample Location**

Sample taken from beneath grate. Flow coming from gravel/sand/grass field to the NW Couldn't get flow to multiple entry locations into grate.





# STORMWATER SAMPLING RECORD Site Name: Chemours Fayetteville Location ID: 62 LUKE TART|OTHER, Danielle Delgado Samplers: Project Manager: Tracy Ovbey Sampling Date: 03-05-2020 Sampling Time: 15:00 **WEATHER CONDITIONS** 50.00 Temperature (F): Sky: Cloudy Precipitation: Rain Wind (mph) 4.00 Sampling Method: Grab Flow Rate: 0.3 liters per minute Total Dissolved рΗ **Solids Turbidity Photo at Sample Location** NTU mg/L 8.39 0.12 49.77 **Observation of Sample Location**





Site Name: Chemours Fayetteville Location ID: 63

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 10:45

### **WEATHER CONDITIONS**

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	6.00

	Sampling Method:	Grab		Flow Rate:			ì
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.99	0.23	189.88

### **Photo at Sample Location**



### **Observation of Sample Location**

Collected sample from water flowing into drainage ditch. Water flowing from gravel area to the north. Could not get flow rate.

Sample from imperious surface





Site Name: Chemours Fayetteville Location ID: 63A

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:45

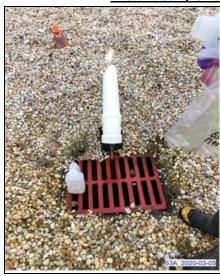
### **WEATHER CONDITIONS**

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

Sampling Method:	Grab		Flow Rate:		
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.22	0.01	4.34

### Photo at Sample Location



### **Observation of Sample Location**

250ml/4.79s flow rate

Sample coming from gravel area west of pipe, sampled from pipe.





Site Name: Chemours Fayetteville Location ID: 64

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:20

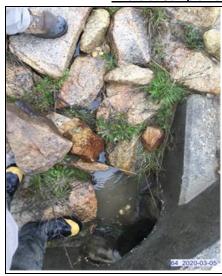
# WEATHER CONDITIONS

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

Sampling Method:	Grab		Flow Rate:	3	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.28	0.02	38.70

# **Photo at Sample Location**



### **Observation of Sample Location**

Sample flowing from gravel area south of colvert





Site Name: Chemours Fayetteville Location ID: 65

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:30

### **WEATHER CONDITIONS**

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

	Sampling Method:	Grab		Flow Rate:			ı
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.52	0.04	338.00

### Photo at Sample Location



### **Observation of Sample Location**

Sample coming from gravel area south of colvert and also from pavement (road) west of location Rate: can't get flow rate due to rocks





Site Name: Chemours Fayetteville Location ID: 66

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:50

# WEATHER CONDITIONS

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

	Sampling Method:	Grab		Flow Rate:			ì
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.08	0.01	1.64

### **Photo at Sample Location**



### **Observation of Sample Location**

Sample from roof of building 250ml/1 min





Site Name: Chemours Fayetteville Location ID: 67

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:00

# WEATHER CONDITIONS

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

Sampling Method:	Grab	Flow Rate:		
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.03	0.02	1.61

# Photo at Sample Location



# **Observation of Sample Location**

Sample from roof Flow rate: 250ml/26.34s





Site Name: Chemours Fayetteville Location ID: 68

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:30

#### **WEATHER CONDITIONS**

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

	Sampling Method:	Grab		Flow Rate:			ì
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
6.70	0.04	420.72

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Sample coming from pavement to the NW of grate
Unable to get flow rate due to multiple entry's into grate





Site Name: Chemours Fayetteville Location ID: 69

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:40

#### **WEATHER CONDITIONS**

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

	Sampling Method:	Grab		Flow Rate:			ì
--	------------------	------	--	------------	--	--	---

рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.69	0.02	23.73

## **Photo at Sample Location**



#### **Observation of Sample Location**

No flow due to multiple entry ways
Sample from pavement coming from road and processing area





Site Name: Chemours Fayetteville Location ID: 70

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:50

#### **WEATHER CONDITIONS**

Temperature (F): 51.00
Sky: Cloudy
Precipitation: Rain
Wind (mph) 7.00

	Sampling Method:	Grab		Flow Rate:			ì
--	------------------	------	--	------------	--	--	---

рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.55	0.05	32.54

## **Photo at Sample Location**



#### **Observation of Sample Location**

No flow rate

Sample coming from runoff from gravel area





Site Name: Chemours Fayetteville Location ID: 71

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:20

## **WEATHER CONDITIONS**

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	4.00

Sampling Method: Grab	Flow Rate:	0.3	liters per minute	l
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.85	0.13	163.16

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Sample taken by dip rod. Flow coming from crack in the concrete, seeping from puddles around grate





Site Name: Chemours Fayetteville Location ID: 72

Samplers: LUKE TART|OTHER, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:10

## **WEATHER CONDITIONS**

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	3.00

Sampling Method:	Grab		Flow Rate:	0.2	liters per minute	l
------------------	------	--	------------	-----	-------------------	---

рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.79	0.10	2.57

# **Photo at Sample Location**



#### **Observation of Sample Location**

Flow from roof





Site Name: Chemours Fayetteville Location ID: 73

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:00

## WEATHER CONDITIONS

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	3.00

Sampling Method:	Grab	Flow Rate:	0.3	liters per minute	
------------------	------	------------	-----	-------------------	--

pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.76	0.06	0.54

## **Photo at Sample Location**



#### **Observation of Sample Location**

Flow from roof





Site Name: Chemours Fayetteville Location ID: 75

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:30

## WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	6.00

Sampling Method:	Grab	Flow Rate:	0.2	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.54	0.06	0.30

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Water coming from room





Site Name: Chemours Fayetteville Location ID: 76

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:00

## WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	6.00

Sampling Method:	Grab	Flow Rate:	0.2	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.69	0.16	4.51

# **Photo at Sample Location**



#### **Observation of Sample Location**

Flow from roof top





Site Name: Chemours Fayetteville Location ID: 77

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:50

## WEATHER CONDITIONS

Temperature (F):	53.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	6.00

Sampling Method: Grab Flow Rate: 0.5 liters p
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.52	0.04	29.75

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Flow coming from road run off into drain





Site Name: Chemours Fayetteville Location ID: 78

Samplers: LUKE TART|OTHER, Danielle Delgado Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:40

#### **WEATHER CONDITIONS**

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	5.00

Sampling Method: Grab	Flow Rate:	0.1	liters per minute
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.25	0.05	1.29

## **Photo at Sample Location**



#### **Observation of Sample Location**

Flow estimated by volume in tray after 30 seconds, sample taken from downspout from steel tray attached below overhead pipes. Sample taken from HDPE tray seen in photo.





Site Name: Chemours Fayetteville Location ID: 79

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:40

### WEATHER CONDITIONS

Temperature (F):	51.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	5.00

Sampling Method:	Grab	Flow Rate:		
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.68	0.05	28.28

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Sample coming from location 79. Under from trailer and into grate. Unclear if coming from pipe or from pool after the pipe.

Couldn't get flow due to multiple entry points





Site Name: Chemours Fayetteville Location ID: 80

Samplers: BRANDON WEIDNER|CHARLES PACE, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:45

### WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	5.00

	Sampling Method:	Grab		Flow Rate:			ĺ
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рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
8.04	0.07	99.64

# **Photo at Sample Location**



#### **Observation of Sample Location**

Sample coming from imperious surface. Loading/unloading area at IXM. Couldn't get flow due to multiple entrys into grate





Site Name: Chemours Fayetteville Location ID: 83

Samplers: KEN STUART, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 14:15

## WEATHER CONDITIONS

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

Sampling Method:	Grab		Flow Rate:	1.1	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.27	0.07	15.24

## **Photo at Sample Location**



#### **Observation of Sample Location**

drain from ppa lab gutter, closest to ppa





Site Name: Chemours Fayetteville Location ID: 84

Samplers: KEN STUART, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 12:20

#### **WEATHER CONDITIONS**

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

Sampling Method:	Grab	Flow Rate:	1.7	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.13	0.05	15.97

#### **Photo at Sample Location**



#### **Observation of Sample Location**

sentry glass sheet flow sampled with dip rod at pipe in ditch, located adjacent to ppa





Site Name: Chemours Fayetteville Location ID: 85

Samplers: KEN STUART, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 15:30

#### **WEATHER CONDITIONS**

Temperature (F):

Sky:

Cloudy

Precipitation:

Wind (mph)

7.00

Sampling Method: Grab Flow Rate: 0.2 liters per minute

pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
6.53	0.01	27.82

## **Photo at Sample Location**



#### **Observation of Sample Location**

location flows into wood lined ditch, very lt rain



|--|



Site Name: Chemours Fayetteville Location ID: 86

Samplers: KEN STUART, Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 13:43

## WEATHER CONDITIONS

Temperature (F):	50.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

Sampling Method: Grab	Flow Rate:	0.1	liters per minute
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pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
6.87	0.10	5.82

## **Photo at Sample Location**



#### **Observation of Sample Location**

pipe coming from trailer roof at ppa. The pipe is the one closest to ppa not the entrance



|--|



Site Name: Chemours Fayetteville Location ID: 87

Samplers: KEN STUART, Ryan Gableman Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 11:40

## WEATHER CONDITIONS

Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	7.00

Sampling Method:   Grab   Flow Rate:   13.2   liters per minute
---

pН	Total Dissolved Solids	Turbidity
	mg/L	NTU
7.59	0.07	4.13

#### **Photo at Sample Location**



#### **Observation of Sample Location**

Roof drain pipe drain from Sentry glass facing PPA



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Site Name: Chemours Fayetteville Location ID: 88

Samplers: KEN STUART, Ryan Gableman Project Manager: Tracy Ovbey

Sampling Date: 03-05-2020 Sampling Time: 15:06

## WEATHER CONDITIONS

Temperature (F):	49.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	8.00

	Sampling Method:	Grab		Flow Rate:			ì
--	------------------	------	--	------------	--	--	---

рН	Total Dissolved Solids	Turbidity
	mg/L	NTU
6.87	0.00	4.11

## Photo at Sample Location



#### **Observation of Sample Location**

second to last drainage pipe from roof at sentry glass, behind towards main gate



#### Attachment A-2

|--|



DocuSian Env	elope ID: 3296F1CC-	9476 4A30 07CD	604DAA2E6673
Docusign Lin	elupe ID. 32801 100-	0410-4A30-81CD-	004DAAZL0012

**ATTACHMENT B: Table 3+ Analytical Results** 

December 2020

T. d. TD	1.0010	1.0.012	1.000	1.0025	I O COM	1.0020	1.0.03	1.0.020	1.0621	1.0021	1.0022
Location ID	LOC10	LOC13	LOC2	LOC25	LOC27	LOC28	LOC3	LOC30	LOC31	LOC31 ASTW-LOC31-101619-D	LOC32
Field Sample ID  Sample Date	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019
QA/QC	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	DUP	10/16/2019
Sample Matrix	LIQUID	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Sample Delivery Group (SDG)	320-55408-1	320-55403-1	320-55413-1	320-55413-1	320-55413-1	320-55413-1	320-55413-1	320-55413-1	320-55401-1	320-55401-1	320-55401-1
Lab Sample ID	320-55408-2	320-55403-5	320-55413-2	320-55413-3	320-55413-4	320-55413-5	320-55413-1	320-55413-6	320-55401-2	320-55401-3	320-55401-4
Total Table 3+ SOP (ng/L)	320-33400-2	320-33403-3	320-33413-2	320-33413-3	320-33413-4	320-33413-3	320-33413-1	320-33413-0	320-33401-2	320-33401-3	320-33401-4
Hfpo Dimer Acid	98,000	760	1,500	820	1,100	480	2,300	4,900	340	330	2,900 J
PFMOAA	22,000	150 J	56 J	16	150	37	250 J	2,400	48 J	51	550
PFO2HxA	25,000	350	230	54	230	99	170	2,000	70	68	690
PFO3OA	14,000	160	43	16	170 J	27	97	2,600	16	16	610
PFO4DA	12,000	150	35	9.5	260	35	120	2,600	15	14	800
PFO5DA	9,700	96 J	18 J	5.9	280 J	33	48	1,500	15	15	630
PMPA	7,000	1,100	450	320	650	500 J	290	2,900	550	530	840
PEPA	3,400	440	160	57	400	210	110	1,300	260	260	390
PS Acid	2,900	68	3.7	<2	53	4.6	11	180	4.1	4.4	9,600
Hydro-PS Acid	9,300	52	18	4.4	47	11	22	450 J	14	14	40,000
R-PSDA	5,200	270 J	120 J	41 J	500 J	69 J	170 J	1,100	53 J	56 J	490
Hydrolyzed PSDA	4,300 J	350 J	22 J	9.2 J	170 J	29 J	110 J	1,900	15 J	16 J	3,300
R-PSDCA	380	<2	<2	<2	4.6	<2	<2	15	<2	<2	76
NVHOS	4,500	25	7.3	3.6	18	7.2	15	190	5.1	5	220
EVE Acid	5,700	55	14	8.2	32	7.9	19	150	8.4	8.5	63
Hydro-EVE Acid	3,900	63	17	9.5	68	9.2	39	490	13	13	110
R-EVE	2,700	200 J	96 J	43 J	150 J	56 J	110 J	1,000	95 J	98 J	84
PES	<23	<2	<2	<2	<2	<2	<2	<2	<2	<2	<23
PFECA B	<30	<2	<2	<2	<2	<2	<2	<2	<2	<2	<30
PFECA-G	<20	<2	<2 UJ	<2 UJ	<2 UJ	<2	<2 UJ	<2	<2	<2	<20
Total Table 3+ (17 compounds)	220,000	3,500	2,600	1,300	3,500	1,500	3,500	22,000	1,400	1,300	57,000
Total Table 3+ (20 compounds)	230,000	4,300	2,800	1,400	4,300	1,600	3,900	26,000	1,500	1,500	61,000
Other PFAS (ng/L)											
10:2 Fluorotelomer sulfonate	<18	<2	<2	<2	5.6	<2	<3.5	<8.8	<2	<2	<3.6
11Cl-PF3OUdS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<6.1
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<190	<20	<20	<20	<20	<20	<36	<93	<20	<20	<38
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<49	<48	<24	<24	<24	<95	<240	<24	<25	<100
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2								<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<20	 <20						<4	<4	<4
6:2 Fluorotelomer sulfonate 9Cl-PF3ONS	<190 <2	<20	<20	<20 <2	<20 <2	<20 <2	<36 <2	<93 <2	<20 <2	<20 <2	<38 <4.6
ADONA	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<3.6
NaDONA	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<3.6
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<36
N-ethylperfluoro-1-octanesulfonamide	<2								<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2								<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<59
Perfluorobutane Sulfonic Acid	2.2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutanoic Acid	980	65	17	7.1	41	19	9	72	10	10	48
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<6.1
Perfluorodecanoic Acid	7.4	<2	<2	<2	6.8	3.1	<2	<2	<2	<2	3.6 J
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<8.6
Perfluorododecanoic Acid	3.3	<2	<2	<2	6.1	<2	<2	<2	<2	<2	2.2
				\ <u>Z</u>		-2					2.6
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<3.6
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid	<2 130	<2 4.2	<2 5.2	<2 <2	<2 12	<2 2.8	<2 <b>8.5</b>	23	3.8	4.1	110 J
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<2 130 <2	<2 4.2 <2	<2 5.2 <2	<2 <2 <2	<2 12 2.3	<2 2.8 <2	<2 <b>8.5</b> <2	<b>23</b> <2	<b>3.8</b> <2	<b>4.1</b> <2	110 J <2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid	<2 130 <2 <2	<2 4.2 <2 <2	<2 5.2 <2 <2	<2 <2 <2 <2 <2	<2 12 2.3 12	<2 2.8 <2 <2	<2 8.5 <2 <2	23 <2 <2	3.8 <2 <2	4.1 <2 <2	110 J <2 <2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	<2 130 <2 <2 <2 290	<pre>&lt;2 4.2 &lt;2 &lt;2 6.6</pre>	<2 5.2 <2 <2 <2 5.6	<2 <2 <2 <2 <2 <2 2,2	<2 12 2.3 12 16	<2 2.8 <2 <2 <2 5.4	<2 8.5 <2 <2 <2 6.6	23 <2 <2 12	3.8 <2 <2 <2 4	4.1 <2 <2 <2 3.9	110 J <2 <2 <2 32
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid	<2 130 <2 <2 <2 290 <2	<pre>&lt;2 4.2 &lt;2 &lt;2 6.6 &lt;2</pre>	<2 5.2 <2 <2 <2 5.6 <2	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<2 12 2.3 12 16 <2	<2 2.8 <2 <2 <2 5.4 <2	<2 8.5 <2 <2 <2 6.6 <2	23 <2 <2 <2 12 <2	3.8 <2 <2 <2 4 <2	4.1 <2 <2 <2 3.9 <2	110 J <2 <2 <2 32 <3.1
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid	<2 130 <2 <2 <2 290 <2 33	<pre>&lt;2 4.2 &lt;2 &lt;2 6.6 &lt;2 3</pre>	<2 5.2 <2 <2 <2 5.6 <2 <2	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<2 12 2.3 12 16 <2 4	<2 2.8 <2 <2 <2 5.4 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2 8.5 <2 <2 <2 6.6 <2 <2	23 <2 <2 <12 12 <2 5.9	3.8 <2 <2 <4 <2 <4 <2 <2 <2 <2 <2 <2	4.1 <2 <2 <2 3.9 <2 <2	110 J <2 <2 <2 32 <3.1 21
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid	<2 130 <2 <2 290 <2 33 <2	<pre> 4.2 4.2 </pre> <pre> 4.6 6.6  &lt;</pre>	<2 5.2 <2 <2 5.6 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<2 12 2.3 12 16 <2 4 <2	<2 2.8  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2	<2 8.5 <2 <2 <2 6.6 <2 <2 <2 <2	23 <2 <2 <12 <12 <2 5.9 <2	3.8 <2 <2 <4 <2 <2 <4 <2 <2 <2 <2 <2 <2 <2	4.1	110 J <2 <2 <2 32 <3.1 21 <2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 130 <2 <2 <2 290 <2 33 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	4.2 4.2 <2 <2 6.6 <2 3 <2 <2	<pre>&lt;2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;2</pre>	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2	<2 2.8  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2	<2 8.5 <2 <2 6.6 <2 <2 <2 <2 <2 <2	23 <2 <2 <12 <12 <2 <5.9 <2 <2 <2 <2 <2	3.8 <2 <2 <4 <2 <2 <4 <2 <2 <2 <2 <2 <2 <2 <2 <2	4.1	110 J <2 <2 <2 32 <3.1 21 <2 <2 <2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 130 <2 <2 <2 290 <2 33 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	4.2 4.2 4.2 4.2 4.2 4.3 6.6 4.3 4.3 4.3 4.3 4.3 4.3 4.3 4.3	<pre>&lt;2 5.2 </pre> <pre>&lt;2 </pre> <pre>&lt;2 5.6 </pre> <pre>&lt;2 </pre> <2  <2  <2  <2  <2  <2  <2	<pre>&lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 <2 <2	<2 2.8  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2  <2	<2 8.5 <2 <2 6.6 <2 <2 <2 <2 <2 <2 <2	23 <2 <2 12 <2 5.9 <2 <2 <2 <2 <2 <2 <2 <2	3.8 <-2 <-2 4 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2	4.1	110 J
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<pre>&lt;2 130 </pre> <pre>&lt;2 22 290 </pre> <pre>&lt;2 33 </pre> <pre>&lt;2 </pre> <pre>&lt;2 </pre> <pre>1,000</pre>	Q   4.2   Q   Q   Q   Q   Q   Q   Q   Q   Q	<pre>&lt;2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;7.3</pre>	<pre>&lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 <2 24	<2 2.8 <2 <2 5.4 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <7.9	<pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;7.4</pre>	23	3.8 <-2 <-2 4 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2 4.7	4.1	110 J
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<pre>&lt;2 130 &lt;2 &lt;2 &lt;2 290 &lt;2 33 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 1,000 2.3</pre>	4.2   4.2	<pre> &lt;2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;2</pre>	<pre> &lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 24 8.5	<pre>&lt;2 2.8 </pre> <pre>&lt;2 <pre>&lt;2 <pre>&lt;2 <pre>&lt;4 </pre> <pre>&lt;2 <pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	<pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;2</pre>	23	3.8 <-2 <-2 4 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2 <-2	4.1	110 J  <2  <2  32  <3.1  21  <2  <2  <2  <2  <2  <2  <2  <2  <
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<pre>&lt;2 130 </pre> <pre>&lt;2 290 </pre> <pre>&lt;2 33 </pre> <pre>&lt;2 <pre>&lt;2 1,000 </pre> <pre>2.3 4.1</pre></pre>	4.2   4.2	<pre>&lt;2 5.2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;2</pre>	<pre> &lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 24 8.5 7.5	<2 2.8 <2 <2 5.4 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;2</pre>	23	3.8	4.1	110 J
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotridecanoic Acid Perfluoroundecanoic Acid	<pre>&lt;2 130 &lt;2 &lt;2 290 &lt;2 33 &lt;2 &lt;2 41 11 </pre>	Q   4.2   Q   Q   Q   Q   Q   Q   Q   Q   Q	<pre> &lt;2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;2</pre>	<pre> &lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 24 8.5 7.5 3.7	<pre>&lt;2 2.8 </pre> <pre>&lt;2 5.4 </pre> <pre>&lt;2 </pre> <pre>&lt;4  <pre> <pre>&lt;4  <pre> <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre>&lt;4  <pre><!--</td--><td><pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;2</pre></td><td>23</td><td>3.8</td><td>4.1</td><td>110 J</td></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre></pre>	<pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;2</pre>	23	3.8	4.1	110 J
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluoropentane Sulfoniamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<pre>&lt;2 130 </pre> <pre>&lt;2 290 </pre> <pre>&lt;2 33 </pre> <pre>&lt;2 <pre>&lt;2 1,000 </pre> <pre>2.3 4.1</pre></pre>	4.2   4.2	<pre>&lt;2 5.2 5.2 &lt;2 &lt;2 5.6 &lt;2 &lt;2</pre>	<pre> &lt;2</pre>	<2 12 2.3 12 16 <2 4 <2 <2 <2 <2 24 8.5 7.5	<2 2.8 <2 <2 5.4 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<pre>&lt;2 8.5 &lt;2 &lt;2 6.6 &lt;2 &lt;2</pre>	23	3.8	4.1	110 J

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	T 0 004	1	1001	1000		7.0.025	1000	1000	T 0 C20	10000	10000
Location ID	LOC32	LOC33	LOC34	LOC35	LOC35	LOC35	LOC36	LOC37	LOC38	LOC38	LOC38
				ASTW-LOC35-1-101619						ASTW-LOC38-2-101619	
Sample Date	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019
QA/QC Sample Matrix	DUP Liquid	Liquid	Liquid	Liquid	Liquid	LIQUID	Liquid	Liquid	Liquid	LIQUID	LIQUID
Sample Matrix Sample Delivery Group (SDG)	320-55401-1	320-55403-1	320-55403-1	320-55416-1	320-55416-1	320-55411-1	320-55403-1	320-55403-1	320-55416-1	320-55411-1	320-55411-1
Lab Sample ID	320-55401-5	320-55403-1	320-55403-2	320-55416-2	320-55416-6	320-55411-4	320-55403-3	320-55403-4	320-55416-3	320-55411-1	320-55411-5
Total Table 3+ SOP (ng/L)	320-33401-3	320-33403-1	320-33403-2	320-33410-2	320-33410-0	320-33411-4	320-33403-3	320-33403-4	320-33410-3	320-33411-1	320-33411-3
Hfpo Dimer Acid	2,300 J	3,800	1,900	1,300	1,400	1,600	2,100	14,000	1,700	2,200	1,800
PFMOAA PFMOAA	600	280	500 J	380 J	330	610 J	190 J	3,100	290	640	510
PFO2HxA	700	530	590 J	250	230	320 J	320	3,100	500	710	610
PFO3OA	620	200	230 J	120	91	130 J	72	6,100	330	480	400
PFO4DA	860	260	420	150	99	140 J	140	11,000	420	560	510
PFO5DA	800	410 J	1,300	200 J	120	170 J	150 J	5,200	320	560	470
PMPA	870	1,400	1,700	970	860	910 J	1,200	8,500	1,900	1,900	1,700
PEPA	380	560	700 J	500 J	420	500 J	610 J	4,000	870	830	770
PS Acid	11,000	110	160 J	91	110	160 J	6.9	1,400	68	860	780
Hydro-PS Acid	42,000	360	890	280 J	230	450 J	170	1,900	130	210	170
R-PSDA	500	790 J	1,300	650 J	690 J	170 J	330 J	490	410 J	280 J	210 J
Hydrolyzed PSDA	3,600	280 J	1,200	1,200	1,600	930 J	33 J	1,700	750 J	1,100	850
R-PSDCA	76	18	21	5.2	5	9.1 J	2.6	44	4.1	6.6	5.3
NVHOS	230	67	130	85	97	160 J	26	200	32	40	33
EVE Acid	61	69	140	38	33	47 J	14	260	57	160	130
Hydro-EVE Acid	110	110	160	52	40	53 J	46	5,700	93	110	85
R-EVE	80	340 J	540	230 J	180 J	56 J	210 J	620	310 J	140	110
PES PEGA P	<23	<2	<2	<2	<2	<4.6 UJ	<2	<4.6	<2	<2.3	<2.3
PFECA B	<30	<2	<2	<2	<2	<6 UJ	2.3	<6	<2	<3	<3
PFECA-G	<20 <b>61,000</b>	<2 8,200	<2 UJ 8,800	<2 UJ 4,400	<2 4,100	<4.1 UJ 5,300	<2 5,000	<4.1 <b>65,000</b>	<2 6,700	<2 9,300	<2 8,000
Total Table 3+ (17 compounds)  Total Table 3+ (20 compounds)	65,000	9,600	12,000	6,500	6,500	6,400	5,600	67,000	8,200	11,000	9,100
Other PFAS (ng/L)	03,000	3,000	12,000	0,300	0,300	0,400	3,000	07,000	0,200	11,000	2,100
10:2 Fluorotelomer sulfonate	<3.7	<3.5	<3.6	<2	<2	<2	<2	<2	<2	<3.4	<2
11Cl-PF3OUdS	<6.2	<5.9	<2	<2	<2	<2	<2	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<39	<37	<38	<20	<20	<20	<20	<20	<20	<36	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<100	<96	<98	<49	<50	<48	<49	<500	<48	<94	<48
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2					<2				<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4					<4				<4	<4
6:2 Fluorotelomer sulfonate	<39	<20	<38	<20	<20	<20	<20	<20	<20	<36	<20
9C1-PF3ONS	<4.7	<4.5	<2	<2	<2	<2	<2	<2	<2	<2	<2
ADONA	<3.7	<3.5	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
NaDONA	<3.7	<3.5	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<37	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2					<2				<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2					<2				<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<58	<20	<20	<20	<20	<20	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<3.7	<2	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorobutanoic Acid	47	71	120	43	37	56	40	200	120	120	110
Perfluorodecane Sulfonic Acid	<6.2 <6	<5.9 <b>7.8</b>	<2 7.8	<2 2.8	<2 2.3	<2 3.9	<2 <2	<2 3.3	<2 <2	<2 <2	<2 <2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<8.7	<8.3	/ <b>.8</b> <2	<b>2.8</b> <2	<b>2.3</b> <2	<2	<2	<b>3.3</b> <2	<2	<2	<2
Perfluorododecanoic Acid	<2	<8.3 <10	2.7	<2	<2	<2	<2	<2	2.7	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<3.7	<3.5	<2	<2	<2	<2	<2	<2	<2	<2	<2
			- <u>-</u> -						6.2		
Perfluoroheptanoic Acid			21	5.6	5.4	6.6	4.1	6.5	0.2	7.1	0.4
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	88 J <2	120 <2	<b>21</b> <2	<b>5.6</b> <2	<b>5.4</b> <2	<b>6.6</b> <2	<b>4.1</b> <2	<b>63</b> <2	<2	<b>7.1</b> <2	<b>6.4</b> <2
	88 J	120				6.6 <2 <2		63 <2 2.7		7.1 <2 <2 <2	
Perfluorohexadecanoic acid (PFHxDA)	<b>88 J</b> <2	120 <2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid	88 J <2 <2	120 <2 <3.2	<2 <b>2.</b> 7	<2 <2	<2 <2	<2 <2	<2 <2	<2 2.7	<2 <2	<2 <2	<2 <2
Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	88 J <2 <2 <2 22	120 <2 <3.2 40	<2 2.7 15	<2 <2 9.8	<2 <2 9.6	<2 <2 14	<2 <2 4.5	<2 2.7 29	<2 <2 9.4	<2 <2 8.9	<2 <2 8.7
Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid	88 J <2 <2 <2 22 <3.1	120 <2 <3.2 40 <3	<2 2.7 15 <2	<2 <2 9.8 <2	<2 <2 <2 9.6 <2	<2 <2 14 <2 <2 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4	<2 <2 <b>4.5</b> <2	<2 2.7 29 <2	<2 <2 9.4 <2	<2 <2 8.9 <2	<2 <2 <b>8.7</b> <2
Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid	88 J <2 <2 <2 22 <3.1 19	120 <2 <3.2 40 <3 10	<2 2.7 15 <2 12	<2 <2 9.8 <2 3.5	2 2 9.6 2 2.6	<2 <2 14 <2 3.7	<2 <2 4.5 <2 2.9	<2 2.7 29 <2 20	2 2 9.4 2 3.1	<2 <2 8.9 <2 3.5	<2 <2 8.7 <2 3.4
Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid	88 J <2 <2 <2 22 <3.1 19 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	120 <2 <3.2 40 <3 10 <2	<2 2.7 15 <2 12 <2	<2 <2 9.8 <2 3.5 <2	2 9.6 2 2.6 2	<2 <2 14 <2 3.7 <2	<2 <2 4.5 <2 2.9 <2 2.9 <2	<2 2.7 29 <2 20 <2	2 9.4 2 3.1 2	<2 <2 8.9 <2 3.5 <2	<2 <2 8.7 <2 3.4 <2
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid  Perfluorohexanoic Acid  Perfluorononanesulfonic acid  Perfluorononanoic Acid  Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide	88 J <2 <2 <2 22 <3.1 19 <2 <2 <2	120	<2 2.7 15 <2 12 <2 <2 <2 <2	<2     <2     9.8     <2     3.5     <2     <2     <2     <2     18	2 9.6 2 2.6 2 4 4 4 4 5	<2   <2     14     <2       <3.7     <2   <2   <2   <2   <2   <2   <1   <1	<2     <2     <4.5     <2     <2     <2     <4.5     <2     <2     <2     <2     <2     <2     <2     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4     <4	<pre>&lt;2 2.7 29 </pre> <pre>&lt;2 20 </pre> <pre>&lt;2 </pre> <pre>&lt;2 </pre> <pre>&lt;2 </pre> <pre>&lt;2 </pre> <pre>&lt;2 </pre> <pre>&lt;7 </pre> <pre>&lt;7 </pre>	2 9.4 2 3.1 2 2 2 2 2 19	<pre>&lt;2</pre>	<2 <2 8.7 <2 3.4 <2 <2 <2 <2 <4 <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4 <4> <4>
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid  Perfluorohexanoic Acid  Perfluorononanesulfonic acid  Perfluorononanoic Acid  Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide  Perfluoropentane sulfonic acid (PFPeS)  Perfluoropentanoic Acid  Perfluorotetradecanoic Acid	88 J <2 <2 22 <3.1 19 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	120 <2 <3.2 40 <3 10 <2 <<5.6 73 <2	<2 2.7 15 <2 12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2     <2     9.8     <2     3.5     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	2 9.6 2 2.6 2 4 4 4 5 4 15		<pre>&lt;2</pre>	<pre>&lt;2 2.7 29 &lt;2 20 &lt;2 &lt;2</pre>	2 9.4 2 3.1 2 2 2 2 2 19 3.1	\$\frac{1}{2}	<2 <2 8.7 <2 3.4 <2 <2 <2 <1 9 <1 9 <1 9 <1 9 <1 9 <1 9
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid  Perfluorohexanoic Acid  Perfluorononanesulfonic acid  Perfluorononanoic Acid  Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide  Perfluoropentane sulfonic acid (PFPeS)  Perfluoropentanoic Acid  Perfluorotetradecanoic Acid  Perfluorotidecanoic Acid	88 J <2 <2 <2 22 <3.1 19 <2 <2 <2 <2 230 <2 230 <2 2	120 <2 <3.2 40 <3 10 <2 <5.6 73 <2 <24	<2 2.7 15 <2 12 <2 <2 <2 <2 <2 <2 <2 2 2 2 2 7 2 7 2 7	<2     <2     9.8     <2     3.5     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	2 9.6 2 2.6 2 2 2 2 15	\$\frac{1}{2}\$   \$\frac{1}{2}\$   \$\frac{1}{4}\$   \$\frac{1}{2}\$   \$\frac{1}{2}	<pre>&lt;2     &lt;2     4.5     &lt;2     2.9     &lt;2     &lt;2</pre>	<2 2.7 29 <2 20 <2 <2 <2 <2 <2 <75 <22 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<pre></pre>	\$\frac{1}{2}	<pre>&lt;2</pre>
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid  Perfluorononanesulfonic acid  Perfluorononanoic Acid  Perfluorooctadecanoic acid  Perfluorooctadecanoic acid  Perfluoropentane Sulfonamide  Perfluoropentanoic Acid  Perfluorotetradecanoic Acid  Perfluorotetradecanoic Acid  Perfluorotridecanoic Acid  Perfluorotridecanoic Acid  Perfluoroundecanoic Acid	88 J	120	<2 2.7 15 <2 12 <2 <2 <2 <2 <2 <2 <2 2 2 2 2 2 7 11	<2     <2     9.8     <2     3.5     <2     <2     <2     <2     <2     <2     <2     <2     <2     3.9	2 9.6 2 2.6 2 2 2 15 2 2 2 2	2   2   14   2   3.7   2   2   2   2   2   2   4   4   4   4	<pre>&lt;2     &lt;2     4.5     &lt;2     2.9     &lt;2     &lt;2     2.2     &lt;2     &lt;2     3.2</pre>	<pre>&lt;2 2.7 29 &lt;2 20 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;3.1</pre>	2 9.4 2 3.1 2 2 2 2 19 3.1 2.4 2.7	\$\frac{1}{2}	<2
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid  Perfluorohexanoic Acid  Perfluorononanesulfonic acid  Perfluorononanoic Acid  Perfluorooctadecanoic acid  Perfluorooctane Sulfonamide  Perfluoropentane sulfonic acid (PFPeS)  Perfluoropentanoic Acid  Perfluorotetradecanoic Acid  Perfluorotridecanoic Acid	88 J <2 <2 <2 22 <3.1 19 <2 <2 <2 <2 230 <2 230 <2 2	120 <2 <3.2 40 <3 10 <2 <5.6 73 <2 <24	<2 2.7 15 <2 12 <2 <2 <2 <2 <2 <2 <2 2 2 2 2 7 2 7 2 7	<2     <2     9.8     <2     3.5     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	2 9.6 2 2.6 2 2 2 2 15	\$\frac{1}{2}\$   \$\frac{1}{2}\$   \$\frac{1}{4}\$   \$\frac{1}{2}\$   \$\frac{1}{2}	<pre>&lt;2     &lt;2     4.5     &lt;2     2.9     &lt;2     &lt;2</pre>	<2 2.7 29 <2 20 <2 <2 <2 <2 <2 <75 <22 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<pre></pre>	\$\frac{1}{2}	<pre>&lt;2</pre>

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I£ ID	1.0020	1.0020	1.0020	1.0040	1.0041	1.0042	1.0042	1.0042	1.005	1.0052	I OCEA
Location ID	LOC39	LOC39 ASTW-LOC39-2-101619	LOC39	LOC40	LOC41	LOC42 ASTW-LOC42-1-101619	LOC42	LOC42 ASTW-LOC42-3-101619	LOC5	LOC52 ASTW-LOC52-101619	LOC54 ASTW-LOC54-101619
Sample Date	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019	10/16/2019
QA/QC	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019	10/10/2019
Sample Matrix	Liquid	LIQUID	LIQUID	Liquid	LIQUID	Liquid	Liquid	LIQUID	Liquid	LIQUID	LIQUID
Sample Delivery Group (SDG)	320-55416-1	320-55411-1	320-55411-1	320-55403-1	320-55408-1	320-55416-1	320-55416-1	320-55411-1	320-55401-1	320-55408-1	320-55408-1
Lab Sample ID	320-55416-4	320-55411-2	320-55411-6	320-55403-6	320-55408-1	320-55416-1	320-55416-5	320-55411-3	320-55401-1	320-55408-3	320-55408-4
Total Table 3+ SOP (ng/L)											
Hfpo Dimer Acid	420	390	370	5,900	5,800	45,000	33,000	35,000	180	23,000	80,000
PFMOAA	57 J	54	48	350 J	410	220,000	130,000	190,000	<5	3,100	650
PFO2HxA	150	130	130	310 J	280	68,000	41,000	53,000	39	6,600	2,300
PFO3OA	52	41	43	180	180	48,000	30,000	40,000	7	2,200	1,500
PFO4DA	37	28	29	240 J	230	46,000	30,000	37,000	7.2	1,200	1,900
PFO5DA	14	20	19	110 J	130	26,000	16,000	22,000	13	1,200	3,200
PMPA	490	510	500	2,800	2,500	6,900	4,400	5,100	230	4,300	2,200
PEPA	190	180	190	1,100	1,000	8,500	7,600	8,100	79	1,800	950
PS Acid	2.8	3.4	3.3	58	54	2,700	1,300	1,900	2.4	29,000	320 J
Hydro-PS Acid	22	22	23	89	80	5,300	3,600	4,300	7.6	3,900	1,500
R-PSDA	120 J	75 J	83 J	160 J	55	1,500	1,500	2,400	19 J	5,300	3,100
Hydrolyzed PSDA	29 J	22 J <2	20 J	300 J	110 J	7,600	4,700	7,000 220	10 J	43,000 J	950 J
R-PSDCA NVHOS	<2 7.9	7.4	<2 7.8	2.1 39 J	<3.1 43	170 2,600	160 1,900	2,400	<2 3.1	71 1,800	110 360
EVE Acid	13	14	12	44	55	14,000	15,000	16,000	3.1	5,600	520
Hydro-EVE Acid	23	22	21	120 J	130	33,000	30,000	33,000	8.5	1,200	320
R-EVE	69 J	44 J	41 J	210 J	80 J	2,800	2,300	2,500	31 J	2,100	1,200
PES	<2	<2	<2	<2	<9.2	<92	<46	<46	<2	<46	26
PFECA B	<2	<2	<2	<2	<12	<120	<60	<60	<2	<60	<12
PFECA-G	<2	<2	<2	<2	<8.2	<82	<41	<41	<2	<41	<8.2
Total Table 3+ (17 compounds)	1,500	1,400	1,400	11,000	11,000	530,000	340,000	450,000	590	85,000	96,000
Total Table 3+ (20 compounds)	1,700	1,600	1,500	12,000	11,000	540,000	350,000	460,000	650	140,000	100,000
Other PFAS (ng/L)											
10:2 Fluorotelomer sulfonate	<2	<2	<2	<9.1	<8.6	<18	<19	<17	<2	<18	<2
11Cl-PF3OUdS	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<96	<91	<190	<200	<180	<20	<190	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<25	<23	<20	<250	<240	<20	<20	<20	<20	<490	<2,600
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol		<2	<2		<2			<2	<2	<2	<4.3
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol		<4	<4		<4			<4	<4	<4	<7
6:2 Fluorotelomer sulfonate	<20	<20	<20	<96	<91	<190	<200	<180	<20	<20	<20
9CI-PF3ONS ADONA	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1
NaDONA NaDONA	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	\2.1	\Z.1	^2.1				<20	<20	<20		
	<20	<20	< 20	< 20		<20				< 20	
* 1	<20	<20 <2	<20 <2	<20	<20	<20			<u> </u>	<20 <2	<20 <4.4
N-ethylperfluoro-1-octanesulfonamide	<20  	<2	<2	<20 	<2			<2	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide		<2 <2	<2 <2		<2 <2	 		<2 <2	<2 <2	<2 <2	<4.4 <2.2
N-ethylperfluoro-1-octanesulfonamide		<2	<2		<2			<2	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	  <20	<2 <2 <20	<2 <2 <20	  <20	<2 <2 <20	  <20	  <20	<2 <2 <20	<2 <2 <20	<2 <2 <20	<4.4 <2.2 <20
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	  <20 <2	<2 <2 <20 <2	<2 <2 <2 <20 <2 <41 <41 <2	  <20 4.3	<2 <2 <20 3.4	  <20 <2	  <20 <2 210 <2	<2 <2 <20 <2	<2 <2 <2 <20 <2.4	<2 <2 <20 <2	<4.4 <2.2 <20 <2
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecane Sulfonic Acid	 <20 <2 41 <2 2.6	<2 <2 <20 <20 <40 <40 <2 2 23	<2 <2 <2 <20 <2 <41 <42 <2 <11 <42 <11 <11 <11 <11 <11 <11 <11 <11 <11 <1	 <20 4.3 48 <2 <2	<2 <2 <20 <3.4 47 <2 <2 <2 <2 <2 <2 <2 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4	 <20 <2 340 <2 9.1	 <20 <2 210 <2 6.2	<pre>&lt;2     &lt;2     &lt;20     &lt;2     300     &lt;2     7.8</pre>	<2 <2 <20 <20 <2.4 <5.3 <2 <2 <2 <2	<2 <2 <20 <2 84 <2 7.9	<4.4 <2.2 <20 <2 930 <2 33
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	 <20 <2 41 <2 2.6 <2	<2 <2 <20 <20 <40 <2 40 <2 2.3 <2	<2 <2 <20 <20 <2 41 <2 2.1 <2	 <20 4.3 48 <2 <2 <2 <2	<2 <2 <2 <20 3.4 47 <2 <2 <2 <2 <2	 <20 <2 340 <2 9.1 <2	 <20 <2 210 <2 6.2 <2	<pre></pre>	<2 <2 <20 <20 <2.4 <5.3 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <	<2 <2 <20 <2 84 <2 7.9 <2	<4.4 <2.2 <20 <2 930 <2 33 <2.3
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid	 <20 <2 41 <2 2.6 <2 <2	<2 <2 <20 <20 <40 <2 40 <2 2.3 <2 2.4	<pre>&lt;2     &lt;2     &lt;20     &lt;2     41     &lt;2     2.1     &lt;2     &lt;2     </pre>	 <20 4.3 48 <2 <2 <2 <2 <2	<2 <2 <20 3.4 47 <2 <2 <2 <2 <2 <2 <2 <7	 <20 <2 340 <2 9.1 <2 6.9	 <20 <2 210 <2 6.2 <2 5.3	2 2 2 20 22 300 2 2 7.8 2 2 8.9	<pre>&lt;2     &lt;2     &lt;20     &lt;24     &lt;5.3     &lt;2     &lt;2</pre>	<2 <20 <20 <2 84 <2 7.9 <2 29	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	 <20 <2 41 <2 2.6 <2 <2 <2	<pre> &lt;2      &lt;2      &lt;20      &lt;20      &lt;2       40       &lt;2       2.3       &lt;2       2.4       &lt;2 </pre>	<pre>&lt;2     &lt;2     &lt;20     &lt;2     41     &lt;2     2.1     &lt;2     &lt;2</pre>	 <20 4.3 48 <2 <2 <2 <2 <2 <2 <2	<pre>&lt;2     &lt;2     &lt;20     3.4     47     &lt;2     &lt;2</pre>	 -20 -2 340 -2 9.1 -2 6.9 -2	<	2 2 20 20 300 2 2 7.8 2 2 8.9 2 2	<pre> &lt;2</pre>	<pre>&lt;2     &lt;2     &lt;20     &lt;2     84     &lt;2     7.9     &lt;2     29     &lt;2</pre>	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid		<pre> &lt;2</pre>	<pre>&lt;2     &lt;2     &lt;20     &lt;2     41     &lt;2     2.1     &lt;2     &lt;2     &lt;2     17</pre>	 <20 4.3 48 <2 <2 <2 <2 <2 <2 <2 <2 <2	<pre>&lt;2     &lt;2     &lt;20     3.4     47     &lt;2     &lt;2     &lt;2     &lt;2     19</pre>	 -20 -2 340 -2 9.1 -2 6.9 -2 270		2 2 20 21 300 22 7.8 22 8.9 22 240	<pre> &lt;2</pre>	<pre>&lt;2</pre>	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 220
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluoroheptanoic Acid	 <20 <2 41 <2 2.6 <2 <2 <2 <2 <2 <2	<pre> &lt;2 &lt;2 &lt;20 &lt;20 &lt;2 40 &lt;2 2.3 &lt;2 2.4 &lt;2 17 &lt;2</pre>	<pre>&lt;2</pre>		<pre>&lt;2</pre>			2	<pre> &lt;2</pre>	<2 <20 <20 <2 84 <2 7.9 <2 29 <2 13 4.7	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 220 <4.5
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid		<pre> &lt;2</pre>	<pre> &lt;2</pre>		<2 <2 <20 3.4 47 <2 <2 <2 <2 <2 <1 9 19 <2 4.5			2	<pre> &lt;2</pre>	<pre> &lt;2</pre>	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 220 <4.5 5.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid		<pre> &lt;2</pre>	<pre> &lt;2</pre>		<pre> &lt;2</pre>			2	<pre> &lt;2</pre>	<pre> &lt;2</pre>	<ul> <li>&lt;4.4</li> <li>&lt;2.2</li> <li>&lt;20</li> <li>&lt;2</li> <li>930</li> <li>&lt;2</li> <li>33</li> <li>&lt;2.3</li> <li>17</li> <li>&lt;2</li> <li>220</li> <li>&lt;4.5</li> <li>5.4</li> <li>190</li> </ul>
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodocanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid	         	<pre> &lt;2</pre>	<pre> &lt;2</pre>		<pre> &lt;2</pre>				<pre> &lt;2</pre>	<pre> &lt;2</pre>	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 2 220 <4.5 5.4 190 <2
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorododecanoic Acid Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFDoS) Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid		<pre> &lt;2</pre>	<pre> &lt;2</pre>		<pre> &lt;2</pre>			2 2 20 20 300 2 2 300 2 2 300 2 2 300 2 2 300 3	<pre> &lt;2</pre>	<pre> &lt;2</pre>	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 220 <4.5 5.4 190 <2 120
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid		<pre> &lt;2</pre>	<pre> &lt;2</pre>		<pre> &lt;2</pre>			2 2 20 20 300 2 2 300 2 2 8.9 2 240 2.8 2 2 53 2 2 140 2 2	<2	<2	<4.4 <2.2 <20 <2 930 <2 33 <2.3 17 <2 220 <4.5 5.4 190 <2 120 <2.3
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic Acid Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanesulfonic acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide		<2   <2   <20   <20   <2   <40   <2   <40   <4   <4   <4   <4   <4   <4   <	<pre> &lt;2</pre>		<2			2 2 20 20 300 2 2 300 2 2 300 2 2 300 2 2 300 300	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic Acid Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanesulfonic acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)		<2   <2   <20   <20   <2   <40   <2   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <4	<2   <2   <2   <20   <2   <41   <4   <4   <4   <4   <4   <4   <		<2   <2   <2   <20     <3.4     47   <2   <2   <2   <2   <2   <2   <2   <			✓2       ✓2       ✓20       ✓2       300       ✓2       7.8       ✓2       8.9       ✓2       240       2.8       ✓2       53       ✓2       140       ✓2 <a "="" href="">2       <a href="">2       <a "="" href="">2</a></a></a></a></a></a></a>	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptane sulfonic acid (PFHxDA) Perfluorohexadecanoic Acid Perfluorohexane Sulfonic Acid Perfluorohexane Sulfonic acid Perfluorononanesulfonic acid Perfluorononanic Acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluoropentane sulfonic acid (PFPeS) Perfluoropentane sulfonic acid (PFPeS)		<2   <2   <20   <20   <2   <40   <40   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <	<2   <2   <2   <20   <2   <41   <41   <41   <42   <41   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <4		<2			2       2       20       2       300       2       7.8       2       8.9       2       240       2.8       2       53       2       140       2       2       2       370	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodocanic Acid Perfluorodocane sulfonic acid (PFDoS) Perfluorodocanic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluoropentanoic Acid		<2   <2   <20   <20   <2   <40   <2   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <4	<2		<2			2	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptane sulfonic acid (PFHxDA) Perfluorohexadecanoic Acid Perfluorohexane Sulfonic Acid Perfluorohexane Sulfonic acid Perfluorononanesulfonic acid Perfluorononanic Acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluoropentane sulfonic acid (PFPeS) Perfluoropentane sulfonic acid (PFPeS)		<2   <2   <20   <20   <2   <40   <40   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <50   <	<2   <2   <2   <20   <2   <41   <41   <41   <42   <41   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <42   <4		<2			2       2       20       2       300       2       7.8       2       8.9       2       240       2.8       2       53       2       140       2       2       2       370	<2	<2	<4.4
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA) Perfluorohexane Sulfonic Acid Perfluorononanesulfonic acid Perfluorononanesulfonic acid Perfluorooctadecanoic acid Perfluorooctadecanoic acid Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluoropentanoic Acid Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotetradecanoic Acid		<2   <2   <20   <20   <2   <40   <2   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <40   <4	<2		<2			C    C    C    C    C    C    C    C	<2	<2	<4.4

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Location ID	LOC55	EQBLK	FBLK	ТВ
Field Sample ID	ASTW-LOC55-101619	ASTW-EB-101619	ASTW-FB-101619	ASTW-TB-101619
Sample Date	10/16/2019	10/16/2019	10/16/2019	10/16/2019
QA/QC		Equipment Blank	Field Blank	Trip Blank
Sample Matrix		LIQUID	LIQUID	LIQUID
Sample Delivery Group (SDG)		320-55408-1	320-55408-1	320-55408-1
Lab Sample ID	320-55408-5	320-55408-6	320-55408-8	320-55408-7
Total Table 3+ SOP (ng/L)	020	4.4	-4	-4
Hfpo Dimer Acid PFMOAA	820 190 J	<b>4.4</b> <5	<4 <5	<4 <5
PFO2HxA	130	<2	<2	<2
PFO3OA	43	<2	<2	<2
PFO4DA	57 J	<2	<2	<2
PFO5DA	51	<2	<2	<2
PMPA	310	<10	<10	<10
PEPA	99	<20	<20	<20
PS Acid	5.6	<2	<2	<2
Hydro-PS Acid	30	<2	<2	<2
R-PSDA	140 J	<2	<2	<2
Hydrolyzed PSDA	40 J	<2	<2	<2
R-PSDCA	<2	<2	<2	<2
NVHOS	11 J	<2	<2	<2
EVE Acid	6	<2	<2	<2
Hydro-EVE Acid	15	<2	<2	<2
R-EVE	110 J	<2	<2	<2
PEGA P	<2	<2	<2	<2
PFECA B PFECA-G	<2 <2	<2 <2	<2 <2	<2 <2
Total Table 3+ (17 compounds)	1,800	4.4	ND	ND
Total Table 3+ (20 compounds)	2,100	4.4	ND	ND
Other PFAS (ng/L)	2,100	7,-1	ND	ND
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
11Cl-PF3OUdS	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<48	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
9Cl-PF3ONS	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid N-ethylperfluoro-1-octanesulfonamide	<20 <2	<20 <2	<20 <2	<20 <2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	13	<2	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	<2	<2	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid Perfluorooctadecanoic acid	<2	<2	<2	<2 <2
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2 <2	<2
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	6.5	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	2.3	<2	<2	<2
PFOA	16	<2	<2	<2
PFOS	3.3	<2	<2	<2

#### Notes.

Bold - Analyte detected above associated reporting limit

#### Abbreviations:

B - analyte detected in an associated blank

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

ND - no Table 3+ analytes were detected above the associated reporting limits

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

SDG - Sample Delivery Group

SOP - standard operating procedure

UJ – Analyte not detected. Reporting limit may not be accurate or precise.

< - Analyte not detected above associated reporting limit.

	1004	10042	T O C/F0	1.0.050	1.0.050	1000	1000
Location ID	LOC42	LOC43	LOC58	LOC58	LOC59	LOC60	LOC61
Field Sample ID		ASTW-LOC-43-030520	ASTW-LOC-58-030520	ASTW-LOC-58-030520-Z	ASTW-LOC-59-030520	ASTW-LOC-60-030520	ASTW-LOC-61-030520
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC							
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered
Sample Delivery Group (SDG)	2091273	2091273	2091278/2095248//2095247	2091270	2091273	2091273	2091273
Lab Sample ID	1275304/1275304	1275308	1275413/1290740/	1275250	1275312	1275316	1275320
Total Table 3+ SOP (ng/L)							
Hfpo Dimer Acid	3,500	5,100	1,000 J	870	14,000	1,100	1,300
PFMOAA	110,000	77,000	33 J	33	7,600	9.1	480
PFO2HxA	4,500	4,200	130 J	130	1,900	98	580
PFO3OA	3,200	2,900	34 J	32	740	21	91
PFO4DA	3,100	3,200	14 J	12	820	4.8	120
PFO5DA	1,900	2,100	8.3 J	6.1	1,600	2.1	280
PMPA	620	650	50 J	59	2,200	370	1,200
PEPA	230	240	45 J	52	940	390	570
PS Acid	2,100	910	17 J	20	640	18	33
Hydro-PS Acid	500	380	4.3 J	3.5	640	2.8	180
R-PSDA	410	670	790 J	850	3,100	190	190
Hydrolyzed PSDA	1,200	1,300	4.6 B	4.5	950	2.8	23
R-PSDCA	<20	<20	<2 UJ	<2	42	<2	<20
NVHOS	3,500	2,600	2.5 J	<2	410	3.5	24
EVE Acid	150	120	31 J	42	810	42	<20
Hydro-EVE Acid	280	200	6.2 J	7.5	260	3.3	67
R-EVE	260	130	15 J	15	540	15	54
PES	<20	<20	<2 UJ	<2	<20	<2	<20
PFECA B	<20	<20	<2 UJ	<2	<20	<2	<20
PFECA-G	<20	<20	<2 UJ	<2	<20	<2	<20
Total Table 3+ (17 compounds)	130,000	100,000	1,400	1,300	33,000	2,100	4,900
Total Table 3+ (20 compounds)	140,000	100,000	2,200	2,100	37,000	2,300	5,200
Total Table 3+ SOP Solid Residue (ng/filter)	,	,	·	,			,
Hfpo Dimer Acid			0.62 J				
PFMOAA			0.037 J				
PFO2HxA			0.12 J				
PFO3OA			0.029 J				
PFO4DA			0.025 J				
PFO5DA		<b></b>	0.015 J 0.034 J				<b></b>
PMPA			0.065 J				
PEPA DE A.: J			0.066 J		-		
PS Acid			0.06 J		-	<del></del>	<del></del>
Hydro-PS Acid			0.093 J				
R-PSDA			1.2 J				
Hydrolyzed PSDA		-	0.0097 J				
R-PSDCA		<del></del>	<0.004 UJ		<u></u>		<del></del>
NVHOS			<0.004 UJ				
EVE Acid		-	0.062 J		-		1
Hydro-EVE Acid		-	0.035 J				
R-EVE			0.02 J				
PES			<0.004 UJ				
PFECA B			<0.004 UJ				
PFECA-G			<0.004 UJ				
Total Table 3+ (17 compounds)		 	1.2				
Total Table 3+ (20 compounds)			2.5				
Other (mg/L)			4.3				
			1				
Total Suspended Solids			<1				-

I	1.00(2	1.00(1	1,000	1.00(2	1.00(2)	100(2)	1.00(4
Location ID	LOC62	LOC62	LOC63	LOC63	LOC63A	LOC63A	LOC64
Field Sample ID	ASTW-LOC-62-030520	ASTW-LOC-62-030520-Z	ASTW-LOC-63-030520	ASTW-LOC-63-030520-Z		ASTW-LOC-63A-030520-Z	ASTW-LOC-64-030520
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC		T	7	7	T	T	T1
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered
Sample Delivery Group (SDG)		2091270	2091278/2095248/2095247	2091270	2091278/2095248/2095247	2091270	2091278/2095248/2095247
Lab Sample ID	1275419/1290772	1275274	1275420/1290776	1275278	1275417/1290756	1275266	1275418/1290760
Total Table 3+ SOP (ng/L)							
Hfpo Dimer Acid	15,000 J	12,000	2,300 J	1,900	1,800 J	1,600	3,800 J
PFMOAA	12,000 J	9,700	2,300 J	1,500	140 J	150	210 J
PFO2HxA	28,000 J	26,000	1,700 J	1,100	380 J	360	2,400 J
PFO3OA	9,400 J	11,000	640 J	500	98 J	100	350 J
PFO4DA	7,000 J	6,000	630 J	450	84 J	80	89 J
PFO5DA	5,800 J	4,500	320 J	340	68 J	94	42 J
PMPA	15,000 J	13,000	850 J	810	480 J	480	3,600 J
PEPA	9,300 J	7,200	660 J	430	360 J	300	2,000 J
PS Acid	51,000 J	41,000	170 J	220	34 J	43	120 J
Hydro-PS Acid	2,700 J	1,900	140 J	130	64 J	85	140 J
R-PSDA	24,000 J	19,000	4,900 J	4,600	1,000 J	750	2,200 J
Hydrolyzed PSDA	7,100 J	5,000	320 B	590	170 J	82	350 J
R-PSDCA	64 J	62	17 J	15	4.9 J	4.4	8.4 J
NVHOS	1,000 J	620	150 J	150	38 J	39	58 J
EVE Acid	1,500 J	1,200	310 J	430	190 J	200	24 J
Hydro-EVE Acid	380 J	410	80 J	71	41 J	47	37 J
R-EVE	860 J	570	440 J	240	250 J	140	410 J
PES	<2 UJ	<2	<2 UJ	<2	<2 UJ	<2	<2 UJ
PFECA B	<2 UJ	<2	<2 UJ	<2	<2 UJ	<2	<2 UJ
PFECA-G	4.9 J	3.7	<2 UJ	<2	<2 UJ	<2	<2 UJ
Total Table 3+ (17 compounds)	160,000	130,000	10,000	8,000	3,800	3,600	13,000
Total Table 3+ (20 compounds)	190,000	160,000	16,000	13,000	5,200	4,600	16,000
Total Table 3+ SOP Solid Residue (ng/filter)	150,000	100,000	10,000	15,000	3,200	1,000	10,000
Hfpo Dimer Acid	0.7 J		0.15 J		1.9 J		0.53 J
PFMOAA PFMOAA	0.73 0.23 J		0.037 J		0.27 J		0.34 J
PFO2HxA	0.68 J		0.037 J		0.27 J 0.65 J		0.053 J
PFO3OA	0.45 J		0.038 J		0.03 J 0.17 J		0.64 J
PFO4DA PFO5DA	0.63 J 3.3 J		0.11 J 0.75 J		0.16 J 0.41 J		0.21 J 0.45 J
PMPA	0.38 J		0.75 J 0.07 J		0.41 J 0.92 J		2.6 UJ
	0.38 J 0.26 B				0.53 J		3 J
PEPA  DE Acid			0.13 UJ				0.98 J
PS Acid	9.5 J 2.3 J		0.27 J 0.33 J		0.13 J 0.34 J		0.98 J 0.72 J
Hydro-PS Acid							
R-PSDA	1.6 J		0.7 J		3.5 J		0.092 J
Hydrolyzed PSDA	1.6 J		0.1 J		0.51 J		0.49 J
R-PSDCA	0.014 J		0.0046 J		0.0087 J		0.02 J
NVHOS	0.031 J		0.0097 J		0.067 J		0.1 J
EVE Acid	0.72 J		0.12 J		0.47 J		0.08 J
Hydro-EVE Acid	0.82 J		0.055 J		0.12 J		0.17 J
R-EVE	0.079 J		0.091 J		0.63 J		0.47 J
PES	<0.004 UJ		<0.004 UJ		<0.004 UJ		<0.004 UJ
PFECA B	<0.004 UJ		<0.004 UJ		<0.004 UJ		<0.004 UJ
PFECA-G	<0.004 UJ		<0.004 UJ		<0.004 UJ		<0.004 UJ
Total Table 3+ (17 compounds)	20		2.1		6.1		9.9
Total Table 3+ (20 compounds)	23		3.0		11		11
Other (mg/L)							
Total Suspended Solids	30		49		1.79 J		500

Location ID	LOC64	LOC65	LOC65	LOC65	LOC65	LOC66	LOC67
	ASTW-LOC-64-030520-Z	ASTW-LOC-65-030520	ASTW-LOC-65-030520-Z	ASTW-LOC-65-030520-D	ASTW-LOC-65-030520-DZ	ASTW-LOC-66-030520	ASTW-LOC-67-030520
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC	3/3/2020	3/3/2020	3/3/2020	DUP	DUP	3/3/2020	3/3/2020
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered
Sample Delivery Group (SDG)	2091270	2091278/2095248/2095247	2091270	2095247/2095248	2091270	2091273	2091273
Lab Sample ID		1275422/1290786	1275286	1289942/1290795	1277367	1275324	1275328
Total Table 3+ SOP (ng/L)	1273270	12/3422/12/0700	1273200	120//42/12/07/3	1277007	12/3024	1273526
Hfpo Dimer Acid	3,300	12,000 J	10,000	9,800 J	10,000	2,100	860
PFMOAA	220	250 J	230	270 J	270	49	21
PFO2HxA	2,100	2,100 J	2,300	2,100 J	2,200	440	140
PFO3OA	360	350 J	340	300 J	390	64	12
PFO4DA	83	190 J	170	150 J	190	19	4
PFO5DA	43	180 J	140 J	130 J	190 J	13	3.4
PMPA	2,800	21,000 J	21,000	24,000 J	22,000	4,400	12,000
PEPA	1,900	17,000 J	16,000	17,000 J	16,000	2,600	7,200
PS Acid	150	300 J	290	260 J	320	1,700	110
Hydro-PS Acid	140	230 J	210	190 J	230	160	47 J
R-PSDA	1,400	6,500 J	5,100	6,600 J	4,700	3,300	260 J
Hydrolyzed PSDA	190	1,000 B	840	1,200 B	870	370	31 J
R-PSDCA	7	93 J	85	92 J	85	2.7	<2
NVHOS	65	360 J	500	370 J	590	110	5.9
EVE Acid	27	45 J	41 J	40 J	38 J	38	4.1
Hydro-EVE Acid	41	72 J	69 J	60 J	64 J	22	3.2
R-EVE	250	450 J	260	370 J	240	830	62
PES	<2	<2 UJ	<2	<2 UJ	<20	<2	<2
PFECA B	<2	<2 UJ	<2	<2 UJ	<20	<2	<2
PFECA-G	<2	<2 UJ	<2	<2 UJ	<20	<2	<2
Total Table 3+ (17 compounds)	11,000	54,000	51,000	55,000	53,000	12,000	20,000
Total Table 3+ (20 compounds)	13,000	62,000	58,000	63,000	58,000	16,000	21,000
Total Table 3+ SOP Solid Residue (ng/filter)							
Hfpo Dimer Acid		0.95 J		1.4 J			
PFMOAA		0.011 UJ		0.13 J		-	
PFO2HxA		0.085 J		0.23 J		-	
PFO3OA		0.053 J		0.17 J		-	
PFO4DA		0.12 J		0.3 J		-	
PFO5DA		0.31 J		0.56 J		-	
PMPA	1	0.69 J		2.2 J			
PEPA	1	0.6 J		1.8 J			
PS Acid	1	1.4 J		2.7 J			-
Hydro-PS Acid	-	1 J		1.6 J			
R-PSDA		0.67 J		1.9 J			
Hydrolyzed PSDA		0.32 J		1.2 J			
R-PSDCA		0.055 J		0.23 J			
NVHOS		0.038 J		0.17 J			
EVE Acid		0.055 J		0.32 J			
Hydro-EVE Acid		0.11 J		0.24 J			
R-EVE		0.046 J		0.49 J			
PES		<0.004 UJ		0.1 J			
PFECA B		<0.004 UJ		0.089 J			
PFECA-G		<0.004 UJ		0.078 J			
Total Table 3+ (17 compounds)		5.5		12			
Total Table 3+ (20 compounds)		6.5		16			
Other (mg/L)							
Total Suspended Solids		270					

Location ID	LOC68	LOC69	LOC69	LOC69	LOC69	LOC70	LOC71
	ASTW-LOC-68-030520-Z	ASTW-LOC-69-030520	ASTW-LOC-69-030520-Z		ASTW-LOC-69-030520-DZ	ASTW-LOC-70-030520	ASTW-LOC-71-030520
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC				DUP	DUP		
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered
Sample Delivery Group (SDG)	2091273	2091278/2095248	2091270	2095247/2095248	2091270	2091273	2091278/2095248/2095247
Lab Sample ID	1275332	1275421/1289930	1275282	1289938/1290791	1277363	1275336	1275414/1290744
Total Table 3+ SOP (ng/L)	1273002	1270121/1209900	1270202	120000011200101	1277600	1270000	127011111290711
Hfpo Dimer Acid	210,000	32,000 J	31,000	30,000 J	33,000	86,000	19,000 J
PFMOAA	1,600	9,300 J	7,200	8,900 J	7,200	14,000	100,000 J
PFO2HxA	11,000	11,000 J	9,700	10,000 J	9,900	140,000	23,000 J
PFO3OA	3,000	3,700 J	3,900	3,600 J	4,300	38,000	12,000 J
PFO4DA	570	2,200 J	2,200	2,300 J	2,600	22,000	8,900 J
PFO5DA	390	1,200 J	1,400 J	1,000 J	1,500	18,000	4,100 J
PMPA	3,200	1,800 J	2,000	1,900 J	2,100	12,000	2,600 J
PEPA	<2,000	850 J	750 J	920 J	780 J	6,300	2,000 J
PS Acid	,	7,300 J	7,600	7,000 J	7,200	71,000	1,500 J
	78,000	,	ŕ	,	7	,	
Hydro-PS Acid	7,500	1,200 J	1,100 J	1,100 J	1,000 J	7,500 J	2,100 J
R-PSDA	140,000	9,000 J	5,900	7,900 J	5,800	190,000 J	1,400 J
Hydrolyzed PSDA	17,000	1,500 B	860	1,500 B	830	16,000 J	2,600 B
R-PSDCA	<200	130 J	130	140 J	120	<200	47 J
NVHOS	3,100	760 J	440	740 J	580	2,100	3,600 J
EVE Acid	11,000	1,300 J	1,100 J	1,200 J	1,100	12,000	330 J
Hydro-EVE Acid	2,400	310 J	310	310 J	310	2,300	360 J
R-EVE	7,000	790 J	490	750 J	500	5,000	320 J
PES	<200	<2 UJ	<2	<2 UJ	<20	<200	<2 UJ
PFECA B	<200	<2 UJ	<2	<2 UJ	<20	<200	<2 UJ
PFECA-G	<200	5.3 J	4.1 J	5.4 J	<20	<200	<2 UJ
Total Table 3+ (17 compounds)	330,000	73,000	69,000	69,000	72,000	430,000	180,000
Total Table 3+ (20 compounds)	500,000	84,000	76,000	79,000	79,000	640,000	180,000
Total Table 3+ SOP Solid Residue (ng/filter)							
Hfpo Dimer Acid				5 J	-		0.84 J
PFMOAA				0.62 J	-		1.5 J
PFO2HxA				1.7 J			0.64 J
PFO3OA				0.72 J		<b></b>	0.71 J
PFO4DA				0.95 J			3.4 J
PFO5DA				3.2 J			4 J
PMPA				1.1 J			0.12 J
PEPA				0.55 J			0.065 J
PS Acid				5 J			2.5 J
Hydro-PS Acid				2.5 J			3.3 J
R-PSDA				3.1 J			0.2 J
Hydrolyzed PSDA				1.4 J			0.64 J
R-PSDCA				0.24 J			0.028 J
NVHOS				0.49 J			0.19 J
EVE Acid				1 J			0.4 J
Hydro-EVE Acid				0.66 J			0.28 J
R-EVE				0.96 J			0.28 J 0.04 J
PES				0.095 J			<0.004 UJ
PFECA B				0.07 J			<0.004 UJ
PFECA-G	<u></u>			0.07 J 0.041 J	<u></u>	<u></u>	<0.004 UJ
Total Table 3+ (17 compounds)				0.041 J 24			18
` * /		<u></u>					
Total Table 3+ (20 compounds)	<del></del>	-		29	-		19
Other (mg/L)							
Total Suspended Solids		12					52

T # 10	10051	1.00=2	X 0.050	1.0.052	10055	1007	100=
Location ID		LOC72	LOC72	LOC73	LOC75	LOC76	LOC77
	ASTW-LOC-71-030520-Z	ASTW-LOC-72-030520	ASTW-LOC-72-030520-Z	ASTW-LOC-73-030520	ASTW-LOC-75-030520	ASTW-LOC-76-030520	ASTW-LOC-77-030520
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC	T	T	7,	7,	T	T	7
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Filtered	Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Unfiltered
Sample Delivery Group (SDG)	2091270	2091278/2095248/2095247	2091270	2091273	2091273	2091273	2091278/2095248/2095247
Lab Sample ID	1275254	1275415/1290748	1275258	1275340	1275344	1275348	1275416/1290752
Total Table 3+ SOP (ng/L)	16000	200.7	200		1.700	0.10	2002
Hfpo Dimer Acid	16,000	300 J	290	520	1,500	910	2,900 J
PFMOAA	98,000	12 J	12	22	21	18	250 J
PFO2HxA	21,000	58 J	57	100	98	99	610 J
PFO3OA	14,000	19 J	17	31	33	32	360 J
PFO4DA	9,200	7.2 J	6	13	15	15	370 J
PFO5DA	4,600	3.5 J	2.7	6.2	9.4	8.7	170 J
PMPA	2,400	17 J	11	45	46	26	120 J
PEPA	<2,000	<20 UJ	<20	24	<20	<20	130 J
PS Acid	1,200 J	100 J	130	25	10	20	91 J
Hydro-PS Acid	1,400	11 J	10	17 J	6.7 J	7.6 J	54 J
R-PSDA	680	27 J	21	89 J	25 J	21 J	740 J
Hydrolyzed PSDA	1,200	18 B	15	6.7 J	11 J	17 J	150 J
R-PSDCA	<200	<2 UJ	<2	<2	<2	<2	7.8 J
NVHOS	2,400	3.1 J	<2	3.6	<2	<2	50 J
EVE Acid	300	2.7 J	<2	4.3	3.2	3.6	50 J
Hydro-EVE Acid	300	<2 UJ	<2	<2	<2	<2	20 J
R-EVE	<200	3.6 J	2.5	9.9	6.3	8.2	180 J
PES	<200	<2 UJ	<2	<2	<2	<2	<2 UJ
PFECA B	<200	<2 UJ	<2	<2	<2	<2	<2 UJ
PFECA-G	<200	<2 UJ	<2	<2	<2	<2	<2 UJ
Total Table 3+ (17 compounds)	170,000	530	540	810	1,700	1,100	5,200
Total Table 3+ (20 compounds)	170,000	580	570	920	1,800	1,200	6,300
Total Table 3+ SOP Solid Residue (ng/filter)	-						
Hfpo Dimer Acid		0.032 J					1.3 J
PFMOAA		<0.01 UJ					0.019 J
PFO2HxA		0.01 J					0.19 J
PFO3OA		0.006 J					0.13 J
PFO4DA		0.0098 J					0.52 J
PFO5DA	_	0.084 J					0.91 J
PMPA		<0.02 UJ					0.022 UJ
PEPA		<0.04 UJ					<0.04 UJ
PS Acid		0.64 J					0.082 J
Hydro-PS Acid		0.099 J					0.54 J
R-PSDA		<0.004 UJ					0.46 J
Hydrolyzed PSDA		0.0093 J					0.13 J
R-PSDCA		<0.004 UJ					0.0058 J
NVHOS		<0.004 UJ					0.065 J
EVE Acid		0.0079 J					0.45 J
Hydro-EVE Acid		<0.004 UJ					0.43 J
R-EVE		<0.004 UJ				 	0.11 J 0.17 J
PES	<u></u>	<0.004 UJ			<u></u>		<0.004 UJ
PFECA B		<0.004 UJ					<0.004 UJ
PFECA-G	<u></u>	<0.004 UJ			<u> </u>	 	<0.004 UJ
Total Table 3+ (17 compounds)	<u></u>	0.89	 		<u></u>	 	4.3
Total Table 3+ (20 compounds)		0.89					5.1
Other (mg/L)		0.70					3.1
( 6 )		104 1					12
Total Suspended Solids		1.04 J				-	12

r e m	LOCZZ	1.0070	1.0070	1.0000	1.0002	1.0004	1.0005
Location ID		LOC78	LOC79 ASTW-LOC-79-030520	LOC80	LOC83	LOC84	LOC85
	ASTW-LOC-77-030520-Z	ASTW-LOC-78-030520		ASTW-LOC-80-030520	ASTW-LOC-83-030520	ASTW-LOC-84-030520	ASTW-LOC-85-030520-Z
Sample Date	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020	3/5/2020
QA/QC							
Sample Matrix	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Filtered/Unfiltered	Filtered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Unfiltered	Filtered
Sample Delivery Group (SDG)	2091270	2091277	2091277	2091277	2091277	2091277	2091277
Lab Sample ID	1275262	1275372	1275376	1275380	1275384	1275388	1275392
Total Table 3+ SOP (ng/L)							
Hfpo Dimer Acid	2,600	3,600	9,600	6,200	260	740	730
PFMOAA	260	48	2,100	1,100	<5	40	<5
PFO2HxA	590	210	2,600	1,800	4.4	20	8.6
PFO3OA	370	50	1,600	810	<2	4.1	<2
PFO4DA	280	23	1,400	620	<2	3.4	<2
PFO5DA	160	14	1,400	330	<2	4.6	<2
PMPA	150	370	930	2,500	<10	81	66
PEPA	61	250	440	1,300	<20	<20	<20
PS Acid	95	500	330	1,500	<2	2.6 B	<2
Hydro-PS Acid	56	36 J	410	370	<2	2.0 B	<2
R-PSDA	540	430 J	3,800	4,600		34	6.5
R-PSDA Hydrolyzed PSDA	72	430 J 33 J	700 B	2,000	<b>6.4</b> <2	5.2 B	<2
, ,							
R-PSDCA	6.8	<2	45	55	<2	<2	<2
NVHOS	55	17	300	470	<2	2.6	<2
EVE Acid	52	65	200	870	<2	<2	<2
Hydro-EVE Acid	21	15	150	220	<2	<2	<2
R-EVE	92	98	400	2,100	<2	11	<2
PES	<2	<2	<2	<20	<2	<2	<2
PFECA B	<2	<2	<2	<20	<2	<2	<2
PFECA-G	<2	<2	<2	<20	<2	<2	<2
Total Table 3+ (17 compounds)	4,800	5,200	22,000	18,000	260	900	800
Total Table 3+ (20 compounds)	5,500	5,800	26,000	27,000	270	950	810
Total Table 3+ SOP Solid Residue (ng/filter)							
Hfpo Dimer Acid							
PFMOAA	-						
PFO2HxA	-						
PFO3OA							
PFO4DA							
PFO5DA							
PMPA							
PEPA							
PS Acid							
Hydro-PS Acid					<u></u>		
·	-				-		
R-PSDA		<del></del>			<del></del>		
Hydrolyzed PSDA							
R-PSDCA							
NVHOS		-					
EVE Acid							
Hydro-EVE Acid							
R-EVE							
PES		-		-			
PFECA B							
PFECA-G							
Total Table 3+ (17 compounds)		<del></del>					
Total Table 3+ (20 compounds)							
Other (mg/L)							
Total Suspended Solids	_	_		_			
1 otat Suspended Solids							

Location II	LOC86	LOC87	LOC88	EB	FBLK
Field Sample II		ASTW-LOC-87-030520	ASTW-LOC-88-030520	ASTW-LOC-EB-030520	ASTW-LOC-FB-030520
		3/5/2020	3/5/2020	3/5/2020	
Sample Dat QA/Q0		3/5/2020	3/5/2020	Equipment Blank	3/5/2020 Field Blank
Sample Matri		Lianid	Liquid	Liquid	Liquid
Sample Matri Filtered/Unfiltere		Liquid	Unfiltered	Unfiltered	Unfiltered
		Unfiltered 2091277			2091277/2091279
Sample Delivery Group (SDG	,		2091277	2091277/2091279	
Lab Sample II	1275396	1275400	1275404	1275408/1275423	1275412/1275424
Total Table 3+ SOP (ng/L)  Hfpo Dimer Acid	280	220	660	<2	<2
PFMOAA	<5	<5	<5	<5	<5
PFO2HxA	<2	12	13	<2	<2
PFO3OA	<2	2.1	2	<2	<2
	<2		<2	<2	<2
PFO4DA		<2			
PFO5DA	<2	<2 21	<2 25	<2	<2 <10
PMPA PERA	<10			<10	
PEPA	<20	<20	<20	<20	<20
PS Acid	<2	3.3 B	8.9 B	2.2	<2
Hydro-PS Acid	<2	<2	2.1	<2	<2
R-PSDA	<2	23	13	<2	<2
Hydrolyzed PSDA	<2	3 B	<2	6	<2
R-PSDCA	<2	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2	<2
R-EVE	<2	10	6.8	<2	<2
PES	<2	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2	<2
Total Table 3+ (17 compounds)	280	260	710	2	ND
Total Table 3+ (20 compounds)	280	290	730	8	ND
Total Table 3+ SOP Solid Residue (ng/filter)					
Hfpo Dimer Acid					
PFMOAA					<u></u>
PFO2HxA					
PFO3OA					
PFO4DA					
PFO5DA					
PMPA					
PEPA					-
PS Acid					
Hydro-PS Acid					-
R-PSDA					-
Hydrolyzed PSDA					
R-PSDCA					
NVHOS					
EVE Acid					
Hydro-EVE Acid					
R-EVE					
PES					
PFECA B					-
PFECA-G					-
Total Table 3+ (17 compounds)					-
Total Table 3+ (20 compounds)					-
Other (mg/L)					
Total Suspended Solids				<1	<1

#### Notes:

Bold - Analyte detected above associated reporting limit *Abbreviations:* 

B - analyte detected in an associated blank

EPA - Environmental Protection Agency

J - Analyte detected. Reported value may not be accurate or precise

mg/ L - milligrams per liter

ND - no Table 3+ analytes were detected above the

associated reporting limits

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

SDG - Sample Delivery Group

SOP - standard operating procedure

UJ – Analyte not detected. Reporting limit may not be accurate or precise.

< - Analyte not detected above associated reporting limit.

# APPENDIX C Analytical Results – All Sampling Events

Location ID	1	1	1	1
Sampling Event		June 2019	August 2019	October 2019
Samping Event	April 2019	June 2019	August 2019	October 2019
Field Sample ID	DSTW-LOC1-042419	STW-LOC1-062819	STW-LOC1-082219	STW-LOC1-101019
Date Sampled		06/28/2019	8/22/2019	10/10/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	14	18	30	12
PFMOAA	7 J	<5	25	<5 UJ
PFO2HxA	12 J	14	21	7.5
PFO3OA	<2 UJ	2.5	3.3	<2
PFO4DA	<2 UJ	<2	<2	<2
PFO5DA	<2 UJ	<2	<2	<2
PMPA	21 J	23	37	27
PEPA	<20 UJ	<20	<20	<20
PS Acid	<2 UJ	<2	<2	<2
Hydro-PS Acid	<2 UJ	<2	<2	<2
R-PSDA	11 J 3.2 J	2.8 J <2	15 J 11 J	8.5 J 2.3 J
Hydrolyzed PSDA R-PSDCA	3.2 J <2 UJ	<2 <2	<2	2.3 J <2
NVHOS	<2 UJ	<2 <2	5.1	5.8
EVE Acid	<2 UJ	<2	<2	<2
Hydro-EVE Acid	<2 UJ	<2	<2	<2
R-EVE	6.4 J	<2	4 J	<2
PES	<2 UJ	<2	<2	<2
PFECA B	<2 UJ	<2	<2	<2
PFECA-G	<2 UJ	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	54	58	120	52
Total Table 3+ Compounds (20 compounds)*	75	60	150	63
Other PFAS (ng/L)	2.0		2	
10:2 Fluorotelomer sulfonate	<2.0	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS) 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	 <20	<20	<2 <20	<2 <20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<20	<20	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<2	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)			<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	2.7	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<2	<2	<2 <20
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <b>2.3</b>	<20 <b>3.7</b>	<20 <b>4</b>	<20 <b>6.5</b>
Perfluorobutanoic Acid	7.1	8.3	8.5	19
Perfluorodecane Sulfonic Acid	<2.0	<2	<2	<2
Perfluorodecanoic Acid	<2.0	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2.0	<2	<2	<2
Perfluorododecanoic Acid	<2.0	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	<2	<2	<2
Perfluoroheptanoic Acid	7.0	14	20	32
Perfluorohexadecanoic acid (PFHxDA)	<2.0	<2	<2	<2
Perfluorohexane Sulfonic Acid	3.3	5	5.6	8.7
Perfluorohexanoic Acid	9.2	21	26	51
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluorononanoic Acid Perfluorooctadecanoic acid	<2.0 <2.0	<2 <2	<2 <2	<2
Perfluorooctane Sulfonamide	<2.0	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2.0	<2	<2	<2
Perfluoropentanoic Acid	7	17	26	48
Perfluorotetradecanoic Acid	<2.0	<2	<2	<2
Perfluorotridecanoic Acid	<2.0	<2	<2	<2
Perfluoroundecanoic Acid	<2.0	<2	<2	<2
PFOA	8.1	8.5	8.7	10
PFOS	12	11	12	14

Location ID	1	1	1	1
Sampling Event		January 2020	April 2020	May/June 2020
Field Sample ID	STW-LOC-1-122019	STW-LOC-1-122019	STW-LOC-1-4-042820	STW-LOC-1-2-052120
Date Sampled	12/20/2019	1/29/2020	4/28/2020	5/20/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	0.0 D	13	13	24
	9.8 B 14			
PFMOAA PFO2HxA	6.9	12 6.1	7.6	<5 12
PFO3OA	<2	<2	2	2.3
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	4.6	3.1
PMPA	23 B	17	26	56
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	5 J	5.5 J	11 J	31 J
Hydrolyzed PSDA	7.1 J	6.1 J	5.2 J	4.8 J
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	5.5	4.6
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE PES	<2 <2	2.3 J	<2	6.6 J
PFECA B	<2	<2	<2 <2	<2 <2
PFECA-G	<2	<2 <2	<2 <2	<2 <2
Total Table 3+ Compounds (17 compounds)*	54	48	70	100
Total Table 3+ Compounds (20 compounds)*	66	62	86	140
Other PFAS (ng/L)		v-		
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	
DONA NaDONA	 <2.1	<b></b> <2.1		<2
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<2.1	<2.1 <20	 <20
N-ethylperfluoro-1-octanesulfonamide	<2	<20 <2	<20 <2	<20
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2 <2	<2 <2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.1	2.2	3.4	3.6 J
Perfluorobutanoic Acid	3.6	<2	5.1	5.6
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	8.8	4.8	4.2	5.1 J
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	3 15	2.4	4.1	4.8 J
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<2	<b>6.3</b> <2	<b>8.5</b> <2	11 <2
Perfluorononanoic Acid Perfluorononanoic Acid	<2	<2 <2	<2 <2	<2 <2
Perfluorooctadecanoic acid	<2	<2 <2	<2 <2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	9.7	5.4	11	9.8
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	5.4	3.8	5.5	5.5 J
PFOS	6.8	5.4	8.3	9.0

Location ID	1	2	3	4
Sampling Event		May/June 2020	May/June 2020	May/June 2020
Field Sample ID		STW-LOC-233-052120	STW-LOC-3-2-052120	STW-LOC-4-2-052120
Date Sampled	8/26/2020	5/20/2020	5/20/2020	5/20/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	13	2,700	2,700	620
PFMOAA	5.0	<11	<11	12
PFO2HxA	14	41	25	6.9
PFO3OA	2.5	10	11	3.3
PFO4DA	<2	4	8	2
PFO5DA	<2	<2	11	4.9
PMPA	60	220	<28	65
PEPA	<10	32	<20	<20
PS Acid	<2	11	<2	<2
Hydro-PS Acid	<2	5	4	2
R-PSDA	<2	26 J	17 J	17 J
Hydrolyzed PSDA	3.0	19 J	5.2 J	2.2 J
R-PSDCA NVHOS	<2 <b>6.5</b>	<2 <b>4.7</b>	<2 3.1	<2 <2
EVE Acid	<b>0.5</b> <2	<b>4.</b> 7	<2 <2	<2
Hydro-EVE Acid	<2	2	<2	<2
R-EVE	<2	15 J	5.4 J	3.8 J
PES	<2	<2.3	<2.3	<2
PFECA B	<2	<3	<3	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	100	3,000	2,800	720
Total Table 3+ Compounds (20 compounds)*	100	3,100	2,800	740
Other PFAS (ng/L)	_	_		
10:2 Fluorotelomer sulfonate	<2	<3	<3.2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<5	<5.4	<2.5
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS) 1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20 <20	<31 <82	<34 <87	<20 <41
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<13	<14	<6.7
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<22	<23	<11
6:2 Fluorotelomer sulfonate	<20	<31	<34	<20
F-53B Major (9Cl-PF3ONS)	<2	<3.8	<4	<2
ADONA				
DONA	<2	<2.8	<3	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<30	<32	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<14	<15	<6.9
N-methyl perfluoro-1-octanesulfonamide	<2	<6.8	<7.2	<3.4
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <b>4.1</b>	<49 <3.1	<52 <3.4	<24 <2
Perfluorobutanoic Acid Perfluorobutanoic Acid	4.3	<5.5	< 5.4 < 5.9	<2.8
Perfluorodecane Sulfonic Acid	<2	<5	<5.4	<2.5
Perfluorodecanoic Acid	<2	<4.9	<5.2	<2.4
Perfluorododecane sulfonic acid (PFDoS)	<2	<7.1	<7.5	<3.6
Perfluorododecanoic Acid	<2	<8.6	<9.2	<4.3
Perfluoroheptane sulfonic acid (PFHpS)	<2	<3	<3.2	<2
Perfluoroheptanoic Acid	3.0	<3.9	<4.2	<2
Perfluorohexadecanoic acid (PFHxDA)		<14	<15	<7
Perfluorohexane Sulfonic Acid	3.6	<2.7	3	<2
Perfluorohexanoic Acid	7.1	<9.1	<9.7	<4.6
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2	<2.5	<2.7	<2
Perfluoronoanoic Acid Perfluorooctadecanoic acid	<2 <2	<4.2 <7.2	<4.5 <7.7	<2.1 <3.6
Perfluorooctane Sulfonamide	<2 <2	<5.5	<5.9	< 2.8
Perfluoropentane sulfonic acid (PFPeS)	<2	<4.7	<5	<2.4
Perfluoropentanoic Acid	7.1	<7.7	<8.2	<3.9
Perfluorotetradecanoic Acid	<2	<4.6	<4.9	<2.3
Perfluorotridecanoic Acid	<2	<20	<22	<10
Perfluoroundecanoic Acid	<2	<17	<18	<8.7
PFOA	5.1	18	26	9
PFOS	7.4	<8.5	15	<4.3

Location ID	5	6A	6A	6A
Sampling Event	May/June 2020	April 2019	June 2019	August 2019
	STW-LOC-5-1.99-052120		STW-LOC-6A-062719	STW-LOC6A-082119
Date Sampled	5/20/2020	04/24/2019	06/27/2019	8/21/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	100	13	66	19
PFMOAA	<5	<5 UJ	<5 UJ	<5
PFO2HxA	19	11 J	11 J	12
PFO3OA	4.5	<2 UJ	<2 UJ	<2
PFO4DA	3	<2 UJ	<2 UJ	<2
PFO5DA	9.2	<2 UJ	<2 UJ	<2
PMPA	68	24 J	23 J	27
PEPA	<20	<20 UJ	<20 UJ	<20
PS Acid	13	<2 UJ	<2 UJ	<2
Hydro-PS Acid	51	<2 UJ	<2 UJ	<2
R-PSDA	120 J	8.1 J	7.9 J	<2 5 1 T
Hydrolyzed PSDA R-PSDCA	5.2 J 5	<b>4.3 J</b> <2 UJ	<2 UJ <2 UJ	<b>5.1 J</b> <2
NVHOS	9.9	<2 UJ	<2 UJ	5.3
EVE Acid	<2	<2 UJ	<2 UJ	<2
Hydro-EVE Acid	<2	<2 UJ	<2 UJ	<2
R-EVE	11 J	2.6 J	4 J	3.9 J
PES	<2	<2 UJ	<2 UJ	<2
PFECA B	<2	<2 UJ	<2 UJ	<2
PFECA-G	<2	<2 UJ	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	280	48	100	63
Total Table 3+ Compounds (20 compounds)*	420	63	110	72
Other PFAS (ng/L)	2	2.0	2	2
10:2 Fluorotelomer sulfonate F-53B Minor (11Cl-PF3OUdS)	<2 <2	<2.0	<2	<2 <2
1H,1H,2H,Perfluorodecanesulfonate (8:2 FTS)	<20	 <20	 <20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<60	<60	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<110	<110	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2			<2
ADONA		<2.1	<2.1	<2.1
DONA	<2			
NaDONA		<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<37 UJ	<37	<2 <2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<35 UJ <20	<35 <20	<2 <20
Perfluorobutane Sulfonic Acid	2	2.4	3.6	4.3
Perfluorobutanoic Acid	3.4	7.6	11	8.7
Perfluorodecane Sulfonic Acid	<2	<2.0	<2	<2
Perfluorodecanoic Acid	<2	<2.0	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2.0	<2	<2
Perfluorododecanoic Acid	<2	<2.0	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2.0	<2	<2
Perfluoroheptanoic Acid	<2	7.4	13	21
Perfluorohexadecanoic acid (PFHxDA)	<2	<2.0	<2	<2
Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	<2 <2	3.7 9.2	5.3 22	6.5 27
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<2 <2	<b>9.2</b> <2.0	<2	<2
Perfluorononanoic Acid	<2	<2.0	<2	<2
Perfluorooctadecanoic acid	<2	<2.0	<2	<2
Perfluorooctane Sulfonamide	<2	<2.0	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2.0	<2	<2
Perfluoropentanoic Acid	12	7.4	18	27
Perfluorotetradecanoic Acid	<2	<2.0	<2	<2
Perfluorotridecanoic Acid	<2	<2.0	<2	<2
Perfluoroundecanoic Acid	<2	<2.0	<2	<2
PFOA	<2	8.6	8.3	11
PFOS	2.1	14	14	18

Location ID	6A	6A	6A	6A
Sampling Event	October 2019	December 2019	January 2020	April 2020
Field Sample ID	STW-LOC6A-100919	STW-LOC-6A-122019	STW-LOC6A-012920	STW-LOC-6A-042820
Date Sampled	10/9/2019	12/20/2019	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	17	30 B	36	17
PFMOAA	<5 UJ	13	13 J	9.9
PFO2HxA	12	7.7	16	11
PFO3OA	2	<2	<2	2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	5.9
PMPA	37	53 B	62	30
PEPA	<20	22	24	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2 15.1	<2	<2 21 J	<2 14 T
R-PSDA Hydrolyzed PSDA	15 J 2.9 J	6.5 J 6.4 J	21 J 7.3 J	14 J 4.7 J
R-PSDCA	<b>2.9 J</b> <2	<b>0.4 J</b> <2		<b>4.7 J</b> <2
NVHOS	6.6	<2	<2	5.4
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	6 J	4.2 J	7.8 J	5 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	75 99	130 140	150 190	81 100
Other PFAS (ng/L)		140	170	100
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate F-53B Major (9Cl-PF3ONS)	<20 <2	<20 <2	<20 <2	<20 <2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	5.9 18	<b>3.1</b> <2	2.5 4	3.6 5.8
Perfluorodecane Sulfonic Acid	<2	<2 <2	<2	<b>5.8</b> <2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	36	11	5.3	4.7
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	8.9	3.6	2.9	4.8
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<b>48</b> <2	16 <2	<b>7</b> <2	<b>9.2</b> <2
Perfluorononanesuironic acid Perfluorononanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	45	11	5.6	11
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Dankler and dank and dank A and d	<2	<2	<2	<2
Perfluoroundecanoic Acid PFOA	12	6.1	5.3	6.9

Location ID	6A	6A	6B	6B
Sampling Event	May/June 2020	August 2020	April 2019	June 2019
Field Sample ID	STW-LOC6A-060320	STW-LOC-6A-082620	DSTW-LOC6B-042419	STW-LOC-6B-062719
Dete Country		9/26/2020	04/24/2010	07/27/2010
Date Sampled Analytical Laboratory	6/3/2020 TestAmerica	8/26/2020 TestAmerica	04/24/2019 TestAmerica	06/27/2019 TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	6.7 J	21	41	24
PFMOAA	<2 UJ	24	<5 UJ	<5 UJ
PFO2HxA	7.1 J	23	11 J	13 J
PFO3OA	<2 UJ	3.4	<2 UJ	<2 UJ
PFO4DA	<2 UJ	<2	<2 UJ	<2 UJ
PFO5DA	<2 UJ	<2	<2 UJ	<2 UJ
PMPA	14 J	80	23 J	23 J
PEPA	2 J	<10 <2	<20 UJ	<20 UJ
PS Acid Hydro-PS Acid	<2 UJ <2 UJ	<2	<2 UJ <2 UJ	<2 UJ <2 UJ
R-PSDA	7.6 J	<2	11 J	13 J
Hydrolyzed PSDA	2.4 J	10	3.6 J	<2 UJ
R-PSDCA	<2 UJ	<2	<2 UJ	<2 UJ
NVHOS	<2 UJ	<2	<2 UJ	<2 UJ
EVE Acid	<2 UJ	<2	<2 UJ	<2 UJ
Hydro-EVE Acid	<2 UJ	<2	<2 UJ	<2 UJ
R-EVE	3.6 J	<2	6.6 J	5.8 J
PES	<2 UJ	<2	<2 UJ	<2 UJ
PFECA B	<2 UJ	<2	<2 UJ	<2 UJ
PFECA-G	<2 UJ	<2	<2 UJ	<2 UJ
Total Table 3+ Compounds (17 compounds)*	30	150	75	60
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	43	160	96	79
10:2 Fluorotelomer sulfonate	٠,	<2	2.0	
F-53B Minor (11Cl-PF3OUdS)	<2 <2	<2	<2.0	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	 <20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<60	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<110	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2		
ADONA			<2.1	<2.1
DONA	<2	<2		-
NaDONA			<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<37 UJ	<37
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<35 UJ	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	3	4.2 5.5	2.3	3.6
Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid	<b>3</b> <2	<b>5.5</b> <2	<b>7.1</b> <2.0	<b>9.2</b> <2
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2 <2	<2 <2	<2.0 <2.0	<2 <2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2.0	<2
Perfluorododecanoic Acid	<2	<2	<2.0	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2.0	<2
Perfluoroheptanoic Acid	5	3.3	7.4	13
Perfluorohexadecanoic acid (PFHxDA)	<2		<2.0	<2
Perfluorohexane Sulfonic Acid	3.5	4.1	3.6	5.6
Perfluorohexanoic Acid	9.7	7.5	9.3	20
Perfluorononanesulfonic acid	<2	<2	<2.0	<2
Perfluorononanoic Acid	<2	<2	<2.0	<2
Perfluorooctadecanoic acid	<2	<2	<2.0	<2
Perfluorooctane Sulfonamide	<2	<2	<2.0	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2.0	<2
Perfluoropentanoic Acid	6.4	7.9	7.2	17
Perfluorotetradecanoic Acid	<2	<2	<2.0	<2
Perfluorotridecanoic Acid	<2	<2 <2	<2.0	<2
Daughannan Janaan A. 1. 1				
Perfluoroundecanoic Acid PFOA	<2 <b>7.6</b>	6	<2.0 <b>9.3</b>	<2 <b>9.6</b>

Location ID	6B	6B	6B	6B
Sampling Event	August 2019	October 2019	December 2019	January 2020
Field Sample ID	STW-LOC6B-082119	STW-LOC6B-100919	STW-LOC-6B-122019	STW-LOC6B-012920
Date Sampled	8/21/2019	10/9/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	17	17	9 B	25
PFMOAA	<5	<5 UJ	13	8.9 J
PFO2HxA	11	11	6.4	6.1
PFO3OA	<2	2.1	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	37	30	19 B	26
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2 12 T	<2 11 T	<2	<2 2.4 T
R-PSDA Hydrolyzed PSDA	12 J 2.5 J	11 J 2.8 J	<2 6.4 J	3.4 J 5.1 J
R-PSDCA	<b>2.5 J</b> <2	<b>2.8 J</b> <2	<b>0.4 J</b> <2	<b>3.1 J</b>
NVHOS	4.4	6.5	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	3.2 J	4.7 J	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	69	67	47	66
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	87	85	54	75
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
5:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA DONA	<2.1	<2.1	<2.1	<2.1
NaDONA	 <2.1	<2.1	 <2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.3	6.9	3.3	2.4
Perfluorobutanoic Acid	8.4	18	<2	3.4
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS) Perfluorododecanoic Acid	<2	<2	<2 <2	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2	<2 <2	<2 <2	<2
Perfluoroheptanoic Acid	20	35	8.2	4.7
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2 UJ	<2
Perfluorohexane Sulfonic Acid	5.8	8.5	3.4	2.6
Perfluorohexanoic Acid	27	48	16	6.3
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2 UJ	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2 5.5
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<b>26</b> <2	<b>46</b> <2	10 <2	5.5
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	8.8	11	4.9	4.2
PFOS	15	16	7.2	5.9

Location ID	6B	6B	6B	7A
Sampling Event	April 2020	May/June 2020	August 2020	April 2019
Field Sample ID	STW-LOC-6B-042820	STW-LOC6B-060320	STW-LOC-6B-082620	DSTW-LOC7A-042419
Date Sampled	4/28/2020	6/3/2020	8/26/2020	04/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	12	4.5 J	27	14
PFMOAA	9.8	<2 UJ	27 31	8 J
PFO2HxA	9.5	6.4 J	32	12 J
PFO3OA	<2	<2 UJ	4.7	<2 UJ
PFO4DA	<2	<2 UJ	<2	<2 UJ
PFO5DA	4.5	<2 UJ	<2	<2 UJ
PMPA	31	17 J	53	24 J
PEPA	<20	<2 UJ	<10	<20 UJ
PS Acid	<2	<2 UJ	<2	<2 UJ
Hydro-PS Acid	<2	<2 UJ	<2	<2 UJ
R-PSDA	10 J	<2 UJ	<2	5.3 J
Hydrolyzed PSDA	4 J	2 J	<2	4.2 J
R-PSDCA	<2	<2 UJ	<2	<2 UJ
NVHOS	5.1	<2 UJ	<2	<2 UJ
EVE Acid	<2	<2 UJ	<2	<2 UJ
Hydro-EVE Acid	<2	<2 UJ	<2 <2	<2 UJ
R-EVE PES	<2 <2	<2 UJ <2 UJ	<2 <2	3.9 J <2 UJ
PFECA B	<2	<2 UJ	<2	<2 UJ
PFECA-G	<2	<2 UJ	<2	<2 UJ
Total Table 3+ Compounds (17 compounds)*	72	28	150	58
Total Table 3+ Compounds (20 compounds)*	86	30	150	71
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2 <2.1	<2	<2	
DONA	<2.1	 <2	 <2	<2.1
NaDONA	<2.1			<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<37
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.6	3.1	4.6	2.3
Perfluorobutanoic Acid	5.6	8.6	5.9	7
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2.0
Perfluorodecanoic Acid	<2	<2	<2	<2.0
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2.0
Perfluorododecanoic Acid	<2	<2	<2	<2.0
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2.0
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<b>4.5</b> <2	<b>4.4</b> <2	3.4	<b>7.4</b> <2.0
Perfluoronexadecanoic acid (PFHxDA)  Perfluoronexane Sulfonic Acid	<2 <b>4.4</b>	3	3.8	<2.0 <b>3.4</b>
Perfluorohexanoic Acid	9.2	8.8	7.5	8.3
Perfluoronoanesulfonic acid	<2	<2	<2	<2.0
Perfluorononanoic Acid	<2	<2	<2	<2.0
Perfluorooctadecanoic acid	<2	<2	<2	2
Perfluorooctane Sulfonamide	<2	<2	<2	<2.0
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2.0
Perfluoropentanoic Acid	11	7.5	8.1	6.5
Perfluorotetradecanoic Acid	<2	<2	<2	<2.0
Perfluorotridecanoic Acid	<2	<2	<2	<2.0
Perfluoroundecanoic Acid	<2	<2	<2	<2.0
PFOA	6	6.6	5.6	8.8
PFOS	9.8	9.3	9.7	14

Location ID	7A	7A	7A	7A
Sampling Event		August 2019	October 2019	December 2019
Field Sample ID		August 2019 STW-LOC7A-082219	STW-LOC7A-101019	STW-LOC-7A-122019
D 4 G	0.6/20/2010	0/22/2010	10/10/2010	12/20/2010
Date Sampled Analytical Laboratory	06/28/2019 TestAmerica	8/22/2019 TestAmerica	10/10/2019 TestAmerica	12/20/2019 TestAmerica
Analytical Laboratory  QA/QC		1 estAmerica	restAmerica 	TestAmerica
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	22	13	16	9.3 B
PFMOAA	<5	6.7	<5 UJ	13
PFO2HxA	14	9.4	10	6.7
PFO3OA	2.2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	22	23	28	21 B
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid R-PSDA	<2 3.4 J	<2 11 J	<2 11 J	<2 <2
Hydrolyzed PSDA	<2	3.1 J	3.2 J	8.2 J
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	4.5	6.6	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	4.8 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	60	57	61	50
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	64	71	80	58
10:2 Fluorotelomer sulfonate	<2	<2	<2	2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2 <2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<2	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)		<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	3.6 8.8	4.1 8.8	4.9	3 4
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	14	20	33	8.6
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	5.2	6.1	8.8	3.3
Perfluorohexanoic Acid	20	26	49	16
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	19	26	46	11
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroundecanoic Acid Perfluoroundecanoic Acid	<2 <2	<2 <2	<2 <2	<2
PFOA	9.4	8.9	11	5.5
11 011	15	15	15	8.1

Location ID		7A	7A	7A
Sampling Event	January 2020	April 2020	May/June 2020	August 2020
Field Sample ID	STW-LOC7A-012920	STW-LOC-7A-4-042820	STW-LOC-7A-2-052120	STW-LOC-7A-4-082620
Date Sampled		4/28/2020	5/20/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	7.8	13	200	14
PFMOAA	12	14	<5	5.2
PFO2HxA	6	10	21	13
PFO3OA	<2	2.3	10	2.0
PFO4DA	<2	<2	12	<2
PFO5DA	<2	4.3	17	<2
PMPA	15	25	69	57
PEPA	<20	<20	<20	<10
PS Acid	<2	<2	90	<2
Hydro-PS Acid	<2	<2	380	<2
R-PSDA	4.7 J	9.2 J	120 J	<2
Hydrolyzed PSDA	6 J	5.5 J	98 J	<b>3.2</b> <2
R-PSDCA NVHOS	<2 <2	<2 5.1	2.2 7.6	6.5
EVE Acid	<2	<2	<b>7.0</b> <2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	19 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	41	74	810	98
Total Table 3+ Compounds (20 compounds)*	52	88	1,000	100
Other PFAS (ng/L)	2	2	2	2
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2 <2
F-53B Minor (11Cl-PF3OUdS) 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2 <20	<2 <20	<2 <20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1		
DONA			<2	<2
NaDONA	<2.1	<2.1		
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2 <2	<2 <2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<2 <20	<20
Perfluorobutane Sulfonic Acid	2	3.6	4.3	4.0
Perfluorobutanoic Acid	2.1	5.2	7	4.4
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.9	4.6	5.8	3.2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	
Perfluorohexane Sulfonic Acid	2.5	4.6	4.3	4.1 6.8
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<b>5</b> <2	<b>9</b> <2	<b>9.2</b> <2	<b>0.8</b> <2
Perfluorononaneic Acid Perfluorononanoic Acid	<2	<2 <2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	5	10	14	6.7
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	3.9	6.4	36	5.8
PFOS	6.8	11	10	10

Location ID	7B	7B	7B	7B
Sampling Event	April 2019	<b>June 2019</b>	June 2019	August 2019
Field Sample ID	-	STW-LOC7B-062719	STW-LOC7B-062719-D	STW-LOC7B-082219
Date Sampled	04/24/2019	06/27/2019	06/27/2019	8/22/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	-		Field Duplicate	
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	21	18	18	42
PFMOAA PFO2HxA	51 J	69	65	1,100
	26 J	25	25	300
PFO3OA	6 J 2.5 J	10 9.7	10	100 64
PFO4DA PFO5DA	2.5 J <2 UJ	24	26	35
PMPA	23 J	21	19	45
PEPA	<20 UJ	<20	<20	<20
PS Acid	<2 UJ	<2	2.0	6.9
Hydro-PS Acid	7 J	120	130	180
R-PSDA	19 J	73 J	71 J	110 J
Hydrolyzed PSDA	53 J	490 J	470 J	1,100 J
R-PSDCA	<2 UJ	2.2	2.3	4.1
NVHOS	2.1 J	9.2	9.8	48
EVE Acid	<2 UJ	<2	<2	<2
Hydro-EVE Acid	<2 UJ	<2	<2	8.7
R-EVE	4 J	3.7 J	<2	11 J
PES	<2 UJ	<2	<2	<2
PFECA B	<2 UJ	<2	<2	<2
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 UJ 140	<2 310	<2 320	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	210	870	860	1,900 3,200
Other PFAS (ng/L)	210	670	000	3,200
10:2 Fluorotelomer sulfonate	<2.0	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)				<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	900 J	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<2	<2	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)				<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamida	<37 UJ <35	<2	<2 <2	<2 <2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<35 <20	<2 <20	<20	<2 <20
Perfluorobutane Sulfonic Acid	2.3	3.4	3.7	4
Perfluorobutanoic Acid	5.2	8.9	8.7	10
Perfluorodecane Sulfonic Acid	<2.0	<2	<2	<2
Perfluorodecanoic Acid	<2.0	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2.0	<2	<2	<2
Perfluorododecanoic Acid	<2.0	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	<2	<2	<2
Perfluoroheptanoic Acid	7	14	15	20
Perfluorohexadecanoic acid (PFHxDA)	<2.0	<2	<2	<2
Perfluorohexane Sulfonic Acid	3.5	5.4	5.5	5.7
Perfluorohexanoic Acid	8.2	21	21	26
Perfluorononanesulfonic acid	<2.0	<2	<2	<2
Perfluorononanoic Acid	<2.0	<2	<2	<2
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluoropentanoic Acid Perfluoropentanoic Acid	7.2	18	17	27
Perfluorotetradecanoic Acid	<2.0	<2	<2	<2
Perfluorotridecanoic Acid	<2.0	<2	<2	<2
Perfluoroundecanoic Acid	<2.0	<2	<2	<2
PFOA	7.9	8.9	9.3	9.6
PFOS	14	15	16	14

Location ID	7B	7B	7B	7B
Sampling Event		December 2019	January 2020	April 2020
Field Sample ID	STW-LOC7B-101019	STW-LOC-7B-122019	STW-LOC7B-012920	STW-LOC-7B-4-042820
Date Sampled	10/10/2019	12/20/2019	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	23	29 B	19	16
PFMOAA	24 J	25	17	9.8
PFO2HxA	17	9.2	9.4	10
PFO3OA	5.7	2.1	2	<2
PFO4DA	4.3	<2	<2	<2
PFO5DA	9.8	<2	<2	6.3
PMPA	35	29 B	24	22
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	71	3.1	<2	2.4
R-PSDA	22 J	6.8 J	8.9 J 39 J	16 J
Hydrolyzed PSDA R-PSDCA	140 J <2	71 J <2	<b>39 J</b> <2	<b>29 J</b> <2
NVHOS	13	2.1	<2 <2	5.7
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	5.5 J	<2	3.6 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	200	100	71	72
Total Table 3+ Compounds (20 compounds)*	370	180	120	120
Other PFAS (ng/L)	2	2	2	2
10:2 Fluorotelomer sulfonate F-53B Minor (11Cl-PF3OUdS)	<2 <2 <2	<2 <2	<2 <2	<2 <2 <2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<2 <20	<2 <20
Perfluorobutane Sulfonic Acid	6.6	3	2.2	3.4
Perfluorobutanoic Acid	19	4.2	2	5.1
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	33	8.6	3.9	4.5
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	8.7 49	3.3	2.8 6.3	4.4 8.9
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<b>49</b> <2	16 	<b>6.3</b> <2	<b>8.9</b> <2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	46	11	5.1	10
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	11	7.1	4.6	6.3
PFOS	14	7.6	6	10

Location ID	7B	7B	7C	7C
			May/June 2020	
Sampling Event Field Sample ID	STW-LOC-7B-2-052120	August 2020 STW-LOC-7B-4-082620	STW-LOC-7C-2-052120	August 2020 STW-LOC-7C-4-082620
		0/0 000</td <td></td> <td>0/0<!--000</td--></td>		0/0 000</td
Date Sampled Analytical Laboratory	5/20/2020 TestAmerica	8/26/2020 TestAmerica	5/20/2020 TestAmerica	8/26/2020 TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	200	20	460	24
PFMOAA	180	41	380	36
PFO2HxA	77	27	160	23
PFO3OA	23 13	6.3 4.8	59 38	<b>5.4</b> <2
PFO4DA PFO5DA	19	5.2	41	<2
PMPA	66	56	100	63
PEPA	<20	<10	55	<10
PS Acid	85	<2	250	26
Hydro-PS Acid	350	7.1	390	6.6
R-PSDA	120 J	<2	380 J	<2
Hydrolyzed PSDA	170 J	70	230 J	110
R-PSDCA NVHOS	2.1	<2 <b>8.5</b>	7.8	<2 <b>8.0</b>
EVE Acid	<2	<2	23	14
Hydro-EVE Acid	<2	<2	7.2	10
R-EVE	17 J	10	37 J	11
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	1,000	180 260	2,000	220 340
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	1,300	200	2,600	340
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20 <2	<20	<20 <2
F-53B Major (9Cl-PF3ONS) ADONA	<2		<2	
DONA	<2	<2	<2	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	5.1	3.9	3.9	3.6
Perfluorodecane Sulfonic Acid	<b>5.1</b> <2	<2	<2	<2
Perfluorodecanic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	6.5	3.5	7.6	3.3
Perfluorohexadecanoic acid (PFHxDA)	<2	4.2	<2	4.00
Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	4.6 11	4.2 6.8	4.4	4.00 6.9
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	15	7.4	31	7.8
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
	.^	<i>-</i> ^		
Perfluoroundecanoic Acid PFOA	<2 31	<2 <b>6.1</b>	<2 36	<2 <b>5.9</b>

Location ID	8	8	8	8
Sampling Event	April 2019	<b>June 2019</b>	August 2019	October 2019
Field Sample ID	DSTW-LOC8-042419	STW-LOC8-062819	STW-LOC8-082219	STW-LOC8-101019
Date Sampled	04/24/2019	06/28/2019	8/22/2019	10/10/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	120	100	460	120
PFMOAA	1,200 J	<21	20,000	240 J
PFO2HxA	480	360	4,900	95 J
PFO3OA	150	200	1,700	48
PFO4DA	<79	210	1,000	48
PFO5DA	51	520	480	85 J
PMPA	< 570	<57	160	38
PEPA	<47	34	72	28
PS Acid	<27	37	58	9,9
Hydro-PS Acid R-PSDA	<b>240</b> <160	2,600 760 J	1,700 340 J	550 37 J
Hydrolyzed PSDA	690 J	3,500 J	4,600 J	600 J
R-PSDCA	<15	3,500 J 49	43	12
NVHOS	<54	190	530	54
EVE Acid	<24	<2.4	<4.9	<2
Hydro-EVE Acid	<28	18	140	9.2
R-EVE	<70	29 J	39 J	7 J
PES	<46	<4.6	<9.2	<2
PFECA B	<60	<6	<12	<2
PFECA-G	<41	<4.1	<8.2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	2,200 2,900	4,300 8,600	31,000 36,000	1,300 2,000
Other PFAS (ng/L)	2,900	0,000	30,000	2,000
10:2 Fluorotelomer sulfonate	<2.0	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)			<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<6	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<11	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2.1	 <2.1	<2 <2.1	<2 <2.1
DONA			~2.1 	
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	<3.7	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<3.5	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	2.4	4.3	4.5	5.2
Perfluorobutanoic Acid	5.7	18	24	26
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2.0	<2 <2	<2 <2	<2 <2
Perfluorododecanoic Acid	<2.0	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	<2	<2	<2
Perfluoroheptanoic Acid	3.7	16	22	26
Perfluorohexadecanoic acid (PFHxDA)	<2.0	<2	<2	<2
Perfluorohexane Sulfonic Acid	3.1	4.7	4.6	4.5
Perfluorohexanoic Acid	4.9	25	31	40
Perfluorononanesulfonic acid	<2.0	<2	<2	<2
Perfluorononanoic Acid	<2.0	4.8	3.2	<2
Perfluorooctadecanoic acid	<2.0 <2.0	<2	<2 <2	<2
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluoropentanoic Acid  Perfluoropentanoic Acid	4.2	22	39	43
Perfluorotetradecanoic Acid	<2.0	<2	<2	<2
Perfluorotridecanoic Acid	<2.0	<2	<2	<2
Perfluorouridecanoic Acid			-	_
Perfluoroundecanoic Acid	<2.0	<2	<2	<2
		<2 12 2.9	<2 16 2.7	<2 9.1 2.2

Location ID	8	8	8	8
Sampling Event	December 2019	January 2020	April 2020	May 2020
Samping Event	December 2017	January 2020	April 2020	Wiay 2020
Field Sample ID	STW-LOC-8-122319	STW-LOC8-013120	STW-LOC-8-4-042820	STW-LOC-8-2-052120
Date Sampled	12/23/2019	1/31/2020	4/28/2020	5/20/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	500	210	200	350
PFMOAA	220	280	88	9,400
PFO2HxA	73	100	54	2,700
PFO3OA	16	<58	14	720
PFO4DA	13 J	<79	17	120
PFO5DA	14	76	36	78
PMPA PEPA	130 91	<b>1,000</b> <47	<b>60</b> <20	140 57
PS Acid	12	29	<b>8.1</b>	24
Hydro-PS Acid	61	200 J	69	210
R-PSDA	26 J	<160	21 J	84 J
Hydrolyzed PSDA	620 J	280 J	340 J	560 J
R-PSDCA	<2	<15	<2	5
NVHOS	16	<54	12	170
EVE Acid	<2	<24	<2	<2
Hydro-EVE Acid	2.8	<28	3.1	19
R-EVE PES	<b>7.8 J</b> <2	<70 <46	3.5 J <2	<3.5 <2.3
PFECA B	<2	<46 <60	<2 <2	<2.3
PFECA-G	<2	<41	<2	<2
Total Table 3+ Compounds (17 compounds)*	1,100	1,900	560	14,000
Total Table 3+ Compounds (20 compounds)*	1,800	2,200	930	15,000
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS) 2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<20 <2	<20 <2	<20 <2	<20 <2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	
DONA				<2
NaDONA	<2.1	<2.1	<2.1	
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<2 <20	<2 <20
Perfluorobutane Sulfonic Acid	3.1	2.7	5	5.2
Perfluorobutanoic Acid	12	3.5	8.8	8.8
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	11	6.7	7.3	9.7
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 UJ <2	<2 <2	<2 2.4	<2 3.8
Perfluoronexane Sulfonic Acid Perfluoronexanoic Acid	<2 17	<2 11	14	3.8
Perfluoronoanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2 UJ	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	21	13	16	23
Perfluorotetradecanoic Acid	<2	<2	<2	<2
D CI 4 1 1 4 1 1	<2	<2	<2	<2
Perfluorotridecanoic Acid			2	
Perfluorotridecanoic Acid Perfluoroundecanoic Acid PFOA	<2 28	<2 16	<2 9.6	<2 13

Location ID	8	8	9	9
Sampling Event	June 2020	August 2020	April 2019	June 2019
Field Sample ID	STW-LOC8-4-060520	STW-LOC-8-4-082620	DSTW-LOC9-042419	STW-LOC9-062819
_		0/0 < /0.00	0.4/0.4/0.40	0.5 (0.0) (0.0.4.0
Date Sampled Analytical Laboratory	6/3/2020 TestAmerica	8/26/2020 TestAmerica	04/24/2019 TestAmerica	06/28/2019 TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	240 J	96	29	77
PFMOAA	260 J	470	8.8 J	<21
PFO2HxA	98 J	200	17 J	20
PFO4DA	34 J 19 J	50 17	4.5 J 3.6 J	<b>5.9</b> <7.9
PFO4DA PFO5DA	19 J 26 J	17		<7.9
PMPA	71 J	52	25 J	<57
PEPA	39 J	15	<20 UJ	<20
PS Acid	13 J	<2	28 J	2,300
Hydro-PS Acid	140 J	77	3.4 J	120
R-PSDA	120 J	18	50 J	110 J
Hydrolyzed PSDA	640 J	200	83 J	190 J
R-PSDCA	4.1 J	2.1	<2 UJ	<2
NVHOS EVE Acid	25 J <2 UJ	30 5.8	2.8 J 11 J	61 57
EVE Acid Hydro-EVE Acid	<2 UJ 4.2 J	6.1		6.7
R-EVE	3.2 J	17	7.5 J	53 J
PES	<2 UJ	<2	<2 UJ	<4.6
PFECA B	<2 UJ	<2	2.8 J	<6
PFECA-G	<2 UJ	<2	<2 UJ	<4.1
Total Table 3+ Compounds (17 compounds)*	970	1,000	140	2,600
Total Table 3+ Compounds (20 compounds)*	1,700	1,300	280	3,000
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2 <2	<2.0	<2
F-53B Minor (11Cl-PF3OUdS) 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2 <20	<20	 <20	 <20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<60	<6
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<110	<11
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2		
ADONA			<2.1	<2.1
DONA	<2	<2		
NaDONA	<b></b>		<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide	<2 <2	<2 <2	<37 <35	<3.7 <3.5
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	5	4.2	2.2	3.7
Perfluorobutanoic Acid	5.9	5.8	6.9	9.2
Perfluorodecane Sulfonic Acid	<2	<2	<2.0	<2
Perfluorodecanoic Acid	<2	<2	<2.0	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2.0	<2
Perfluorododecanoic Acid	<2	<2	<2.0	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2.0	<2
Perfluoroheyadosonoio soid (PEHyDA)	5.4	4.6	7.5	13
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 4.1	2.7	<2.0 <b>3.3</b>	<2 <b>5.5</b>
Perfluoronexane Surronic Acid Perfluoronexanoic Acid	7.6	8.4	9	21
Perfluoronoanesulfonic acid	<2	<2	<2.0	<2
Perfluorononanoic Acid	<2	<2	<2.0	2
Perfluorooctadecanoic acid	<2	<2	<2.0	<2
Perfluorooctane Sulfonamide	<2	<2	<2.0	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2.0	<2
Perfluoropentanoic Acid	12	17	8.6	19
D. (Cl., 4 . 4 4	<2	<2	<2.0	<2
Perfluorotetradecanoic Acid	-	^	- ^	_
Perfluorotridecanoic Acid	<2	<2	<2.0	<2
	<2 <2 12	<2 <2 <b>9.4</b>	<2.0 <2.0 <b>8.9</b>	<2 <2 9.3

Location ID	9	9	9	9
		October 2019	December 2019	
Sampling Event	August 2019			January 2020
Field Sample ID	STW-LOC9-082219	STW-LOC9-101019	STW-LOC-9-122019	STW-LOC9-012920
Date Sampled Analytical Laboratory		10/10/2019 TestAmerica	12/20/2019	1/29/2020
Analytical Laboratory QA/QC	TestAmerica 	1 estAmerica 	TestAmerica 	TestAmerica 
Table 3+ Lab SOP (ng/L)	<del></del>			
HFPO-DA (EPA Method 537 Mod)	55	2,400	28 B	59
PFMOAA	25 J	38 J	14	14
PFO2HxA	28	500	14	14
PFO3OA	5.9	160	5	4.1
PFO4DA	2.3	45	3.8 J	3.6
PFO5DA	<2	26	3.2	4.1
PMPA	48	110	27 B	18
PEPA	<20	27	<20	<20
PS Acid	86	170	6.6	160 J
Hydro-PS Acid R-PSDA	8 81 J	50 300 J	<2 8.3 J	8.7 80 J
Hydrolyzed PSDA	160 J	1,500 J	49 J	150 J
R-PSDCA	<2	7.6	<2	<2
NVHOS	11	63	<2	3.1
EVE Acid	19	110	3.7	10
Hydro-EVE Acid	2.1	34	<2	2.6
R-EVE	17 J	91 J	3.5 J	10 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	290	3,700	110	300
Total Table 3+ Compounds (20 compounds)*	550	5,600	170	540
Other PFAS (ng/L)	-2	-2	2	2
10:2 Fluorotelomer sulfonate F-53B Minor (11Cl-PF3OUdS)	<2 <2	<2 <2	<2 <2	<2 <2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	41	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <b>4.1</b>	<20 <b>6.3</b>	<20 <b>3.1</b>	<20 <b>2.1</b>
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	9.1	6.3 54	4.5	3.2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	19	38	9.7	4.8
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	6.1	9.2	3.3	2.8
Perfluorohexanoic Acid	26	55	16	6
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	3	<2 UJ	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide  Perfluoroportone sulfonia acid (PEPoS)	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 <b>27</b>	<2 94	<2 12	<2 <b>9.8</b>
Perfluorotetradecanoic Acid	<2	<b>94</b> <2	<2	<b>9.8</b> <2
Perfluorotridecanoic Acid Perfluorotridecanoic Acid	<2	<2	<2 UJ	2.2
Perfluoroundecanoic Acid	<2	<2	<2 UJ	<2
PFOA	8.9	12	6.7	4.3
	15	16	7.8	6.2

Location ID	9	9	9	10
Sampling Event		May/June 2020	August 2020	April 2019
Field Sample ID		STW-LOC-9-2-052120	STW-LOC-9-4-082620	DSTW-LOC10-042419
Date Sampled	4/28/2020	5/20/2020	8/26/2020	4/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)	25	2.200		220
HFPO-DA (EPA Method 537 Mod)	25	3,200	51 5.7	320
PFMOAA PFO2HxA	11 13	390 1,700	15	58 J 88 J
PFO3OA	2.9	760	3.8	24 J
PFO4DA	<2	430	<2	20 J
PFO5DA	4	590	<2	9.1 J
PMPA	25	1,000	40	260 J
PEPA	<20	630	<10	97 J
PS Acid	49	2,000	100	78 J
Hydro-PS Acid	2.3	400	8.9	19 J
R-PSDA	21 J	2,600 J	58	190 J
Hydrolyzed PSDA	85 J	970 J	320	280 J
R-PSDCA	<2	65	<2	<2 UJ
NVHOS	10	200	3.2	14 J
EVE Acid	3.3	330	71 55	8.5 J
Hydro-EVE Acid R-EVE	<2 <2	81 240 J	55 19	8.5 J 150 J
PES	<2 <2	240 J <2.3	<2	150 J <2 UJ
PFECA B	<2	<3	<2	<2 UJ
PFECA-G	<2	<2	<2	<2 UJ
Total Table 3+ Compounds (17 compounds)*	150	12,000	350	1,000
Total Table 3+ Compounds (20 compounds)*	250	16,000	750	1,600
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4 <20	<110
6:2 Fluorotelomer sulfonate	<20 <2	<20	<20 <2	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2.1	<2		<2.1
DONA		<2	<2	
NaDONA	<2.1			<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<37
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.8	3.1	4.3	2.1
Perfluorobutanoic Acid	6	57	6.2	10
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2.0
Perfluorodecanoic Acid	<2	2	<2	<2.0
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2 <2	<2.0
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2	<2 <2	<2 <2	<2.0 <2.0
Perfluoroneptane suironic acid (PFHpS)  Perfluoroheptanoic Acid	4.6	36	4.2	<2.0 <b>8.4</b>
Perfluorohexadecanoic acid (PFHxDA)	<b>4.0</b> <2	<2		<2.0
Perfluorohexane Sulfonic Acid	4.7	3.9	4.5	3.5
Perfluorohexanoic Acid	9.8	15	7.0	9.3
Perfluorononanesulfonic acid	<2	<2	<2	<2.0
Perfluorononanoic Acid	<2	8.8	<2	<2.0
Perfluorooctadecanoic acid	<2	<2	<2	<2.0
Perfluorooctane Sulfonamide	<2	<2	<2	<2.0
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2.0
Perfluoropentanoic Acid	12	220	13	17
Perfluorotetradecanoic Acid	<2	<2	<2	<2.0
Perfluorotridecanoic Acid	<2	<2	<2	<2.0
Perfluoroundecanoic Acid	<2	3.2	<2	<2.0
PFOA	6.4	55	6.2	10

Location ID	10	10	10	10
Sampling Event	August 2019	October 2019	December 2019	January 2020
Field Sample ID	STW-LOC10-082219	STW-LOC10-101019	STW-LOC-10-122019	STW-LOC10-012920
Date Sampled	8/22/2019	10/10/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	1,700	15,000	230	8,300
· · · · · · · · · · · · · · · · · · ·		,		,
PFMOAA PFO2HxA	490 J 250	1,700 7,400	34	22,000 23,000
PFO3OA	88	3,300	12	870
PFO4DA	87	2,100	11 J	750
PFO5DA	42	1,900	9.2	340
PMPA	180	1,300	58	810
PEPA	63	590	23	420
PS Acid	380	23,000	40	650
Hydro-PS Acid	510	3,000	8.8	300
R-PSDA	870 J	1,200 J	35 J	280 J
Hydrolyzed PSDA	730 J	3,400 J	100 J	380 J
R-PSDCA	23	78	<2	11
NVHOS	460	270	7	180
EVE Acid	62	680	8.5	110
Hydro-EVE Acid	72	930	4	140
R-EVE	280 J	570 J	38 J	170 J
PES	<2	<9.2	<2	<9.2
PFECA B	<2	<12	<2	<12
PFECA-G	<2	<8.2	<2	<8.2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	4,400 6,300	61,000 66,000	480 650	58,000 59,000
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	0,300	00,000	050	39,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	2.1	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	23	<2 170	3.1 5.4	<2 <b>56</b>
Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid		<2	<b>5.4</b> <2	<b>&gt;6</b> <2
Perfluorodecane Suifonic Acid Perfluorodecanoic Acid	<2 <2	14	<2 <2	<2 <2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	2.4	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	23	33	8.8	17
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	6	<2	3.3	<2
Perfluorohexanoic Acid	29	41	15	19
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	2.5	22	<2	3.9
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	47	200	12	85
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	14	<2	<2
PFOA DEOS	48 15	26	6.6	17
PFOS	15	9	8.3	3.9

Location	ID 10	10A	10A	11
Sampling Eve	nt May/June 2020	May/June 2020	August 2020	May/June 2020
Field Sample	ID STW-LOC-10-2-052120	STW-LOC-10A-2-052120	STW-LOC-10A-4-082620	STW-LOC-11-1-052120
Date Sampl	ed 5/20/2020	5/20/2020	8/26/2020	5/20/2020
Analytical Laborato		TestAmerica	TestAmerica	TestAmerica
QA/( Table 3+ Lab SOP (ng/L)	<u> </u>			
HFPO-DA (EPA Method 537 Mod)	1,700	2,600	56	320
PFMOAA	5,300	13,000	<4	46
PFO2HxA	630	1,100	15	580
PFO3OA	440	580	2.4	16
PFO4DA	340	450	<3	24
PFO5DA	560	510	<3.9	47
PMPA	<280	<570	<31	120
PEPA	120	300	<10 <b>160</b>	47
PS Acid Hydro-PS Acid	230 150	1,100 410	12	11 20
R-PSDA	480 J	1,800 J	34	230 J
Hydrolyzed PSDA	170 J	700 J	340	38 J
R-PSDCA	11	44	<2	<2
NVHOS	210	540	2.6	7.3
EVE Acid	25	140	72	<2
Hydro-EVE Acid	44	89	49	8.7
R-EVE	160 J	330 J	9.9	83 J
PES P	<23	<46	<2 <2	<2 <2
PFECA B PFECA-G	<30 <20	<60 <41	<2.4	<2 <2
Total Table 3+ Compounds (17 compounds)*	9,800	21,000	370	1,200
Total Table 3+ Compounds (20 compounds)*	11,000	24,000	750	1,600
Other PFAS (ng/L)	,,,,,,	, , , , ,		,
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2 <4	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20	<20	<4 <20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA				
DONA	<2	<2	<2	<2
NaDONA				
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	<2	<2	4.3 6.4	<2
Perfluorodecane Sulfonic Acid	<b>62</b> <2	<b>78</b> <2	<2	11 <2
Perfluorodecanic Acid	<2	<2	<2	2.8
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	7.1	18	3.8	6.5
Perfluorohexadecanoic acid (PFHxDA)	<2	<2		<2
Perfluorohexane Sulfonic Acid	<2	<2	4.2	5.6
Perfluorohexanoic Acid	11	17	7.4	4.8
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2 2.8	<2 <b>5.4</b>	<2 <2	<2 <b>4.8</b>
Perfluorononanoic Acid Perfluorooctadecanoic acid	<b>2.8</b> <2	<b>5.4</b> <2	<2 UJ	<b>4.8</b> <2
Perfluorooctane Sulfonamide	<2	<2 <2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	37	120	12	17
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	2.2	<2	<2
PFOA	5.1	14	6.3	12
PFOS	<2	3.5	12	63

Location ID		12	12	12
Sampling Event	August 2019	December 2019	May/June 2020	August 2020
Field Sample ID	STW-LOC12-082219	STW-LOC-12-122019	STW-LOC-12-2-052120	STW-LOC-12-4-082620
Date Sampled	8/22/2019	12/20/2019	5/20/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	17	15 B	77	21
PFMOAA	<5	20	<5	12 J
PFO2HxA	14	14	44	21
PFO3OA	2.6	2.4	4.6	3.6
PFO4DA	<2	<2	2.6	<2
PFO5DA	<2	3	5.7	<2
PMPA	26	50 B	83	52
PEPA	<20	<20	<20	<10
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	9	<2
R-PSDA	9.2 J	<2	53 J	23 J
Hydrolyzed PSDA	3 J	15 J	6.9 J	4.1 J
R-PSDCA	<2	<2	<2	<2
NVHOS	4.9	2.4	4.2	11 J
EVE Acid	<2	<2	<2	<2 <2
Hydro-EVE Acid	<2 2.5 I	<2	<2	7.4 J
R-EVE PES	3.5 J <2	<2 <2	<b>6.3 J</b> <2	7.4 J <2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	65	110	230	120
Total Table 3+ Compounds (20 compounds)*	80	120	300	160
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1		 <2
DONA NaDONA	<2.1	 <2.1	<2	
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	6.5	4.5	4.3	6.9
Perfluorobutanoic Acid	15	6.8	6.3	8.3
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	33	11	7.8	6.3
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	
Perfluorohexane Sulfonic Acid	8.5 37	5.5 19	5.9	6.5
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<2	<2 <2	13 <2	<2 UJ
Perfluorononanoic Acid	2.9	<2	<2	2.1
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	37	14	15	14
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2 UJ
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	16	6.9	9.6	11
PFOS	22	15	13	19

		T		
Location ID		13	14	14
Sampling Event	August 2020	May/June 2020	April 2019	<b>June 2019</b>
Field Sample ID	STW-LOC-12-4-082620	STW-LOC-10A-2-052120	DSTW-LOC14-042419	STW-LOC14-062819
Date Sampled	8/26/2020	5/20/2020	04/24/2019	06/28/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)	Field Duplicate			
HFPO-DA (EPA Method 537 Mod)	20	640	12	22
PFMOAA	12	50	67 J	<5
PFO2HxA	22	53	10 J	15
PFO3OA	3.9	22	2.1 J	2.5
PFO4DA	<2	24	<2 UJ	<2
PFO5DA	<2	23	<2 UJ	<2
PMPA	52	190	15 J	22
PEPA	<10	84	<20 UJ	<20
PS Acid	<2	170	<2 UJ	<2
Hydro-PS Acid	<2	33	<2 UJ	<2
R-PSDA	<2 UJ	120 J	5.7 J	<2
Hydrolyzed PSDA	4.0	190 J	2.3 J	2.1 J
R-PSDCA	<2	<2	<2 UJ	<2
NVHOS	<2 UJ	9.5	<2 UJ	<2
EVE Acid	<2	7	<2 UJ	<2
Hydro-EVE Acid	<2	7	<2 UJ	<2
R-EVE	<2 UJ	57 J	3.2 J	<2
PES	<2	<2	<2 UJ	<2
PFECA B	<2	<2	<2 UJ	<2
PFECA-G	<2	<2	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	120	1,300	110	62
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	160	1,700	120	64
10:2 Fluorotelomer sulfonate	<2	<2	<2.0	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2		
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<60	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<110	<2
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2		
ADONA			<2.1	<2.1
DONA	<2	<2		
NaDONA			<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<37	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<35	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	6.5	<2	<2.0	5.7
Perfluorobutanoic Acid	8.1	13	4.7	13
Perfluorodecane Sulfonic Acid	<2 <2	<2	<2.0	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2 <2	<2.0 <2.0	<2 <2
Perfluorododecanoic Acid (PPDoS)  Perfluorododecanoic Acid	<2 <2	<2 <2	<2.0	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2	<2 <2	<2.0	<2 <2
Perfluoroheptanoic Acid	6.1	7.6	3.1	24
Perfluorohexadecanoic acid (PFHxDA)		<2	<2.0	<2
Perfluorohexane Sulfonic Acid	6.2	<2	3	7.9
Perfluorohexanoic Acid	12	3.7	4.4	36
Perfluorononanesulfonic acid	<2	<2	<2.0	<2
Perfluorononanoic Acid	2.0	3	<2.0	2.3
Perfluorooctadecanoic acid	<2	<2	<2.0	<2
Perfluorooctane Sulfonamide	<2	<2	<2.0	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2.0	<2
Perfluoropentanoic Acid	14	45	3.8	28
Perfluorotetradecanoic Acid	<2	<2	<2.0	<2
Perfluorotridecanoic Acid	<2	<2	<2.0	<2
Perfluoroundecanoic Acid	<2	<2	<2.0	<2
PFOA	10	9.9	5.8	14
PFOS	18	2.2	11	22

Location ID	14	14	14	14
Sampling Event	August 2019	October 2019	December 2019	April 2020
Field Sample ID	STW-LOC14-082219	STW-LOC14-101019	STW-LOC-14-122019	STW-LOC-14-4-042820
Date Sampled	8/22/2019	10/10/2019	12/20/2019	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)			44 P	20
HFPO-DA (EPA Method 537 Mod)	14	15	21 B	39
PFMOAA PFO2HxA	<5	<5 UJ <b>6.7</b>	19	25
PFO3OA	<b>14</b> <2	<2	13 <2	21 4.4
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2 UJ	<2	5.4
PMPA	33	23	68	34
PEPA	<20	<20	25	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	2.1
R-PSDA	5 J	2.4 J	<2	8.6 J
Hydrolyzed PSDA	<2	<2	9.3 J	17 J
R-PSDCA	<2	<2	<2	<2
NVHOS	3.8	6	<2	4.7
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE PES	<2 <2 <2	<2 <2	<2 <2	<2 <2
PES PFECA B	<2	<2	<2 <2	<2 <2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	65	51	150	140
Total Table 3+ Compounds (20 compounds)*	70	53	160	160
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20	<4 39 J	<4
6:2 Fluoroteiomer sunonate F-53B Major (9Cl-PF3ONS)	<20 <2	<20 <2	<2	<20 <2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.2	9.6	4.5	3.5
Perfluorobutanoic Acid	10	27	6.8	5.3
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid Perfluorododecanoic Acid	<2 <2 <2	<2 <2	<2 <2	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2 <2	<2 <2
Perfluoroheptanoic Acid	21	50	11	4.7
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	6.1	13	5.1	4.7
Perfluorohexanoic Acid	27	72	20	8.7
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	2.2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	2.1	<2	<2
Perfluoropentanoic Acid	27	67	14	9.9
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid Perfluoroundecanoic Acid	<2 <2 <2	<2 <2	<2 <2	<2 <2 <2
		<2 15	<2 7.5	6.4
PFOA				

I continu ID	1.4	1.4	15	15
Location ID	14	14	15	15
Sampling Event	May/June 2020	August 2020	April 2019	June 2019
Field Sample ID	STW-LOC-14-1.33- 052120	STW-LOC-14-4-082620	DSTW-LOC15-042419	STW-LOC15-062819
Date Sampled	5/20/2020	8/26/2020	04/24/2019	06/28/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	120	19	34	45
PFMOAA	<5	8.7	8.4 J	12
PFO2HxA	15	17	17 J	16
PFO3OA	3.9	2.5	4 J	3.2
PFO4DA	<2	<2	3.2 J	<2
PFO5DA	<2	<2	<2 UJ	<2
PMPA	57	51	35 J	25
PEPA	<20	<10	<20 UJ	<20
PS Acid	3.1	<2	22 J	880
Hydro-PS Acid	3.3	<2	4.3 J	41
R-PSDA	21 J	<2	42 J	80 J
Hydrolyzed PSDA	6.8 J	3.2	71 J	250 J
R-PSDCA	<2	<2	<2 UJ	<2
NVHOS	3.8	8.9	3 J	23
EVE Acid	<2	<2	9.5 J	22
Hydro-EVE Acid	<2	<2	<2 UJ	3.6
R-EVE	9.9 J	<2	10 J	33 J
PES	<2	<2	<2 UJ	<2
PFECA B	<2	<2	<2 UJ	<2
PFECA-G	<2	<2	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	210	#REF!	140	1,100
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	240	#REF!	260	1,400
10:2 Fluorotelomer sulfonate	<2	<2	<2.0	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2		
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<60	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<110	<2
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2		
ADONA			<2.1	<2.1
DONA	<2	<2	-	
NaDONA			<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<37	3.1
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<35	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.1	6.1	2.3	3.7
Perfluorobutanoic Acid	5.9	7.8	6.5	9.4
Perfluorodecane Sulfonic Acid	<2	<2	<2.0	<2
Perfluorodecanoic Acid	<2	<2	<2.0	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2.0	<2
Perfluorododecanoic Acid	<2	<2	<2.0	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2.0	<2
Perfluoroheptanoic Acid	5.5	5.8	7.5	14
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2	6.2	<2.0	<2
ARRELHIOTODEVADE NUITODIC ACID	4 4	n.Z	3.5	5.7
	4.1		7 0	22
Perfluorohexanoic Acid	9.5	11	7.9	22
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<b>9.5</b> <2	11 <2	<2.0	<2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid	9.5 <2 <2	11 <2 <2 <2	<2.0 <2.0	<2 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid	9.5 <2 <2 <2 <2 <2	11 <2 <2 <2 <2 <2	<2.0 <2.0 <2.0	<2 <2 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	9.5 <2 <2 <2 <2 <2 <2	11 <2 <2 <2 <2 <2 <2	<2.0 <2.0 <2.0 <2.0	<2 <2 <2 <2 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	9.5 <2 <2 <2 <2 <2 <2 <2 <2	11 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2.0 <2.0 <2.0 <2.0 <2.0	<2 <2 <2 <2 <2 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	9.5 <2 <2 <2 <2 <2 <2 <12	11 <2 <2 <2 <2 <2 <2 <2 <12 <12	<2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 8.2	<2 <2 <2 <2 <2 <2 <2 <18
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid	9.5 <2 <2 <2 <2 <2 <2 <12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	11 <2 <2 <2 <2 <2 <2 <12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	<2 <2 <2 <2 <2 <2 18 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	9.5 <2 <2 <2 <2 <2 <12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	11	<2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	<2 <2 <2 <2 <2 <2 <18 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
Perfluorohexanoic Acid Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid	9.5 <2 <2 <2 <2 <2 <2 <12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	11 <2 <2 <2 <2 <2 <2 <12 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0 <2.0	<2 <2 <2 <2 <2 <18 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2

T 41 TD	15	15	15	15
Location ID		15	15	15
Sampling Event		October 2019	December 2019	January 2020
Field Sample ID		STW-LOC15-101019	STW-LOC-15-122019	STW-LOC15-012920
Date Sampled		10/10/2019	12/20/2019	1/29/2020
Analytical Laboratory QA/QC	TestAmerica 	TestAmerica	TestAmerica 	TestAmerica 
Table 3+ Lab SOP (ng/L)	<u></u>			
HFPO-DA (EPA Method 537 Mod)	43	140	35	85
PFMOAA	12	<5 UJ	15	120
PFO2HxA	22	32	13	140
PFO3OA	5.3	16	5	8.2
PFO4DA PFO5DA	<b>2.2</b> <2	16	3.9	6.5
PMPA	38	15 45	31 B	5.3
PEPA	<20	<20	<20	<20
PS Acid	92	150	24	100
Hydro-PS Acid	8.2	28	2.2	8.5
R-PSDA	63 J	250 J	11 J	120 J
Hydrolyzed PSDA	140 J	1,700 J	58 J	360 J
R-PSDCA NVHOS	<2 12	3.6 35	<2 2	<2 <b>5.4</b>
EVE Acid	22	62	4.3	7.9
Hydro-EVE Acid	2.1	21	<2	2.7
R-EVE	15 J	71 J	4.7 J	22 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	260	560	140	510
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	480	2,600	210	1,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20	<4 <20	<4 <20
F-53B Major (9Cl-PF3ONS)	<20 <2	<20 <2	<20 <2	<20
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2 <20	<2 <20	<2	<2 <20
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <b>4.1</b>	6.5	<20 3	2.2
Perfluorobutanic Acid	9.2	22	<2	2.4
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<b>20</b> <2	<b>37</b> <2	<b>8.7</b> <2	<b>4.7</b> <2
Perfluorohexane Sulfonic Acid	5.9	8.9	3.4	2.6
Perfluorohexanoic Acid	26	51	14	5.5
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	2.4	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 <b>28</b>	<2 <b>68</b>	<2 10	<2 10
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<b>28</b> <2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	9.4	11	4.8	4
PFOS	16	16	8.2	6.2

Location ID	15	15	15	15
Sampling Event	April 2020	May/June 2020	May/June 2020	August 2020
Field Sample ID		STW-LOC-15-2-052120	STW-LOC-15-2-052120- D	STW-LOC-15-4-082620
Date Sampled	4/28/2020	5/20/2020	5/20/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC			Field Duplicate	
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	36	3,000	3,000	<b>51</b>
		*		<b>51</b> <2
PFMOAA PFO2HxA	14 14	2,700 1,100	2,700 1,100	7.3
PFO3OA	3.8	420	470	<2
PFO4DA	2.6	300	230	<2
PFO5DA	6.1	300	310	<2
PMPA	27	680	680	<20
PEPA	<20	460	460	<10
PS Acid	140	2,200	2,400	51
Hydro-PS Acid	7	400	420	3.8
R-PSDA	47 J	2,800 J	2,900 J	15
Hydrolyzed PSDA	330 J	1,100 J	1,200 J	150
R-PSDCA	<2	77	81	<2
NVHOS	11	250	250	<2
EVE Acid	4.1	410	410	27
Hydro-EVE Acid	<2	77	75	18
R-EVE	6.3 J	260 J	270 J	3.4
PES	<2	<4.6	<4.6	<2
PFECA B	<2	<6	<6	<2
PFECA-G	<2	<4.1	<4.1	<2
Total Table 3+ Compounds (17 compounds)*	270	12,000	13,000	160
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	650	17,000	17,000	330
	2	2	2	<2
10:2 Fluorotelomer sulfonate	<2 <2	<2 <2	<2 <2	<2
F-53B Minor (11Cl-PF3OUdS) 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1			
DONA		<2	<2	<2
NaDONA	<2.1			
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.7	2.5	2.8	4.2
Perfluorobutanoic Acid	7.9	53	57	6.8
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	2	2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	5	32	36	4.1
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	4.2
Perfluorohexane Sulfonic Acid	4.6	3.1	3.3	4.3 7.6
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<b>9.3</b> <2	14	15 <2	7. <b>6</b> <2
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2 <2	<2 6	6.4	<2 <2
Perfluoronoanoic Acid Perfluorooctadecanoic acid	<2	<2	<b>0.4</b> <2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanic Acid	12	240	260	13
Perfluorotetradecanoic Acid	<2	<2	<2	<2
	<2	<2	<2	<2
Perfluorotridecanoic Acid	<u> </u>			
Perfluorotridecanoic Acid Perfluoroundecanoic Acid	<2		2.7	<2
		2.1		<2 <b>6.4</b>

Location ID	18	18	18	18
Sampling Event	June 2019	August 2019	August 2019	August 2019
Field Sample ID	STW-LOC-18-062719	STW-LOC18-082119-1	STW-LOC18-082119-2	STW-LOC18-082119-3
Date Sampled	06/27/2019	8/21/2019	8/21/2019	8/21/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	4.1	7.1	11	7.6
PFMOAA	<5 UJ	<5	<5	<5
PFO2HxA	2.4 J	2.2	4.4	3.8
PFO3OA	<2 UJ	<2	<2	<2
PFO4DA	<2 UJ	<2	<2	<2
PFO5DA	<2 UJ	<2	<2	<2
PMPA	<10 UJ	<10 UJ	18	21
PEPA	<20 UJ	<20	<20	<20
PS Acid	<2 UJ	<2	2	<2
Hydro-PS Acid	<2 UJ	<2	<2 4.1. T	<2
R-PSDA Hydrolyzed PSDA	<2 UJ <2 UJ	3.5 J <2	<b>4.1 J</b> <2	2.3 J <2
R-PSDCA	<2 UJ	<2	<2	<2
NVHOS	<2 UJ	<2 UJ	<2	4.4
EVE Acid	<2 UJ	<2	<2	<2
Hydro-EVE Acid	<2 UJ	<2	<2	<2
R-EVE	<2 UJ	<2	2.1 J	3.2 J
PES	<2 UJ	<2	<2	<2
PFECA B	<2 UJ	<2	<2	<2
PFECA-G	<2 UJ	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	6.5	9.3	35 42	37 42
Other PFAS (ng/L)	0.5	13	42	42
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<4 UJ	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2.1	<2 <2.1	<2 <2.1	<2 <2.1
DONA	<2.1	<2.1	<2.1	<2.1
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	<3.3	14 J	7.1 J	7.9
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorododecanoic Acid Perfluorododecanoic Acid	<2 <2	<2	<2	2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	2.4	5.1	9.2	8.9
Perfluorohexadecanoic acid (PFHxDA)	<2 UJ	<2 UJ	<2 UJ	<2 UJ
Perfluorohexane Sulfonic Acid	<2	<2	2.6	2.5
Perfluorohexanoic Acid	3.5	5.2	11	12
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluoroctadecanoic acid	<2 UJ	<2 UJ	<2 UJ	<2 UJ
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 <2 <2	<2 <2	<2 <2	<2 <2
Perfluoropentane sulfonic acid (PFPeS)  Perfluoropentanoic Acid	3.6	3.7 J	<2 11	<2 11
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	<2	2.8	5.4	5.1
PFOS	<2	<2	6.4	7.6

Location ID	18	18	18	18
Sampling Event	August 2019	October 2019	December 2019	January 2020
Field Sample ID	STW-LOC18-082119-4	STW-LOC18-100919	STW-LOC-18-122019	STW-LOC18-012920
Date Sampled	8/21/2019	10/9/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	120	16	12 B	6 J
PFMOAA	<5	<5 UJ	<5	<5
PFO2HxA	20	5.5 J	3.9 J	3.7 J
PFO3OA	5.1	<2	<2	<2
PFO4DA	3.2	<2	<2	<2
PFO5DA	<2	<2 UJ	<2	<2 UJ
PMPA	64 J	<10 UJ	19 B	<10 UJ
PEPA	26	<20	<20	<20 UJ
PS Acid	5	<2	<2	<2
Hydro-PS Acid	6.4	<2	<2	<2
R-PSDA	53 J 22 J	13 J	7.7 J 6.2 J	<2
Hydrolyzed PSDA R-PSDCA	<2 s	<2 <2	<b>6.2 J</b> <2	<2 <2
NVHOS	6.4	<2 UJ	<2 UJ	<2 UJ
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	2.3	<2	<2	<2
R-EVE	26 J	2.4 J	5.2 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	260	22	35	9.7
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	360	37	54	9.7
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<49	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4 UJ	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1 UJ
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1 UJ
N-ethyl perfluoroctane sulfonamidoacetic acid	<20 <2	<20 <2 UJ	<20	<20 <2
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide	<2	<2 03	<2 <2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	12 J	17 J	<3.3	110 J
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	6.3	22	2.8	<2
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 <2 <2	<2 UJ 5.4	<8.3 <2	<89 UJ <2
Perfluoronexane Surionic Acid Perfluorohexanoic Acid	7.6	29	3.2	<2 UJ
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2 UJ	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	7.3	27 J	3.4	<49 UJ
Perfluorotetradecanoic Acid	<2	<2 UJ	<2	<2 UJ
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid PFOA	<2 <b>4.2</b>	<2 <b>6.7</b>	<2 3.3	<2 <2

Location ID	18	18	18	19A
Sampling Event	April 2020	May/June 2020	August 2020	April 2019
	STW-LOC-18-4-042820	STW-LOC18-4-060520	STW-LOC-18-4-082620	DSTW-LOC19A-042419
Date Sampled	4/28/2020	6/3/2020	8/26/2020	04/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)	. •	2 ( 7		20.7
HFPO-DA (EPA Method 537 Mod)	6.5	3.6 J	9.5	30 J
PFMOAA PFO2HxA	<5 2.5	<2 UJ	<2	< 5 UJ
PFO3OA	<b>3.5</b> <2	2.8 J <2 UJ	<b>2.8</b> <2	<b>4.8 J</b> <2 UJ
PFO4DA	<2	<2 UJ	<2	<2 UJ
PFO5DA	4.6	<2 UJ	<2	<2 UJ
PMPA	15	<13 UJ	<20	27 J
PEPA	<20	<2 UJ	<10	<20 UJ
PS Acid	<2	<2 UJ	<2	<2 UJ
Hydro-PS Acid	<2	<2 UJ	<2	<2 UJ
R-PSDA	<2	<2 UJ	10	<2 UJ
Hydrolyzed PSDA	3.1 J	<2 UJ	<2	<2 UJ
R-PSDCA	<2	<2 UJ	<2	<2 UJ
NVHOS	<2	<2 UJ	<2	<2 UJ
EVE Acid	<2	<2 UJ	<2	<2 UJ
Hydro-EVE Acid	<2	<2 UJ	<2	<2 UJ
R-EVE	<2	<2 UJ	<2	<2 UJ
PES	<2	<2 UJ	<2	<2 UJ
PFECA B	<2	<2 UJ	<2	<2 UJ
PFECA-G	<2	<2 UJ	<2	<2 UJ
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	30 33	6.4 6.4	12 22	62 62
Other PFAS (ng/L)	33	0.4	22	02
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20 UJ
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	
ADONA	<2.1			<2.1 UJ
DONA		<2	<2	
NaDONA	<2.1			<2.1 UJ
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2 UJ	<7.5	<2	<37 UJ
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2 <20	<35 UJ
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <2	<20 <2	<20	<20 <2.0 UJ
Perfluorobutanic Acid	<2	<3	4.8 J	4.3 J
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2.0 UJ
Perfluorodecanoic Acid	<2	<2	<2	<2.0 UJ
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2.0 UJ
Perfluorododecanoic Acid	<2	<2	<2	<2.0 UJ
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2.0 UJ
Perfluoroheptanoic Acid	<2	<2	2.4	<2.0 UJ
Perfluorohexadecanoic acid (PFHxDA)	<2 UJ	<2 UJ		<2.0 UJ
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2.0 UJ
Perfluorohexanoic Acid	2.1	2.4	2.3	<2.0 UJ
Perfluorononanesulfonic acid	<2	<2	<2	<2.0 UJ
Perfluorononanoic Acid	<2	<2	<2	<2.0 UJ
Perfluorooctadecanoic acid	<2 UJ	<2 UJ	<2 UJ	<2.0 UJ
Perfluorooctane Sulfonamide	<2	<2	<2	<2.0 UJ
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2.0 UJ
Perfluoropentanoic Acid	2.6	2.9	3.3	2.6 J
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 UJ	<2 <2	<2.0 UJ
Perfluoroundecanoic Acid Perfluoroundecanoic Acid	<2 <2	<2 <2	<2 <2	<2.0 UJ <2.0 UJ
PFOA	<2 <2	<2 <b>2</b>	2.5	<2.0 UJ 2.6 J
			- 447	

Location ID	19A	19A	19A	19A
Sampling Event		August 2019	October 2019	December 2019
Field Sample ID		STW-LOC19A-082119	STW-LOC19A-100919	STW-LOC-19A-122019
Date Sampled	06/27/2019	8/21/2019	10/9/2019	12/20/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)	4 F Y	40	<b>7</b> 0	200
HFPO-DA (EPA Method 537 Mod)	4.5 J	18	7.3	380
PFMOAA PFO2HxA	<5 UJ <b>2.6 J</b>	<5 <b>5.1</b>	<5 <b>7.1</b>	16 35
PFO3OA	2.0 J <2 UJ	<2	<2 UJ	9.7
PFO4DA	<2 UJ	<2	<2 UJ	4 J
PFO5DA	<2 UJ	<2	<2 UJ	<2
PMPA	<10 UJ	21	19	340
PEPA	<20 UJ	<20	<20	180
PS Acid	<2 UJ	4.5	<2	<2
Hydro-PS Acid	<2 UJ	<2	<2	<2
R-PSDA	<2 UJ	<2 UJ	<2 UJ	<2
Hydrolyzed PSDA R-PSDCA	<2 UJ <2 UJ	<2 <2	<2 UJ <2	11 J <2
NVHOS	<2 UJ	<2 <2	2.1	2.2
EVE Acid	<2 UJ	<2	<2	<2
Hydro-EVE Acid	<2 UJ	<2	<2	2.4
R-EVE	<2 UJ	<2	<2 UJ	4.1 J
PES	<2 UJ	<2	<2	<2
PFECA B	<2 UJ	<2	<2	<2
PFECA-G	<2 UJ	<2 UJ	<2 UJ	<2 UJ
Total Table 3+ Compounds (17 compounds)*	7.1	49	36	970
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	7.1	49	36	980
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20 UJ	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	 -2.1 III	<2	<2 <2.1	<2
ADONA DONA	<2.1 UJ	<2.1	<2.1	<2.1
NaDONA	<2.1 UJ	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	2.4 J	2.9	6	3.2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorododecanoic Acid	<2	<2	<2	<2 <2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	3.3 J	5.1	9.5	3.5
Perfluorohexadecanoic acid (PFHxDA)	<2 UJ	<2 UJ	<2 UJ	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	6.1 J	6.8	15	7.8
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	3.1 B
Perfluorooctadecanoic acid	<2 UJ	<2 UJ	<2 UJ	<2
Perfluorooctane Sulfonamide  Perfluoropentane sulfonia acid (PEPaS)	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 5.3	<2 7.1	<2 15	<2 <b>6.3</b>
Perfluorotetradecanoic Acid	<2 UJ	<2	<2 UJ	<2
Perfluorotridecanoic Acid	<2	<2	<2	46 B
Perfluoroundecanoic Acid	<2	<2	<2	15 B
PFOA	3.1 J	3.7	3.3	14
PFOS	<2	2.4	2.5	<2

Location ID	19A	19A	19A	19A
Sampling Event	January 2020	April 2020	May/June 2020	August 2020
Field Sample ID		STW-LOC-19A-042820	STW-LOC19A-060320	STW-LOC-19A-082620
Date Sampled	1/29/2020	4/28/2020	6/3/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	19 J	5	51 J	4.2
PFMOAA	8.7 J	<5	<2 UJ	5.5
PFO2HxA	9.3	4	10 J	4.9
PFO3OA	2.9	<2	3.4 J	<2
PFO4DA	<2	<2	2.5 J	<2
PFO5DA	<2	5.4	<2 UJ	<2
PMPA	27	13	34 J	<20
PEPA	<20	<20	9.6 J	<10
PS Acid	2.3	3	<2 UJ	3.1
Hydro-PS Acid R-PSDA	<2 <2	<2 <2	<2 UJ 22 J	<2 <2
Hydrolyzed PSDA	4.8 J	<2	17 J	<2
R-PSDCA	<b>4.6 J</b>	<2	<2 UJ	<2
NVHOS	<2	<2	<2 UJ	<2
EVE Acid	<2	<2	<2 UJ	<2
Hydro-EVE Acid	<2	<2	2 J	<2
R-EVE	<2	<2	11 J	<2
PES	<2	<2	<2 UJ	<2
PFECA B	<2	<2	<2 UJ	<2
PFECA-G	<2	<2	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)* Total Table 3+ Compounds (20 compounds)*	69 74	30	110 160	18 18
Other PFAS (ng/L)	/4	30	100	10
10:2 Fluorotelomer sulfonate	<2 UJ	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2 UJ	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20 UJ	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20 UJ	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2 UJ	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4 UJ	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20 UJ	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2 UJ	<2	<2	<2
ADONA DONA	<2.1 UJ	<2.1	<b></b> <2	 <2
NaDONA	<2.1 UJ	<2.1		
N-ethyl perfluorooctane sulfonamidoacetic acid	<20 UJ	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2 UJ	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2 UJ	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20 UJ	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2 UJ	<2	2.4	<2
Perfluorobutanoic Acid	8.6 J	<2	5.2	<2
Perfluorodecane Sulfonic Acid	<2 UJ	<2	<2	<2
Perfluorodecanoic Acid	<2 UJ	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 UJ <2 UJ	<2	<2	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 UJ	<2 <2	<2 <2	<2
Perfluoroheptanoic Acid	2.9 J	<2	3.4	<2
Perfluorohexadecanoic acid (PFHxDA)	<2 UJ	<2 UJ	<2	
Perfluorohexane Sulfonic Acid	<2 UJ	<2	<2	<2
Perfluorohexanoic Acid	4.3 J	2.7	5.5	2.5
Perfluorononanesulfonic acid	<2 UJ	<2	<2	<2
Perfluorononanoic Acid	<2 UJ	<2	<2	<2
Perfluorooctadecanoic acid	<2 UJ	<2 UJ	<2	<2 UJ
Perfluorooctane Sulfonamide	<2 UJ	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2 UJ	<2	<2 <b>5.5</b>	<2 <b>2.9</b>
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	3.2 J <2 UJ	<b>3.2</b> <2	<b>5.5</b> <2	<b>2.9</b> <2
Perfluorotridecanoic Acid Perfluorotridecanoic Acid	<2 UJ	<2 <2	<2 <2	<2
Perfluoroundecanoic Acid	<2 UJ	<2	<2	<2
PFOA	4.4 J	<2	12	2.7
PFOS	7 J	<2	2.4	<2

	Lon	100	100	100
Location ID		19B	19B	19B
Sampling Event	April 2019	June 2019	August 2019	October 2019
Field Sample ID	DSTW-LOC19B-042419	STW-LOC-19B-062719	STW-LOC19B-082119	STW-LOC19B-100919
Date Sampled		06/27/2019	8/21/2019	10/9/2019
Analytical Laboratory		TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	22	9.6	26	5.9
PFMOAA	<5 UJ	<5 UJ	<5	<5
PFO2HxA	9.8 J	3.1 J	5.3	3.9
PFO3OA	<2 UJ	<2 UJ	<2	<2
PFO4DA	<2 UJ	<2 UJ	<2	<2 UJ
PFO5DA	<2 UJ	<2 UJ	<2	<2 UJ
PMPA PEPA	39 J <20 UJ	<10 UJ <20 UJ	<b>26</b> <20	20 <20
PS Acid	<20 UJ	<2 UJ	5	<20
Hydro-PS Acid	<2 UJ	21 J	2.6	2.2
R-PSDA	6.5 J	<2 UJ	<2	<2 UJ
Hydrolyzed PSDA	3.5 J	<2 UJ	<2	<2
R-PSDCA	<2 UJ	<2 UJ	<2	<2
NVHOS	<2 UJ	<2 UJ	3	3.2
EVE Acid	<2 UJ <2 UJ	<2 UJ	<2	<2
Hydro-EVE Acid R-EVE	<2 UJ 5.3 J	<2 UJ <2 UJ	<2 <2	<2 <2
PES	<2 UJ	<2 UJ	<2	<2
PFECA B	<2 UJ	<2 UJ	<2	<2
PFECA-G	<2 UJ	<2 UJ	<2 UJ	<2 UJ
Total Table 3+ Compounds (17 compounds)*	71	34	68	27
Total Table 3+ Compounds (20 compounds)*	86	34	68	27
Other PFAS (ng/L)	2.0	2	2	2
10:2 Fluorotelomer sulfonate F-53B Minor (11Cl-PF3OUdS)	<2.0	<2	<2 <2 <2	<2 <2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<60	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<110	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)			<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA NaDONA	 <2.1	 <2.1	<2.1	<b></b> <2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37 UJ	<37	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35 UJ	<35	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	2.3
Perfluorobutanoic Acid	4.4	3	4.6	7.2
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	2.2	4	7.9	12
Perfluorohexadecanoic acid (PFHxDA)	<2	<2 UJ	<2 UJ	6.2 J
Perfluorohexane Sulfonic Acid	<2	<2	<2	2.3
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<b>3.4</b> <2	<b>6.8</b> <2	11 <2	18 <2
Perfluorononanoic Acid Perfluorononanoic Acid	<2	<2	<2	<2 <2
Perfluorooctadecanoic acid	<2	<2 UJ	<2 UJ	<2 UJ
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	3.6	6	11	18
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid PFOA	<2 <b>4.9</b>	<2 3.1	<2 30	<2 <b>4.4</b>
	. 44			

Location II	19B	19B	19B	19B
Sampling Even	t December 2019	January 2020	April 2020	May/June 2020
Field Sample II	STW-LOC-19B-122019	STW-LOC19B-012920	STW-LOC-19B-042820	STW-LOC19B-060320
Date Sampleo	1 12/20/2019	1/29/2020	4/28/2020	6/3/2020
Analytical Laboratory		TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	22 B	75	54	2.2 J
PFMOAA	5.6	14 J	37	<2 UJ
PFO2HxA	4.3	230	26	2.7 J
PFO3OA	<2	19	6.2	<2 UJ
PFO4DA	<2	<2	2.5 J	<2 UJ
PFO5DA	<2	<2	6.1	<2 UJ
PMPA	35 B	120	44	<13 UJ
PEPA	<20	46	<20	<2 UJ
PS Acid	<2	2.9	<2	<2 UJ
Hydro-PS Acid R-PSDA	<2 <2	<2 <2	4.3 22 J	<2 UJ <2 UJ
K-PSDA Hydrolyzed PSDA	2.2 J	5.3 J	22 J 22 J	<2 UJ
R-PSDCA	<2.2 3	<2	<2	<2 UJ
NVHOS	<2	<2	5.1	<2 UJ
EVE Acid	<2	<2	<2	<2 UJ
Hydro-EVE Acid	<2	<2	2.3	<2 UJ
R-EVE	<2	<2	12 J	<2 UJ
PES	<2	<2	<2	<2 UJ
PFECA B	<2	<2	<2	<2 UJ
PFECA-G	<2 UJ	<2	<2	<2 UJ
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	67	510 510	190 240	4.9
Other PFAS (ng/L)	09	310	240	4.9
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<3.2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<52
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<8.5
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<14
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2 <2.1	<2 <2.1	<2 <2.1	<2.4
DONA	<2.1	<2.1	<2.1	<2
NaDONA	<2.1	<2.1	<2.1	
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<8.7
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<4.3
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<31
Perfluorobutane Sulfonic Acid	<2	<2	3.6	<2
Perfluorobutanoic Acid	2.2	5.9	5.6	3.7
Perfluorodecane Sulfonic Acid	<2	<2	<2	<3.2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2 <2	<2 <2	<2 <2	<3.1 <4.5
Perfluorododecanoic Acid  Perfluorododecanoic Acid	<2 <2	<2 <2	<2 <2	<4.5 <5.5
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	2.7	3.5	5.1	<2.5
Perfluorohexadecanoic acid (PFHxDA)	<2 UJ	<2	<2	<8.9 UJ
Perfluorohexane Sulfonic Acid	<2	<2	2.8	3.7
Perfluorohexanoic Acid	5.2	5.8	9.1	<5.8
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2.7
Perfluorooctadecanoic acid	<2 UJ	<2	<2	<4.6 UJ
Perfluorooctane Sulfonamide  Perfluorooctane Sulfonia ocid (PERes)	<2	<2	<2	5.2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 3.9	<2 7.9	<2 9.8	<3 <b>6.6</b>
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2	<2	<b>9.8</b> <2	<2.9 UJ
Perfluorotridecanoic Acid	<2	<2	<2	<13
Perfluoroundecanoic Acid	<2	<2	<2	<11
PFOA	<2	3.2	9.6	<8.5
PFOS	2.4	<2	4.7	7.8

Location ID	19B	20	20	20
Sampling Event	August 2020	April 2019	April 2019	June 2019
	STW-LOC-19B-082620	DSTW-LOC20-042419	DSTW-LOC20-042419-D	STW-LOC20-062819
Date Sampled	8/26/2020	04/24/2019	04/24/2019	06/28/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC			Field Duplicate	
Table 3+ Lab SOP (ng/L)		(1	(2)	50
HFPO-DA (EPA Method 537 Mod)	4.7	61 53 J	63 76 X	50
PFMOAA PFO2HxA	<2 <b>6.2</b>	53 J 30 J	56 J 31 J	48 28
PFO3OA	<2	6.9 J	6.7 J	9.3
PFO4DA	<2	3.7 J	3.5 J	8.7
PFO5DA	<2	<2 UJ	<2 UJ	20
PMPA	<20	37 J	35 J	30
PEPA	<10	<20 UJ	<20 UJ	<20
PS Acid	<2	5.3 J	5.5 J	260
Hydro-PS Acid	<2	7.8 J	7.9 J	110
R-PSDA	<2	28 J	27 J	69 J
Hydrolyzed PSDA	<2 <2	68 J	68 J	390 J
R-PSDCA NVHOS	<2 <2	<2 UJ <b>2.9 J</b>	<2 UJ 2.4 J	2 14
EVE Acid	<2	2.9 J	2.4 J <2 UJ	7.3
Hydro-EVE Acid	<2	<2 UJ	<2 UJ	<2
R-EVE	<2	6.6 J	7.8 J	12 J
PES	<2	<2 UJ	<2 UJ	<2
PFECA B	<2	<2 UJ	<2 UJ	<2
PFECA-G	<2	<2 UJ	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	11	210	210	590
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	11	310	310	1,100
10:2 Fluorotelomer sulfonate	<2	<2.0	<2.0	<2
F-53B Minor (11Cl-PF3OUdS)	<2 UJ	<2.0	<2.0	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<60	<60	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<110	<110	<2
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2 UJ			
ADONA		<2.1	<2.1	<2.1
DONA	<2 UJ			
NaDONA Nathul porfluoreactors sulfanomideacetic acid	 <20	<2.1 <20	<2.1 <20	<2.1 <20
N-ethyl perfluorooctane sulfonamidoacetic acid N-ethylperfluoro-1-octanesulfonamide	<2 UJ	<37	<37	<20 <2
N-methyl perfluoro-1-octanesulfonamide	<2 UJ	<35	<35	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	2.2	2.2	3.8
Perfluorobutanoic Acid	2.2	6.5	5.9	8.8
Perfluorodecane Sulfonic Acid	<2	<2.0	<2.0	<2
Perfluorodecanoic Acid	<2	<2.0	<2.0	<2
Perfluorododecane sulfonic acid (PFDoS)	<2 UJ	<2.0	<2.0	<2
Perfluorododecanoic Acid	<2	<2.0	<2.0	<2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid	<2 UJ <2	<2.0 <b>7.1</b>	<2.0 7	<2 15
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<2 <8	<b>7.1</b> <2.0	<2.0	<2 <2
Perfluorohexane Sulfonic Acid	<2 UJ	3.5	3.5	5.8
Perfluorohexanoic Acid	2.9	7.8	7.7	23
Perfluorononanesulfonic acid	<2 UJ	<2.0	<2.0	<2
Perfluorononanoic Acid	<2 UJ	<2.0	<2.0	<2
Perfluorooctadecanoic acid	<2	<2.0 UJ	<2.0	<2
Perfluorooctane Sulfonamide	<2 UJ	<2.0	<2.0	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2.0	<2.0	<2
Perfluoropentanoic Acid	3.9	6.7	7.6	17
Perfluorotetradecanoic Acid	<2 UJ	<2.0	<2.0	<2
Perfluorotridecanoic Acid	<2 <2	<2.0	<2.0	<2
Perfluoroundecanoic Acid PFOA	3.4 J	<2.0 <b>8.7</b>	<2.0 <b>8.5</b>	<2 9.3
11.1.0/1	J.T U	0.7	13	15

Location ID	20	20	20	20
Sampling Event	August 2019	August 2019	October 2019	October 2019
Field Sample ID	STW-LOC20-082219	STW-LOC20-082219-D	STW-LOC20-101019	STW-LOC20-100919-D
Date Sampled	8/22/2019	8/22/2019	10/10/2019	10/10/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC		Field Duplicate		Field Duplicate
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	49 J	71 J	30 J	34
PFMOAA PFO2HxA	650 J	630	24 J 18	21 J 19
PFO3OA	210 J 71	210 71	5.7	5.7
PFO4DA	44	46	4.3	4.6
PFO5DA	19	22	7.6 J	7.3 J
PMPA	39	46	34	27
PEPA	<20	<20	<20	<20
PS Acid	39	40	17	16
Hydro-PS Acid	70	67	46	41
R-PSDA	63 J	74 J	31 J	18 J
Hydrolyzed PSDA	540 J	640 J	190 J	160 J
R-PSDCA NVHOS	<2 28	<2 28	<2 13 J	<2 <b>8.7 J</b>
EVE Acid	8.6	8.3	3.8	3.3
Hydro-EVE Acid	6.4	6.3	<2	<2
R-EVE	11 J	12 J	6.9 J	5.4 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	1,200	1,200	200	190
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	1,800	2,000	430	370
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA N. DONA		2.1	2.1	
NaDONA N-ethyl perfluorooctane sulfonamidoacetic acid	<2.1 <20	<2.1 <20	<2.1 <20	<2.1 <20
N-ethylperfluoro-1-octanesulfonamide	<20 <2	<20	<20 <2	<20
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.2	4.2	6.3	6.2
Perfluorobutanoic Acid	10	10	19	24
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2 UJ	19 J
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2 <2	<2 <2	<2 <2 <2	<b>3</b> <2
Perfluoroneptanoic Acid (PFHpS)	20	20	34 J	100 J
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	5.9	6.3	8.6	8.7
Perfluorohexanoic Acid	26	27	48 J	92 J
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2 UJ	40 J
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<b>27</b> <2	26	47	65
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroundecanoic Acid	<2	<2	<2	8.3
	<b>∼</b> ∠	\_	<b>∼</b> ∠	1
PFOA	10	9.5	11 J	50 J

Location ID	20	20	20	20
Sampling Event	December 2019	December 2019	January 2020	January 2020
Field Sample ID	STW-LOC-20-122019	STW-LOC-20-122019-D	STW-LOC20-012920	STW-LOC20-012920-D
Date Sampled	12/20/2019	12/20/2019	1/29/2020	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC		Field Duplicate		Field Duplicate
Table 3+ Lab SOP (ng/L)	42	47	89 J	66 J
HFPO-DA (EPA Method 537 Mod) PFMOAA	22	20	35 J	31
PFO2HxA	11	11	35 J 37	36
PFO3OA	2.7	2.8	3.1	3
PFO4DA	<2	<2	2.1	2.1
PFO5DA	2.2	<2	<2	<2
PMPA	33 B	32 B	27	31
PEPA	<20	<20	<20	<20
PS Acid	5.3	5.5	18	18
Hydro-PS Acid R-PSDA	2.2 7.7 J	2.1 6.3 J	2.9 21 J	2.8 22 J
Hydrolyzed PSDA		6.5 J 44 J	85 J	82 J
R-PSDCA	<2	<2	<2	<2
NVHOS	2.4	2.2	2.6	2.3
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	4 J	3.3 J	<2	7.5 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 120	<2 120	<2 <b>220</b>	<2 190
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	180	180	320	300
Other PFAS (ng/L)	100	100	320	200
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20	<4 <20	<4 <20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 3	<20 <b>3</b>	<20 <b>2.2</b>	<20 2.2
Perfluorobutanoic Acid	5.4	4.5	3.8	3.2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid  Perfluoroheyadaanaia acid (PEHyDA)	8.8	8.8	4.1	4
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 3.2	<2 3.4	<2 <b>2.5</b>	<2 <b>2.5</b>
Perfluorohexanoic Acid	15	15	5.5	5.6
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2 UJ	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	11	11	5.9	5.7
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid Perfluoroundecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
PFOA	5.7	5.9	4.3	4.2
PFOS	7.9	8	6.6	6.5

		T	T	T
Location ID	20	20	20	20
Sampling Event	April 2020	April 2020	May/June 2020	August 2020
Field Sample ID	STW-LOC-20-4-042820	STW-LOC-20-4-042820- D	STW-LOC-20-2-052120	STW-LOC-20-4-042820
Date Sampled		4/28/2020	5/20/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)		Field Duplicate		
HFPO-DA (EPA Method 537 Mod)	41	41	940	57
PFMOAA	14	13	850	<2
PFO2HxA	13	13	330	14
PFO3OA	2.5	2.7	130	3.2
PFO4DA	<2	<2	69	<2
PFO5DA	5.6	5.3	75	<2
PMPA	31	30	200	<20
PEPA	<20	<20	120	<10
PS Acid	30	32	720	24
Hydro-PS Acid	3.2	3.2	310	4.0
R-PSDA	18 J	16 J	780 J	12
Hydrolyzed PSDA	93 J	91 J	440 J	86
R-PSDCA	<2	<2	20	<2
NVHOS	6.7	6.5	71	<2
EVE Acid	<2	<2	150	12
Hydro-EVE Acid	<2	<2	20	9.6
R-EVE	3.8 J	<2	71 J	4.8
PES	<2	<2	<2.3	<2
PFECA B	<2	<2	<3	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	150	150	4,000	150
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	260	250	5,300	260
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1		
DONA			<2	<2
NaDONA	<2.1	<2.1		
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.5	3.6	3.9	4.1
Perfluorobutanoic Acid	6.1	6.3	20	6.0
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid  Perfluoroheyadacapaic acid (PEHyDA)	4.8	4.6	13	3.8
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 <b>4.5</b>	<2 <b>4.5</b>	<2 <b>4.9</b>	4.2
Perfluoronexane Sulfonic Acid Perfluoronexanoic Acid	9	9.2	12	7.1
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<b>9</b> <2	<b>9.2</b> <2	<2	<2
Perfluorononanoic Acid	<2	<2	2.5	<2
Perfluorooctadecanoic acid	<2 UJ	<2	<2	<2
Perfluorooctane Sulfonamide	<2 03	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	11	11	77	10
Perfluorotetradecanoic Acid		<2	<2	<2
	<2		<u>-</u>	
Perfluorotridecanoic Acid	<2 <2	<2	<2	<2
			<2 <2	<2 <2
Perfluorotridecanoic Acid	<2	<2		

Location II	21A	21A	21A	21A
Sampling Even	t April 2019	June 2019	August 2019	October 2019
Field Sample II	D DSTW-LOC21A-042419	STW-LOC-21A-062719	STW-LOC21A-082119	STW-LOC21A-100919
Date Sample	d 04/24/2019	06/27/2019	8/21/2019	10/9/2019
Analytical Laborator		TestAmerica	TestAmerica	TestAmerica
QA/Q0 Table 3+ Lab SOP (ng/L)	<u></u>			
HFPO-DA (EPA Method 537 Mod)	33	40	57	97
PFMOAA	11 J	12 J	9.5 J	11 J
PFO2HxA	16 J	15 J	13	28
PFO3OA	2.9 J	2.9 J	2.4	12
PFO4DA	2 J	<2 UJ	<2	9.6
PFO5DA	<2 UJ	<2 UJ	2.2	6.6
PMPA	43 J	33 J	53	71
PEPA	<20 UJ	<20 UJ	<20	25
PS Acid	2.1 J	9.7 J	12	7.7
Hydro-PS Acid	<2 UJ	2.2 J	4.9	4.3
R-PSDA Hydrolyzed PSDA	4.2 J 4.1 J	19 J 11 J	31 J 25 J	32 J 17 J
R-PSDCA	<2 UJ	<2 UJ	<2	<2
NVHOS	<2 UJ	2.5 J	33	8.4
EVE Acid	<2 UJ	<2 UJ	<2	7.4
Hydro-EVE Acid	<2 UJ	<2 UJ	3.8	3.9
R-EVE	3.4 J	4.1 J	34 J	19 J
PES	<2 UJ	<2 UJ	<2	<2
PFECA B	<2 UJ	<2 UJ	<2	<2
PFECA-G	<2 UJ	<2 UJ	<2	<2
Total Table 3+ Compounds (17 compounds)* Total Table 3+ Compounds (20 compounds)*	110 120	120 150	190 280	290 360
Other PFAS (ng/L)	120	150	200	300
10:2 Fluorotelomer sulfonate	<2.0	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)			<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<60	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<110	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2.1	 <2.1	<2 <2.1	<2 <2.1
DONA	<2.1	<2.1	<2.1	<2.1
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37 UJ	<37	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35 UJ	<35	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	2	4	4.5	6.8
Perfluorobutanoic Acid	5	9.8	12	17
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2.0 <2.0	<2	<2 <2 <2	<2 <2
Perfluorodoecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2.0	<2 <2	<2 <2	<2
Perfluorododecanoic Acid  Perfluorododecanoic Acid	<2.0	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	<2	<2	<2
Perfluoroheptanoic Acid	3	14	23	31
Perfluorohexadecanoic acid (PFHxDA)	<2.0	<2	<2	<2
Perfluorohexane Sulfonic Acid	3	6.2	6	9.8
Perfluorohexanoic Acid	4.4	23	29	41
Perfluorononanesulfonic acid	<2.0	<2	<2	<2
Perfluorononanoic Acid	<2.0	<2	<2	2
Perfluorooctadecanoic acid	<2.0	<2	<2	<2
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2.0 <2.0	<2 <2	<2 <2	<2 <2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2.0 <b>4.8</b>	21	30	40
Perfluorotetradecanoic Acid	<2.0	<2	<2	<2
Perfluorotridecanoic Acid	<2.0	<2	<2	<2
Perfluoroundecanoic Acid	<2.0	<2	<2	<2
PFOA	5.6	9.8	10	12
PFOS	9.1	14	16	23

Location II	21A	21A	21A	21A
Sampling Event	December 2019	January 2020	April 2020	May/June 2020
Field Sample ID	STW-LOC-21A-122019	STW-LOC21A-012920	STW-LOC-21A-042820	STW-LOC-21A-052120
Date Sampled	12/20/2019	1/29/2020	4/28/2020	5/20/2020
Analytical Laboratory		TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	43	31	220	420
PFMOAA	21	15 J	27	110
PFO2HxA	16	15	28	170
PFO3OA	2.6	2.1	5.8	31
PFO4DA	<2	<2	2.1 J	50
PFO5DA	2.5	<2	7.8	460
PMPA	54 B	34	43	180
PEPA	23	<20	<20	48
PS Acid	2.7	<2	<2	75
Hydro-PS Acid R-PSDA	<2 7.3 J	<2 <2	<2 16 J	220 1,100 J
Hydrolyzed PSDA	12 J	8.7 J	16 J	33 J
R-PSDCA	<2	<b>8.7 J</b> <2	<2	18
NVHOS	2.1	<2	3.7	37
EVE Acid	<2	<2	<2	5.2
Hydro-EVE Acid	<2	<2	<2	12
R-EVE	5 J	<2	3.4 J	77 J
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	170 190	97 110	340 370	1,800 3,000
Other PFAS (ng/L)	190	110	370	3,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2 <2.1	<2 <2.1	<2 <2.1	<2
DONA	<2.1	<2.1	<2.1	 <2
NaDONA	<2.1	<2.1	<2.1	
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	2.4	2.6	3.7	2.2
Perfluorobutanoic Acid	5	5.2	27	11
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2 <2	<2 <2
Perfluorododecanoic Acid  Perfluorododecanoic Acid	<2 <2 <2	<2 <2	<2 <2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2 <2	<2 <2
Perfluoroheptanoic Acid	6.2	5.2	5.3	7.6
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	3.3	3.3	4.5	3.1
Perfluorohexanoic Acid	10	8.2	11	7.7
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	2.7
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide  Perfluorooctane Sulfonia said (PEPeS)	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 <b>8.8</b>	<2 <b>7.9</b>	<2 12	<2 33
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	4	4.7	6.8	4.8
PFOS	9.4	6.9	17	9.8

Location II	21A	22	22	22
Sampling Even Field Sample II	-	April 2019  DSTW-LOC22-042419	June 2019 STW-LOC-22-062719	August 2019 STW-LOC22-082119
-		0.4/0.4/0.040	0<10=10040	0/04/0040
Date Sample Analytical Laboratory		04/24/2019 TestAmerica	06/27/2019 TestAmerica	8/21/2019 TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	16	170	130 J	140
PFMOAA	<2	<5 UJ	220 J	36 J
PFO2HxA	14	<2 UJ	540 J	45 J
PFO3OA	2.2	3 J	27 J	5.5
PFO4DA	<2	5.3 J	32 J	6.5
PFO5DA	<2	<2 UJ	<6.7 UJ	3.8 J
PMPA	23	67 J	1,500 J	20 J
PEPA	<10	<20 UJ	210 J 180 J	<20
PS Acid Hydro-PS Acid	<2 <2	2 J 18 J	150 J	47 54
R-PSDA	<2	160 J	500 J	59 J
Hydrolyzed PSDA	4.2	170 J	13,000 J	770 J
R-PSDCA	<2	<2 UJ	23 J	<2
NVHOS	<2	11 J	65 J	13 J
EVE Acid	<2	<2 UJ	<4.9 UJ	<2
Hydro-EVE Acid	<2	2.1 J	<5.6 UJ	3.9
R-EVE	<2	5.2 J	54 J	7.5 J
PES	<2	<2 UJ	<9.2 UJ	<2
PFECA B	<2	<2 UJ	<12 UJ	<2
PFECA-G	<2	<2 UJ	<8.2 UJ	<2 UJ
Total Table 3+ Compounds (17 compounds)*	55 59	280	3,100	370
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	39	610	17,000	1,200
10:2 Fluorotelomer sulfonate	<2	<2.0	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2			<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<52	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<60	<60	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<110	<110	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2			<2
ADONA		<2.1	<2.1 UJ	<2.1
DONA	<2			<b></b>
NaDONA		<2.1	<2.1 UJ	<2.1
N-ethyl perfluoroctane sulfonamidoacetic acid	<20 <2	<20 <37 UJ	<20 <37	<20 <2
N-ethylperfluoro-1-octanesulfonamide N-methyl perfluoro-1-octanesulfonamide	<2	<37 UJ	<35	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<31	<20	<20
Perfluorobutane Sulfonic Acid	4.6	<2.0	3.4	<2
Perfluorobutanoic Acid	5.8	<3.5 UJ	37 J	5.4 J
Perfluorodecane Sulfonic Acid	<2	<3.2	<2	<2
Perfluorodecanoic Acid	<2	<3.1	2.4	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<4.5	<2	<2
Perfluorododecanoic Acid	<2	<5.5	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2.0	<2	<2
Perfluoroheptanoic Acid	3.6	7.1	12	6.7
Perfluorohexadecanoic acid (PFHxDA)	<2	<8.9	<2	<2
Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	4.2 7.3	<b>4.5</b> <5.8	5.6 21 J	<2 <b>6.9</b>
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<2	<5.8 <2.0	21 J <2	<b>6.9</b> <2
Perfluorononanoic Acid	<2	<2.7	2.3	<2
Perfluorooctadecanoic acid	<2	<4.6	<2	<2
Perfluorooctane Sulfonamide	<2	<3.5	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<3.0	<2	<2
Perfluoropentanoic Acid	9.1	20	22 J	8
Perfluorotetradecanoic Acid	<2	2.9	<2	<2
Perfluorotridecanoic Acid	<2	<13	<2	<2
Perfluoroundecanoic Acid	<2	<11	<2	<2
PFOA	6.5	<8.5	9.8	7.5
PFOS	5.4	<5.4	18	3.6

Location ID	22	22	22	22
Sampling Event	October 2019	October 2019	December 2019	January 2020
Field Sample ID	STW-LOC22-100919	STW-LOC22-100919-D	STW-LOC-22-122019	STW-LOC22-012920
Date Sampled	10/9/2019	10/9/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC		Field Duplicate		
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	27	27	<14	<150
PFMOAA	37 J	56 J	25 J	<5 UJ
PFO2HxA	21	23	12 J	10 J
PFO3OA	7.2	8.1	5	3.5
PFO4DA	6.7	8.5	4.1 J	3
PFO5DA	7.1 J	14 J	2.3 J	<2 UJ
PMPA	40	37	<10 UJ	<10 UJ
PEPA	<20	<20	<20 UJ	<20
PS Acid	70	73	25 J	58
Hydro-PS Acid	63 J	130 J	25 J	18
R-PSDA Hydrolyzed PSDA	18 J 210 J	26 J 300 J	28 J 490 J	40 J 260 J
R-PSDCA	<2 < 2	2.3	<2	<b>200 J</b> <2
NVHOS	12	15	2.3 J	<2 UJ
EVE Acid	2.1	2.6	<2	<2
Hydro-EVE Acid	2.5	2.8	<2	<2
R-EVE	5 J	4.5 J	3 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	300 530	400 730	100 620	93
Other PFAS (ng/L)	550	750	020	390
10:2 Fluorotelomer sulfonate	<2	<2	<2	<19
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<32
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<200
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<520
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<85
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<140
6:2 Fluorotelomer sulfonate	<20	<20	<20	<200
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<24
ADONA DONA	<2.1	<2.1	<2.1	<19
NaDONA	<2.1	<2.1	<2.1	<19
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<190
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<87
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<43
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<310
Perfluorobutane Sulfonic Acid	3.7	3.6	<2	<20
Perfluorobutanoic Acid	16 J	18 J	130 J	79
Perfluorodecane Sulfonic Acid	<2	<2	<2	<32
Perfluorodecanoic Acid	<2	<2	<2	<31
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 <2	<2 <2	<2 <2 <2	<45 <55
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<19
Perfluoroheptanoic Acid	24	24	4.1 J	<25
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2 UJ	<89
Perfluorohexane Sulfonic Acid	6.1	6.2	<2	28
Perfluorohexanoic Acid	34	33	<2 UJ	<58
Perfluorononanesulfonic acid	<2	<2	<2	<16
Perfluorononanoic Acid	<2	2	<2	<27
Perfluorooctadecanoic acid	<2	<2	<2 UJ	<46
Perfluorooctane Sulfonamide	<2	<2	<2	<35
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 32	<2 32	<2 <2 UJ	<30 <49
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2 <2	<2 <2	<2 UJ <2	<49 <29
Perfluorotridecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2	<130
Perfluoroundecanoic Acid	<2	<2	<2	<110
PFOA	8.4	8.4	4.5	<85
	12	11	3.4 J	<54

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Location ID		22	22	23A
Sampling Event	April 2020	May/June 2020	August 2020	April 2019
Field Sample ID	STW-LOC-22-4-042820	STW-LOC22-4-060520	STW-LOC-22-4-082620	DSTW-LOC23A-042419
Date Sampled		6/3/2020	8/26/2020	04/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	34	27 J	99 J	270
PFMOAA	56	110 J	<2	1,300
PFO2HxA	23	14 J	16	480
PFO3OA	7.6	4.9 J	5.6	140
PFO4DA	9.6	4 J	7.6	<79
PFO5DA	3.7	<2 UJ	6.4	<34
PMPA	11	37 J	<20	700
PEPA	<20	4.8 J	<10	<47
PS Acid	67	86 J	19	2,700
Hydro-PS Acid R-PSDA	30 12 J	34 J 30 J	59 270	140 180 J
Hydrolyzed PSDA	370 J	640 J	1,200	2,200 J
R-PSDCA	<2	<2 UJ	2.7	<15
NVHOS	9.5	7.6 J	14	<54
EVE Acid	<2	<2 UJ	33	65
Hydro-EVE Acid	2	3.6 J	14	32
R-EVE	2.6 J	3.4 J	330	<70
PES	<2	<2 UJ	<2	<46
PFECA B	<2	<2 UJ	<2	<60
PFECA-G	<2	<2 UJ	<2	<41
Total Table 3+ Compounds (17 compounds)*	250	330	280	5,800
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	640	1,000	2,100	8,200
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<3.2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<26	<52	<20 UJ	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<4.3	<8.5	<2	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<7	<14	<4	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2.4	<2	
ADONA	<2.1			<2.1
DONA		<2	<2	
NaDONA	<2.1 <20	<20	 <20	<2.1 <20
N-ethyl perfluorooctane sulfonamidoacetic acid N-ethylperfluoro-1-octanesulfonamide	<2.0	<20 <8.7	<20	<37
N-methyl perfluoro-1-octanesulfonamide  N-methyl perfluoro-1-octanesulfonamide	<4.4 <2.2	<8.7 <4.3	<2	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<31	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	2.4	<2.0
Perfluorobutanoic Acid	15	6.3	<2 R	160
Perfluorodecane Sulfonic Acid	<2	<3.2	<2	<2.0
Perfluorodecanoic Acid	<2	<3.1	<2	<2.0
Perfluorododecane sulfonic acid (PFDoS)	<2.3	<4.5	<2	<2.0
Perfluorododecanoic Acid	<2.8	<5.5	<2	<2.0
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2.0
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<b>3.1</b> <4.5 UJ	<2.5	2.1	3.6
Perfluoronexadecanoic acid (PFHxDA) Perfluoronexane Sulfonic Acid	<4.5 UJ 3.2	<8.9 UJ <b>4.8</b>	<2	<2.0 <b>2</b>
Perfluorohexanoic Acid	<2.9	<b>4.8</b> <5.8	3.7 J	6.6
Perfluoronoanesulfonic acid	<2	<2	<2	<2.0
Perfluorononanoic Acid	<2	<2.7	<2	<2.0
Perfluorooctadecanoic acid	<2.3 UJ	<4.6 UJ	<2 UJ	<2.0
Perfluorooctane Sulfonamide	<2	<3.5	<2	<2.0
Perfluoropentane sulfonic acid (PFPeS)	<2	<3	<2	<2.0
Perfluoropentanoic Acid	8	7.6	15 J	13
Perfluorotetradecanoic Acid	<2	<2.9 UJ	<2	<2.0
Perfluorotridecanoic Acid	<6.5	<13	<2	<2.0
Perfluoroundecanoic Acid	<5.5	<11	<2	<2.0
PFOA DEOS	6.7	8.6	4.0	20 2.9
PFOS	<2.7	6.5	4.7	2.9

Location II	23A	23A	23A	23A
Sampling Even	June 2019	August 2019	August 2019	August 2019
Field Sample II		-	STW-LOC23A-082119-2	
Date Sampled	06/27/2019	8/21/2019	8/21/2019	8/21/2019
Analytical Laboratory		TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	170	11,000	25,000	15,000
PFMOAA	320	1,200	1,300	1,600
PFO2HxA	240	280	350	390
PFO3OA	87	73	110	110
PFO4DA	<79	26	48	46
PFO5DA	<34 UJ	11	22	19
PMPA	1,300	82	120	<110
PEPA	560	33	54	45
PS Acid	17,000	4,500	12,000	12,000
Hydro-PS Acid	740	210	570	520
R-PSDA	220 J 2,900 J	190 J 3,800 J	400 J 7,400 J	350 J 7,000 J
Hydrolyzed PSDA R-PSDCA	2,900 J 19	3,800 J 2	7,400 J 3.3	3.5
NVHOS	<54	49	100	94
EVE Acid	110	52	150	130
Hydro-EVE Acid	28	23	61	52
R-EVE	<70	16 J	25 J	27 J
PES	<46	<2.3	<9.2	<9.2
PFECA B	<60	<3	<12	<12
PFECA-G	<41	<2	<8.2	<8.2
Total Table 3+ Compounds (17 compounds)*	21,000	18,000	40,000	30,000
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	24,000	22,000	48,000	37,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<3.1	<3.1	<3.2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<51	<50	<52
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<3	<12	<12
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<14	<13	<14
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)		<2.4	<2.3	<2.4
ADONA DONA	<2.1	<2.1	<2.1	<2.1
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	<2	<7.5	<7.5
N-methyl perfluoro-1-octanesulfonamide	<35	<2	<6.9	<6.9
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<30	<30	<31
Perfluorobutane Sulfonic Acid	3.8	3.5	3.7	3.5
Perfluorobutanoic Acid	70	55	54	51
Perfluorodecane Sulfonic Acid	<2	<3.1	<3.1	<3.2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<b>2.8</b> <2	<3 <4.4	<3 <4.3	<3.1
Perfluorododecanoic Acid Perfluorododecanoic Acid	6.9	<4.4 <5.4	<4.3 <5.3	<4.5 <5.5
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	14	24	25	26
Perfluorohexadecanoic acid (PFHxDA)	42	<8.7	<8.6	<8.8
Perfluorohexane Sulfonic Acid	5.8	6.2	6	6.1
Perfluorohexanoic Acid	24	26	26	24
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	2.9	3.5	5.2	5
Perfluorooctadecanoic acid	21	<4.5	<4.4	<4.6
Perfluorooctane Sulfonamide  Perfluorooctane Sulfonia said (PEPeS)	<2	<3.4	<3.4	<3.5
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 <b>29</b>	<2.9 <b>31</b>	<2.9 <b>34</b>	<3 34
Perfluorotetradecanoic Acid	30	<2.8	<2.8	<2.9
Perfluorotridecanoic Acid	16	<13	<13	<13
Perfluoroundecanoic Acid	4.3	<11	<11	<11
PFOA	30	290	460	380
PFOS	19	23	33	33

Location ID	23A	23A	23A	23A
Sampling Event		October 2019	December 2019	January 2020
	STW-LOC23A-082119-4	STW-LOC23A-100919	STW-LOC-23A-122019	STW-LOC23A-012920
Date Sampled	8/21/2019	10/9/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC		-		-
Table 3+ Lab SOP (ng/L)	12 000	110	2 200	100
HFPO-DA (EPA Method 537 Mod)	12,000	110	2,200	190
PFMOAA PFO2HxA	1,200	890 200	1,100	500 J
PFO3OA	310 92	70	240 80	130 46
PFO4DA	42	44	37	29
PFO5DA	21 J	31	20	13
PMPA	<110	<57	<57	33
PEPA	42	20	33	<20
PS Acid	12,000	11,000	6,900	4,400
Hydro-PS Acid	530	570	330	200
R-PSDA	350 J	340 J	260 J	140 J
Hydrolyzed PSDA	7,000 J	5,900 J	3,500 J	2,000 J
R-PSDCA	3.1	2.9	<2	<2
NVHOS	89	61	39	19
EVE Acid	130	88	83	52
Hydro-EVE Acid	52 22 K	71	63	25 20 K
R-EVE	23 J	34 J	26 J	20 J
PES PEGA P	<9.2	<4.6	<4.6	<2.3
PFECA B	<12 <8.2	<6	<6 <4.1	<3 <2
PFECA-G Total Table 3+ Compounds (17 compounds)*	27,000	<4.1 13,000	11,000	5,600
Total Table 3+ Compounds (17 compounds)*	34,000	19,000	15,000	7,800
Other PFAS (ng/L)	31,000	17,000	12,000	7,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<3.1	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<50	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<12	3.3	2.8	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<13	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2.3	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA N. DONA		2.1		
NaDONA Nathyl parflygragatona gylfanamidagastia asid	<2.1 <20	<2.1 <20	<2.1 <20	<2.1 <20
N-ethyl perfluorooctane sulfonamidoacetic acid N-ethylperfluoro-1-octanesulfonamide	<7.5	<20 <2	<20 <2	<20
N-methyl perfluoro-1-octanesulfonamide	<6.9	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<30	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.9	6.7	2.3	3
Perfluorobutanoic Acid	49	18	180	45
Perfluorodecane Sulfonic Acid	<3.1	<2	<2	<2
Perfluorodecanoic Acid	5.1	4	2.4	<2
Perfluorododecane sulfonic acid (PFDoS)	<4.3	<2	<2	<2
Perfluorododecanoic Acid	<5.3	4	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	23	31	15	9.1
Perfluorohexadecanoic acid (PFHxDA)	<8.5	10	8.1	3.3
Perfluorohexane Sulfonic Acid	6.5 27	12	3.8	4
Doubly and have nois Asid	1.1	37	17 <2	<b>12</b> <2
Perfluoroneanosulfonio acid		/1	<u> </u>	<.2
Perfluorononanesulfonic acid	<2	<2	21 R	<i>√</i> 2
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2 4.8	3.4	2.1 B 4.9	<2 <2
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid	<2 <b>4.8</b> <4.4	3.4 6.8	4.9	<2
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 4.8 <4.4 <3.3	3.4 6.8 2.1	<b>4.9</b> <2	<2 <2
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid	<2 <b>4.8</b> <4.4	3.4 6.8	4.9	<2
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 4.8 <4.4 <3.3 <2.9	3.4 6.8 2.1 <2	<b>4.9</b> <2 <2 <2	<2 <2 <2
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 4.8 <4.4 <3.3 <2.9 32	3.4 6.8 2.1 <2 43	4.9 <2 <2 18	<2 <2 <2 13
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2 4.8 <4.4 <3.3 <2.9 32 <2.8	3.4 6.8 2.1 <2 43 8	4.9 <2 <2 <18 6.4	<2 <2 <2 <13 3.6
Perfluorononanesulfonic acid Perfluorononanoic Acid Perfluorooctadecanoic acid Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 4.8 <4.4 <3.3 <2.9 32 <2.8 <12	3.4 6.8 2.1 <2 43 8 6.9	4.9 <2 <2 18 6.4 5.2 B	<2 <2 <2 13 3.6 2.4

Location ID	23A	23A	23A	23B
Sampling Event	April 2020	May/June 2020	August 2020	June 2019
Field Sample ID	STW-LOC-23A-4-042820	STW-LOC23A-4-060520	STW-LOC-23A-2-082620	STW-LOC-23B-062719
Date Sampled	4/28/2020	6/3/2020	8/26/2020	06/27/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	130	870 J	69	3,200
PFMOAA	1,000	1,800 J	520	160 J
PFO2HxA	230	400 J	110	150 J
PFO3OA	65	180 J	44	67 J
PFO4DA	20	69 J	<30	61 J
PFO5DA	<2	50 J	<39	77 J
PMPA	41	<150 UJ	<310	19,000 J
PEPA	<20	20 J	<10	8,500 J
PS Acid	4,900	24,000 J	6,000	49 J
Hydro-PS Acid R-PSDA	190 89 J	1,200 J 400 J	230 160	110 J 580 J
Hydrolyzed PSDA	1,800 J	8,800 J	2,500	450 J
R-PSDCA	<2	5 J	<8.7	4.5 J
NVHOS	26	100 J	24	33 J
EVE Acid	30	190 J	47	5.1 J
Hydro-EVE Acid	8.9	54 J	7.4	21 J
R-EVE	5.6 J	19 J	<36	210 J
PES	<2.3	<2 UJ	<3.4	<9.2 UJ
PFECA B	<3	<6.6 UJ	<13	<12 UJ
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 <b>6,600</b>	<12 UJ	<24 <b>7,100</b>	<8.2 UJ
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	8,500	29,000 38,000	9,700	31,000 33,000
Other PFAS (ng/L)	0,500	30,000	2,700	33,000
10:2 Fluorotelomer sulfonate	<2	<2	<2	<3.5
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<37
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	2.9	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20 <2	20 J
F-53B Major (9Cl-PF3ONS) ADONA	<2 <2.1	<2	< Z	<b></b> <2.1
DONA		<2	<2	
NaDONA	<2.1			<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<37
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	20	<20	<20
Perfluorobutane Sulfonic Acid	3.7	2.3	4.4	2.5
Perfluorobutanoic Acid	26	23	20	580
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2 <2	<2 4.8	<2 2.0	<2 <2
Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2	<2	<2
Perfluorododecanoic Acid	3.9	7.8	4.1	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	6.4	8.3	4.6	10
Perfluorohexadecanoic acid (PFHxDA)	3.8	6.4		<2 UJ
Perfluorohexane Sulfonic Acid	4	3.8	3.8	<2
Perfluorohexanoic Acid	11	13	8.3	12
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	3.1	<2	2.5
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	2.5	2	<2 <b>2.1</b>	<2 UJ
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 <2	<2 <2	<b>2.1</b> <2	<2 <2
Perfluoropentanoic Acid Perfluoropentanoic Acid	<2 15	20	11	<2 <b>68</b>
Perfluorotetradecanoic Acid	3.9	9	3.4	<2 UJ
Perfluorotridecanoic Acid	3.3	6.8	3.7	<2
Perfluoroundecanoic Acid	2.8	6.1	2.4	<2
PFOA	93	110	23	29
		17	17	5

Location ID	23B	23B	23B	23B
Sampling Event	October 2019	December 2019	January 2020	April 2020
Field Sample ID		STW-LOC-23B-122019	STW-LOC23B-012920	STW-LOC-23B-042820
Date Sampled	10/9/2019	12/20/2019	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				
Table 3+ Lab SOP (ng/L)	48	240	21	25
HFPO-DA (EPA Method 537 Mod)	17	240	31	35
PFMOAA PFO2HxA	200 56	7.3	11 J 7	19 15
PFO3OA	19	<2	<2	2.9
PFO4DA	10	<2	<2	<2
PFO5DA	8.5 J	<2	<2	4.1
PMPA	<28	24 B	26	32
PEPA	<20	<20	<20	<20
PS Acid	2,700	25	37	36
Hydro-PS Acid	120	<2	<2	<2
R-PSDA	100 J	<2	<2	<2
Hydrolyzed PSDA R-PSDCA	1,700 J <2	<b>26 J</b> <2	34 J <2	19 J <2
NVHOS	20	<2 <2	<2 <2	4.2
EVE Acid	20	<2	<2	<2
Hydro-EVE Acid	14	<2	<2	<2
R-EVE	10 J	<2	<2	2.2 J
PES	<2.3	<2	<2	<2
PFECA B	<3	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	3,200	310	110	150
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	5,000	340	150	170
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA DONA	<2.1	<2.1	<2.1	<2.1
NaDONA	<2.1	<2.1	 <2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	5.4	2.7	2	3.5
Perfluorobutanoic Acid	18	4	3.3	5.3
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2 <2
Perfluoroheptanoic Acid	30	6.6	2.9	4.2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	6.8	3.2	<2	3.9
Perfluorohexanoic Acid	43	12	3.8	8.2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluoroctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 <b>40</b>	<2 8.2	<2 4	<2 9.2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<b>40</b> <2	<b>8.2</b> <2	<b>4</b> <2	<b>9.2</b> <2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	13	26	12	8.6
PFOS	14	7.9	5.3	9.3

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Location ID		23B	24A	24A
Sampling Event	May/June 2020	August 2020	April 2019	April 2019
Field Sample ID	STW-LOC23B-060320	STW-LOC-23B-082620	DSTW-LOC24A-042419	DSTW-LOC24A-042419- D
Date Sampled		8/26/2020	4/24/2019	4/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)				Field Duplicate
HFPO-DA (EPA Method 537 Mod)	57	25	16 J	14
PFMOAA	3.7	<2	7.5 J	<5 UJ
PFO2HxA	6.3	18	9.9 J	12 J
PFO3OA	<2	2.8	<2 UJ	<2 UJ
PFO4DA	<2	<2	<2 UJ	<2 UJ
PFO5DA	<2	<2	<2 UJ	<2 UJ
PMPA	31	32	25 J	26 J
PEPA	<2	<10	<20 UJ	<20 UJ
PS Acid	32	33	<2 UJ	<2 UJ
Hydro-PS Acid	<2	2.0	<2 UJ	<2 UJ
R-PSDA	<2	<2	3.6 J	5.4 J
Hydrolyzed PSDA	14 J	35	2.7 J	3.1 J
R-PSDCA	<2	<2	<2 UJ	<2 UJ
NVHOS	<2	<2	<2 UJ	<2 UJ
EVE Acid	<2	<2	<2 UJ	<2 UJ
Hydro-EVE Acid	<2	<2	<2 UJ	<2 UJ
R-EVE	<2	<2 <2	4 J	4.2 J
PES PFECA B	<2 <2	<2	<2 UJ <2 UJ	<2 UJ <2 UJ
PFECA-G	<2	<2	<2 UJ	<2 UJ
Total Table 3+ Compounds (17 compounds)*	130	110	58	52
Total Table 3+ Compounds (20 compounds)*	140	150	69	65
Other PFAS (ng/L)	110		Ų,	
10:2 Fluorotelomer sulfonate	<2	<2	<2.0	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<2		
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<60	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<110	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2		
ADONA			<2.1	<2.1
DONA	<2	<2		
NaDONA	<20	<20	<2.1 <20	<2.1 <20
N-ethyl perfluorooctane sulfonamidoacetic acid N-ethylperfluoro-1-octanesulfonamide	<20 <2	<20	<20 <37 UJ	<20 <37 UJ
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<35 UJ	<35 UJ
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.1	4.4	2.3	2.3
Perfluorobutanoic Acid	5.2	5.5	6.3	5.8
Perfluorodecane Sulfonic Acid	<2	<2	<2.0	<2.0
Perfluorodecanoic Acid	<2	<2	<2.0	<2.0
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2.0	<2.0
Perfluorododecanoic Acid	<2	<2	<16	<2.0
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2.0	<2.0
Perfluoroheptanoic Acid	3.4	3.6	7	7.3
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2.0	<2.0
Perfluorohexane Sulfonic Acid	2.6	4.0	3.9	3.8
Perfluorohexanoic Acid	6.8	7.5	8.5	8.8
Perfluorononanesulfonic acid	<2	<2	<2.0	<2.0
Perfluorononanoic Acid	<2	<2	2	<2.0
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2.0	<2.0 <2.0
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 <2	<2 <2	<2.0 <2.0	<2.0 <2.0
Perfluoropentane suironic acid (PFPeS)  Perfluoropentanoic Acid	5.8	7.9	<2.0 7	<2.0 <b>6.7</b>
Perfluorotetradecanoic Acid	<2	<2	<5.9	<2.0
Perfluorotridecanoic Acid	<2	<2	<14	<2.0
Perfluoroundecanoic Acid	<2	<2	<2	<2.0
PFOA	7.3	6.9	9.5	9.7
PFOS	9.4	12	25	21

Location ID	24A	24A	24A	24A
Sampling Event	June 2019	June 2019	August 2019	August 2019
	STW-LOC-24A-062719	STW-LOC-24A-062719- D	STW-LOC24A-082119	STW-LOC24A-082119-D
Date Sampled	06/27/2019	06/27/2019	8/21/2019	8/21/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC		Field Duplicate		Field Duplicate
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	26	26	16	17
PFMOAA	<5 UJ	<5 UJ	11	12
PFO2HxA	14 J	14 J	12	13
PFO3OA	2.3 J	2.3 J	<2	2.1
PFO4DA	<2 UJ	<2 UJ	<2	<2
PFO5DA	<2 UJ	<2 UJ	<2	<2
PMPA	30 J	30 J	26	28
PEPA	<20 UJ	<20 UJ	<20	<20
PS Acid	2.2 J	2.2 J	<2	<2
Hydro-PS Acid	<2.2 J	<2.2 J	<2	<2
R-PSDA	4.4 J <2 UJ	<b>4.4 J</b> <2 UJ	9.7 J 4 J	11 J 4.2 J
Hydrolyzed PSDA R-PSDCA	<2 UJ	<2 UJ	<b>4 J</b> <2	<b>4.2 J</b> <2
NVHOS	2 J	2 J	4.7	5.3
EVE Acid	<2 UJ	<2 UJ	<2	<2
Hydro-EVE Acid	4.4 J	4.4 J	<2	<2
R-EVE	2.3 J	2.3 J	4.5 J	3.9 J
PES	<2 UJ	<2 UJ	<2	<2
PFECA B	<2 UJ	<2 UJ	<2	<2
PFECA-G	<2 UJ	<2 UJ	<2	<2
Total Table 3+ Compounds (17 compounds)*	81	81	70	77
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	88	88	88	97
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)			<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<60	<60	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<110	<110	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)			<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA NaDONA	<2.1	<2.1	<2.1	 <2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37	<37	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<35	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.4	3.4	4.1	3.7
Perfluorobutanoic Acid	9.4	9.4	9.3	9
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	2.2	2.2	2.5	2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 <2 <2	<2	<2	<2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2	<2 <2 <2	<2 <2 <2	<2 <2 <2
Perfluoroheptanoic Acid  Perfluoroheptanoic Acid	13	13	19	18
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	6	6	6	5.8
Perfluorohexanoic Acid	21	21	26	26
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	2.7	2.7	2.7	2.1
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	17	17	25	27
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2 <2 <2	<2 <2
Perfluoroundecanoic Acid	<2	<2	<2	<2 <2
PFOA	11 J	11 J	11	10
	30 J	30 J	27 J	22 J

Location ID	24A	24A	24A	24A
Sampling Event		January 2020	January 2020	April 2020
Sampling Event	December 2019	January 2020	January 2020	April 2020
Field Sample ID	STW-LOC-24A-122019	STW-LOC24A-012920	STW-LOC24A-012920-D	STW-LOC-24A-042820
Date Sampled	12/20/2019	1/29/2020	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)			Field Duplicate	
HFPO-DA (EPA Method 537 Mod)	18 B	11	8.7	10
PFMOAA	12	9.9 J	9.3	7.1
PFO2HxA	6.1	6.5	6.2	8.8
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	4.6
PMPA	41 B	46	47	27
PEPA	22	23	25	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	<2	<2	<2	10 J
Hydrolyzed PSDA	12 J	5.4 J	5.2 J	4 J
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	5.3
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	99	96	96	63
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	110	100	100	77
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2 <2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA	-			
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.1	2.1	2	3.6
Perfluorobutanoic Acid	<2	4.5	4.2	7.6
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid  Perfluorodecanoic Sulfonia said (PEDoS)	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 <2	<2 UJ <2	<2 <2	<2 <2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroheptanoic Acid  Perfluoroheptanoic Acid	8.6	3.8	3.5	4.8
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<b>4.0</b> <2
Perfluorohexane Sulfonic Acid	4.4	2.5	2.4	4.8
Perfluorohexanoic Acid	15	5.4	5.1	9
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	2.8 B	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2 UJ
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2 UJ	<2	<2
Perfluoropentanoic Acid	10	4.8	4.5	10
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	16 B	<2	<2	<2
Perfluoroundecanoic Acid	3.1 B	<2	<2	<2
PFOA	7.6	3.9	3.5	6.8
PFOS	17	6.3	6.2	17

Location ID	24A	24A	24A	24A
Sampling Event	April 2020	May/June 2020	May/June 2020	August 2020
Field Sample ID	STW-LOC-24A-042820- D	STW-LOC24A-060320	STW-LOC24A-060320-D	STW-LOC-24A-082620
Date Sampled	4/28/2020	6/3/2020	6/3/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Field Duplicate		Field Duplicate	
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	10	38 J	20 J	20
				28 18 J
PFMOAA PFO2HxA	6.9 8.5	<2 UJ <b>6.4 J</b>	<2 UJ 7.4 J	26 J
PFO3OA	<b>0.5</b> <2	<2 UJ	<2 UJ	4.1
PFO4DA	<2	<2 UJ	<2 UJ	<2
PFO5DA	5.1	<2 UJ	<2 UJ	<2
PMPA	25	96 J	63 J	53 J
PEPA	<20	140 J	53 J	18 J
PS Acid	<2	<2 UJ	<2 UJ	<2
Hydro-PS Acid	<2	<2 UJ	<2 UJ	<2
R-PSDA	11 J	<2 UJ	<2 UJ	<2
Hydrolyzed PSDA	3.4 J	<2 UJ	<2 UJ	7.9 J
R-PSDCA	<2	<2 UJ	<2 UJ	<2
NVHOS	5.1	<2 UJ	<2 UJ	<2
EVE Acid	<2	<2 UJ	<2 UJ	<2
Hydro-EVE Acid	<2	<2 UJ	<2 UJ	<2
R-EVE	<2	<2 UJ	<2 UJ	35 J
PES	<2	<2 UJ	<2 UJ	<2
PFECA B	<2	<2 UJ	<2 UJ	<2
PFECA-G	<2	<2 UJ	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	61	280	140	150
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	75	280	140	190
	2		2	<2
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS) 1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2 <20	<2 <20	<2 <20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<20	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1			
DONA		<2	<2	<2
NaDONA	<2.1			
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.7	3.2	2.9	4.3
Perfluorobutanoic Acid	7.3	13	13	6.1
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheyadaanaia asid (PEHyDA)	5	6.1	6.1	3.5
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 5	<2 3.1	<2 3.3	4.3
Perfluoronexane Suriome Acid Perfluorohexanoic Acid	8.8	9.6	9.2	7.2
Perfluoronoanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	10	11	11	8.7
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	6.6	6.1	6.8	6.6
PFOS	16	8.9 J	12 J	13

Location ID	24A	24B	24B	24B
Sampling Event		April 2019	June 2019	August 2019
Field Sample ID	STW-LOC-24A-082620- D	DSTW-LOC24B-042419	STW-LOC24B-062719	STW-LOC24B-082119
Date Sampled	8/26/2020	04/24/2019	06/27/2019	8/21/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Field Duplicate			
Table 3+ Lab SOP (ng/L)	20	14	10	8.9
HFPO-DA (EPA Method 537 Mod) PFMOAA	30	14 11 J	<5	
PFO2HxA	14 J	11 J	8.1	<5 <b>6.7</b>
PFO3OA	2.2	<2 UJ	<2	<2
PFO4DA	<2	<2 UJ	<2	<2
PFO5DA	<2	<2 UJ	<2	<2
PMPA	21 J	19 J	17	16
PEPA	<10	<20 UJ	<20	<20
PS Acid	<2	<2 UJ	77	<2
Hydro-PS Acid	<2	<2 UJ	3.3	<2
R-PSDA	3 4 J	5.1 J 4.3 J	<2 11 J	5.3 J
Hydrolyzed PSDA R-PSDCA	<2 <2	4.3 J <2 UJ	<2	<b>2.4 J</b> <2
NVHOS	<2	<2 UJ	<2	4.3
EVE Acid	<2	<2 UJ	<2	<2
Hydro-EVE Acid	<2	<2 UJ	<2	<2
R-EVE	<2	3.8 J	<2	2.2 J
PES	<2	<2 UJ	<2	<2
PFECA B	<2	<2 UJ	<2	<2
PFECA-G	<2	<2 UJ	<2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	85 92	55 68	120 130	36 46
Other PFAS (ng/L)	92	08	130	40
10:2 Fluorotelomer sulfonate	<2	<2.0	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2			<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<60	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<110	<2	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2			<2
ADONA DONA	 <2	<2.1	<2.1	<2.1
NaDONA		<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<37	2.9	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<35	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	4.5	2.2	3.5	4.3
Perfluorobutanoic Acid	6.2	5.5	9.6	9.5
Perfluorodecane Sulfonic Acid	<2	<2.0	<2	<2
Perfluorodecanoic Acid Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2.0 <2.0	<2 <2 <2	<2 <2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2 <2	<2.0 <2.0	<2 <2	<2 <2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2.0	<2	<2
Perfluoroheptanoic Acid	3.3	6	13	21
Perfluorohexadecanoic acid (PFHxDA)		<2.0	<2	<2
Perfluorohexane Sulfonic Acid	4.3	3.3	5	5.8
Perfluorohexanoic Acid	7.7	8	19	25
Perfluorononanesulfonic acid	<2	<2.0	<2	<2
Perfluorononanoic Acid	<2	<2.0	<2	<2
Perfluorooctadecanoic acid	<2	<2.0	<2	<2
Perfluorooctane Sulfonamide  Perfluoropontone sulfonia acid (PEPaS)	<2 <2	<2.0	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	8.2	<2.0 <b>6.2</b>	<2 17	<2 <b>25</b>
Perfluorotetradecanoic Acid	<2	<2.0	<2	<2
Perfluorotridecanoic Acid	<2	<2.0	<2	<2
Perfluoroundecanoic Acid	<2	<2.0	<2	<2
PFOA	6.3	7.7	8.3	9.5
PFOS	11	12	14	16

Location ID	24B	24B	24B	24B
Sampling Event		December 2019	December 2019	January 2020
Field Sample ID	STW-LOC24B-100919	STW-LOC-24B-122019	STW-LOC-24B-122019-D	STW-LOC24B-012920
Date Sampled	10/9/2019	12/20/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	-		Field Duplicate	
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	8.5	11 B	8.7 B	12
PFMOAA	<5 UJ	12	13	8.2 J
PFO2HxA	7.1	6.5	5.1	6.2
PFO3OA	2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA PMPA	<2 18	<2 27 B	<2 29 B	<2 <b>24</b>
PEPA	<20	<20 <20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	6.9 J	<2	3.7 J	<2
Hydrolyzed PSDA	4.4 J	5.2 J	6.2 J	3.7 J
R-PSDCA	<2	<2	<2	<2
NVHOS	7	<2	<2	<2
EVE Acid	9.6	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	2.6 J	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	52	57	56	50
Total Table 3+ Compounds (20 compounds)*	64	62	68	54
Other PFAS (ng/L)	2	2	2	
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2 <20	<2 <20	<2 <20	<2 <20
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS) 1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<20	<20	<2	<20 <2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	6.2	2.8	2.7	<2
Perfluorobutanoic Acid	18	3.9 J	3.9	3.9
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)  Perfluorododecanoic Acid	<2	<2	<2	<2
	<2	<2 <2	<2 <2 <2	<2
Perfluoroheptane sulfonic acid (PFHpS) Perfluoroheptanoic Acid	<2 34	<2 6.8 J	<2 <b>6.8</b>	<2 2.8
Perfluoroneptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<2	<b>6.8 J</b> <2	<b>0.8</b> <2	<b>2.8</b> <2
Perfluorohexane Sulfonic Acid	8.5	3.1	3.2	2.1
Perfluorohexanoic Acid	49	13 J	12	4.1
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	46	8.3 J	9.9	4.3
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	11	4.6 J	4.6	3
PFOS	15	7.5	7.9	5.3

Location ID	24B	24B	24B	24C
Sampling Event		May/June 2020	August 2020	April 2019
Samping Event	April 2020	May/June 2020	August 2020	April 2019
Field Sample ID	STW-LOC-24B-042820	STW-LOC24B-060320	STW-LOC-24B-082620	DSTW-LOC24C-042419
Date Sampled		6/3/2020	8/26/2020	04/24/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	
QA/QC Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	16	4.7	15	19
PFMOAA	15	3.2	<2	11 J
PFO2HxA	12	5.8	13	12 J
PFO3OA	2.4	<2	2.1	<2 UJ
PFO4DA	<2	<2	<2	<2 UJ
PFO5DA	5.6	<2	<2	<2 UJ
PMPA	26	33	22	28 J
PEPA	<20	<2	<10	<20 UJ
PS Acid	<2	<2	<2	14 J
Hydro-PS Acid	<2	<2	<2	2.1 J
R-PSDA	<2	<2	15	39 J
Hydrolyzed PSDA	5.5 J	<2	5.5	51 J
R-PSDCA	<2	<2	<2	<2 UJ
NVHOS	4.5	<2	<2	4 J
EVE Acid	<2	<2	<2	6.8 J
Hydro-EVE Acid	<2	<2	<2	3.7 J
R-EVE	2.2 J	<2	<2	36 J
PES	<2	<2	<2	<2 UJ
PFECA B	<2	<2	<2	<2 UJ
PFECA-G	<2	<2	<2	<2 UJ
Total Table 3+ Compounds (17 compounds)*	82	47	52	100
Total Table 3+ Compounds (20 compounds)*	89	47	73	230
Other PFAS (ng/L)	_	_	2	2.0
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2.0
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2 <20	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20 <60
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2 <4	<2	<4	<110
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate		<4	<20	<110
F-53B Major (9Cl-PF3ONS)	<20 <2	<20 <2	<20	<20
ADONA	<2.1			<2.1
DONA		<2	<2	
NaDONA	<2.1			<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<37
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<35
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.5	2.8	4.1	2
Perfluorobutanoic Acid	5.4	6.3 J	5.3	4.7
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	4.4	3.5	3.3	5.9
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	4.4	3.1	4.1	3.4
Perfluorohexanoic Acid	9.1	7.7	6.7	7
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	10	6.4	8.0	6.4
Perfluorotetradecanoic Acid	<2	<2	<2	<2.0
Perfluorotridecanoic Acid	<2	<2	<2	<2.0
Perfluoroundecanoic Acid	<2	<2	<2	<2.0
PFOA PFOS	5.7 12	5.5 9	6.0	7.3 15

Location ID	24C	24C	24C	24C
Sampling Event	June 2019	August 2019	December 2019	January 2020
Field Sample ID		STW-LOC24C-082119	STW-LOC-24C-122019	STW-LOC24C-012920
Date Sampled	06/27/2019	8/21/2019	12/20/2019	1/29/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	-			
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	16	13	270	11
PFMOAA PFO2HxA	<5	<5	<21	10 J
PFO3OA	<b>8.6</b> <2	<b>7.6</b> <2	46 20	<b>7.2</b> <2
PFO4DA	<2	<2	13	<2
PFO5DA	<2	<2	12	<2
PMPA	14	23	61 B	26
PEPA	<20	<20	31	<20
PS Acid	3.5	21	490	4.4
Hydro-PS Acid	<2	3.3	130	<2
R-PSDA	13 J	18 J	470 J	8 J
Hydrolyzed PSDA R-PSDCA	5.3 J <2	53 J	1,300 J 11	44 J
R-PSDCA NVHOS	<2 <b>2</b>	<2 <b>6.7</b>	260	<2 <b>4.7</b>
EVE Acid	<2	2.1	930	5.6
Hydro-EVE Acid	<2	<2	290	2.2
R-EVE	3.9 J	5.4 J	170 J	<2
PES	<2	<2	<4.6	<2
PFECA B	<2	<2	<6	<2
PFECA-G	<2	<2	<4.1	<2
Total Table 3+ Compounds (17 compounds)*	44	77	2,600	71
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	66	150	4,500	120
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2
1H,1H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<2	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)		<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA NaDONA	<2.1	<2.1	 <2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	2.3	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	3.8	4.5	2.9	<2
Perfluorobutanoic Acid	8	8.4	5.3	3.3
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid Perfluoroheptane sulfonic acid (PFHpS)	<2 <2 <2	<2 <2	<2 <2	<2 <2
Perfluoroheptanoic Acid Perfluoroheptanoic Acid	13	22	7.1	2.8
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	5.1	6.1	3.2	2
Perfluorohexanoic Acid	21	27	13	3.9
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	17 <2	<b>26</b> <2	11 <2	<b>4</b> <2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	7.9	9.8	5.3	2.8
PFOS	15	13	8.1	5.5

Location ID	24C	24C	24C	TBLK
Sampling Event	April 2020	May/June 2020	August 2020	April 2019
	STW-LOC-24C-042820	STW-LOC24C-060320	STW-LOC-24C-082620	DSTW-TB-042519
Date Sampled	4/28/2020	6/3/2020	8/26/2020	04/25/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC				Trip Blank
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	16	5.6	14	<4.0
PFMOAA PFO2HxA	15	3	7.4	<5 UJ
	13	6.1	13 2.1	<2 UJ
PFO3OA	<b>2.2</b> <2	<2	<b>2.1</b> <2	<2 UJ <2 UJ
PFO4DA PFO5DA	5	<2 <2	<2	<2 UJ
PMPA	26	31	47	<10 UJ
PEPA	<20	<2	<10	<20 UJ
PS Acid	16	8.9	2.7	<2 UJ
Hydro-PS Acid	<2	<2	<2	<2 UJ
R-PSDA	15 J	30 J	20	<2 UJ
Hydrolyzed PSDA	25 J	22 J	14	<2 UJ
R-PSDCA	<2	<2	<2	<2 UJ
NVHOS	5.2	3.4	7.5	<2 UJ
EVE Acid	5.9	2.6	<2	<2 UJ
Hydro-EVE Acid	2.4	<2	<2	<2 UJ
R-EVE	<2	3.4 J	11	<2 UJ
PES	<2	<2	<2	<2 UJ
PFECA B	<2	<2	<2	<2 UJ
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 110	<2 <b>61</b>	<2 94	<2 UJ ND
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	150	120	140	ND ND
Other PFAS (ng/L)	130	120	170	ND
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<60
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<110
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	
ADONA	<2.1			<2.1
DONA		<2	<2	
NaDONA	<2.1			<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2 <2	<37
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<2 <20	<35 <20
N-metnyl perfluorooctane sulfonamidoacetic acid Perfluorobutane Sulfonic Acid	<20 <b>3.5</b>	<20 <b>2.9</b>	4.0	<20 <2
Perfluorobutanoic Acid	5.4	4.9	4.8	<2 <2
Perfluorodecane Sulfonic Acid	<2	<b>4.9</b> <2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	4.5	3.9	3.3	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2		<2
Perfluorohexane Sulfonic Acid	4.3	2.8	4.0	<2
Perfluorohexanoic Acid	8.7	8	6.5	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluoroctadecanoic acid	<2	<2	<2	<2
Perfluorocctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS) Perfluoropentanoic Acid	<2 10	<2 <b>5.4</b>	<2 7.2	<2 <2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2	<b>5.4</b> <2	<2	<2 <2
Perfluoroteiradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2	<2 <2	<2 <2
Perfluoroundecanoic Acid	<2	<2	<2	<2 <2
PFOA	6.5	5.7	5.5	<2 <2
	U.U	J.1		\ <u></u>

Location ID	TBLK	TBLK	TBLK	TBLK
Sampling Event	June 2019	August 2019	October 2019	December 2019
Field Sample ID	STW-TBLK-1	STW-TBLK-082219	STW-TBLK-100919	STW-TB-122619
Date Sampled	06/28/2019	8/22/2019	10/9/2019	12/26/2019
Analytical Laboratory QA/QC	TestAmerica Trip Blank	TestAmerica Trip Blank	TestAmerica Trip Blank	TestAmerica Trip Blank
Table 3+ Lab SOP (ng/L)	TTIP Diank	Trip Diank	Tip Diank	111p Diank
HFPO-DA (EPA Method 537 Mod)	<4	<2	<4	6.7
PFMOAA	<5	<5	<5	<5
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA PFO5DA	<2 <2	<2 <2 <2	<2 <2	<2 <2
PMPA	<10	<10	<10	11
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	<2	<2	<2	<2
Hydrolyzed PSDA	<2	<2	<2	<2
R-PSDCA NVHOS	<2 <2	<2 <2 <2	<2 <2	<2 <2
EVE Acid	<2 <2	<2 <2	<2 <2	<2 <2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND	18
Total Table 3+ Compounds (20 compounds)*  Other PFAS (ng/L)	ND	ND	ND	18
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<2	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20 <2	<20 <2	<20 <2
F-53B Major (9Cl-PF3ONS) ADONA	<b></b> <2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	<2 <2	<2 <2 <2	<2 <2	<2 <2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)  Perfluorohexane Sulfonic Acid	<2 <2	<2 <2 <2	<2 <2	<2 <2
Perfluorohexanoic Acid	<2	<2	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	2.9
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2 <2	<2	<2	<2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2 <2	<2 <2	<2 <b>27</b>
Perfluoroundecanoic Acid	<2	<2	<2	5
PFOA PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

TBLK   April 2020   April 2020   STW-LOC-TB-0   S	042820 STW-TB-0521 5/20/2020 a TestAmeric	STW-TBLK-082620   8/26/2020
STW-LOC-TB-0   STW-LOC-TB-0	STW-TB-052    S720/2020     Ca	STW-TBLK-082620   8/26/2020
TestAmeric   TestAmeric   Trip Blank	TestAmerica	TestAmerica Trip Blank
TestAmeric   TestAmeric   Trip Blank	TestAmerica	TestAmerica Trip Blank
		<4 <2 <2 <2 <2 <20 <10 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
	<2     <2     <2     <2     <2     <10     <20     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	
<2	<2     <2     <2     <10     <20     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	<2 <2 <20 <10 <2 <2 <20 <20 <20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
	<2 <2 <10 <20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2 <2 <20 <10 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
	<2 <10 <20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2 <20 <10 <10 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
<10 <20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<10 <20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<20 <10 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
	<20 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<10 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2
<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	<2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2     <2	<2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <
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	C    C    C    C    C    C    C    C	

Location ID	EQBLK	EQBLK	EQBLK	EQBLK
Sampling Event	April 2019	April 2019	April 2019	June 2019
Field Sample ID	DSTW-EB-01-042419	DSTW-EB-02-042419	DSTW-EB-03-042419	STW-EQBLK-1
Date Sampled	04/24/2019	04/24/2019	04/24/2019	06/28/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Table 3+ Lab SOP (ng/L)	• •	• •	•	•
HFPO-DA (EPA Method 537 Mod)	<4.0	<4.0	<4.0	<4
PFMOAA	<5 UJ	<5 UJ	<5 UJ	<5
PFO2HxA	<2 UJ	<2 UJ	<2 UJ	<2
PFO3OA	<2 UJ	<2 UJ	<2 UJ	<2
PFO4DA	<2 UJ	<2 UJ	<2 UJ	<2
PFO5DA PMPA	<2 UJ <10 UJ	<2 UJ <10 UJ	<2 UJ <10 UJ	<2 <10
PEPA	<20 UJ	<20 UJ	<20 UJ	<20
PS Acid	<2 UJ	<2 UJ	<2 UJ	<2
Hydro-PS Acid	<2 UJ	<2 UJ	<2 UJ	<2
R-PSDA	<2 UJ	<2 UJ	<2 UJ	<2
Hydrolyzed PSDA	<2 UJ	<2 UJ	<2 UJ	<2
R-PSDCA	<2 UJ	<2 UJ	<2 UJ	<2
NVHOS	<2 UJ	<2 UJ	<2 UJ	<2
EVE Acid	<2 UJ	<2 UJ	<2 UJ	<2
Hydro-EVE Acid	<2 UJ	<2 UJ	<2 UJ	<2
R-EVE PES	<2 UJ <2 UJ	<2 UJ <2 UJ	<2 UJ <2 UJ	<2
PFECA B	<2 UJ	<2 UJ	<2 UJ	<2 <2
PFECA-G	<2 UJ	<2 UJ	<2 UJ	<2
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND	ND
Total Table 3+ Compounds (20 compounds)*	ND	ND	ND	ND
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	<2
F-53B Minor (11Cl-PF3OUdS)				
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol 2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<b>820 J</b> <110	<b>850 J</b> <110	<b>780 J</b> <110	<2 <2
6:2 Fluorotelomer sulfonate	<20	<20	<110	<20
F-53B Major (9Cl-PF3ONS)				
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<37 UJ	<37 UJ	<37	<2
N-methyl perfluoro-1-octanesulfonamide	<35	<35	<35	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	<2.0 <2.0	<2.0 <2.0	<2.0 <2.0	<2 <2
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	<2 <2
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	<2
Perfluorododecane sulfonic acid (PFDoS)	<2.0	<2.0	<2.0	<2
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2.0	<2.0	<2.0	<2
Perfluoroheptanoic Acid	<2.0	<2.0	<2.0	<2
Perfluorohexadecanoic acid (PFHxDA)	<2.0	<2.0	<2.0	<2
Perfluorohexane Sulfonic Acid	<2.0	<2.0	<2.0	<2
Perfluorohexanoic Acid	<2.0	<2.0	<2.0	<2
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2.0 <2.0	<2.0 <2.0	<2.0 <2.0	<2 <2
Perfluorononanoic Acid Perfluoronoctadecanoic acid	<2.0	<2.0	<2.0	<2 <2
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0	<2
Perfluoropentane sulfonic acid (PFPeS)	<2.0	<2.0	<2.0	<2
Perfluoropentanoic Acid	<2.0	<2.0	<2.0	<2
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	<2
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	<2
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	<2
PFOA	<2.0	<2.0	<2.0	<2
PFOS	<2.0	<2.0	<2.0	<2

Location ID	EQBLK	EQBLK	EQBLK	EQBLK
Sampling Event	June 2019	August 2019	August 2019	August 2019
Field Sample ID	STW-EQBLK-2	STW-EB-01-082119	STW-EB-02-082119	STW-EB-03-082119
Date Sampled Analytical Laboratory	06/27/2019 TestAmerica	8/21/2019 TestAmerica	8/21/2019 TestAmerica	8/21/2019 TestAmerica
QA/QC	<b>Equipment Blank</b>	Equipment Blank	Equipment Blank	Equipment Blank
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	<4	<2	<2	<2
PFMOAA	<5	<5	<5	<2 <5
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	<10	<10	<10	<10
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid R-PSDA	<2 <2	<2 <2	<2 <2	<2 <2
R-PSDA Hydrolyzed PSDA	<2 <2	<2 <2	<2 <2	<2
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 ND	<2 ND	<2 ND	<2 ND
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	ND ND	ND ND	ND ND	ND ND
Other PFAS (ng/L)	ND	ND	ND	ND
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)		<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<2	<4	<4	<4
6:2 Fluorotelomer sulfonate F-53B Major (9Cl-PF3ONS)	<20	<20 <2	<20 <2	<20 <2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid Perfluorobutanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanesulfonic acid Perfluorononanoic Acid	<2 <2 <2	<2 <2 <2	<2 <2	<2 <2
Perfluorononanoic Acid Perfluorooctadecanoic acid	<2 <2	<2 <2	<2 <2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	<2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	2	<2
PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

Location ID	EQBLK	EQBLK	EQBLK	EQBLK
Sampling Event	October 2019	October 2019	October 2019	December 2019
Field Sample ID	STW-EB-01-100919	STW-EB-02-100919	STW-EB-03-100919	STW-EQBLK-DR- 122019
Date Sampled	10/9/2019	10/9/2019	10/9/2019	12/20/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	<b>Equipment Blank</b>	Equipment Blank	Equipment Blank	Equipment Blank
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	<4	<4	<4	<4
PFMOAA	<5	<5	<5	<5
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2 10
PMPA	<10	<10	<10	
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid R-PSDA	<2 <2	<2 <2	<2 <2	<2 <2
Hydrolyzed PSDA	<2	<2	<2	<2
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND	10
Total Table 3+ Compounds (20 compounds)*	ND	ND	ND	10
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<2	<2	<2
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20 <2	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2 <2	<2 <2	<2 <2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20	<2 <20	<2 <20
Perfluorobutane Sulfonic Acid	<20 <2	<20 <2	<20 <2	<20
Perfluorobutanic Acid	<2	<2	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	<2	<2	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	<2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

Location ID	EQBLK	EQBLK	EQBLK	EQBLK
Sampling Event	December 2019	January 2020	January 2020	April 2020
	STW-EQBLK-IO-122019	STW-LOCEB1-012920	STW-LOCEB2-012920	STW-LOC-EB1-042820
Date Sampled	12/20/2019	1/29/2020	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Table 3+ Lab SOP (ng/L) HFPO-DA (EPA Method 537 Mod)	<4	<4	<4	-4
PFMOAA	<5	<5 UJ	<5 UJ	<4 <5
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	10	<10	<10	<10
PEPA	<20	<20	<20	<20
PS Acid	<2	<2	<2	<2
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA Hydrolyzed PSDA	<2 <2	<2 <2	<2 <2	<2 <2
R-PSDCA	<2	<2	<2	<2 <2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	10 10	ND ND	ND ND	ND ND
Other PFAS (ng/L)	10	ND	ND	ND
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS) ADONA	<2 <2.1	<2 <2.1	<2 <2.1	<2 <2.1
DONA	~2.1			
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	<2	<2	<2	<2
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorodecane sulfonic acid (PFDoS)	<2	<2	<2	<2 <2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	<2	<2	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorooctane Sulfonamide Perfluoropentane sulfonic acid (PFPeS)	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoropentanoic Acid	<2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

Location ID	EQBLK	EQBLK	EB	EB
Sampling Event	April 2020	May/June 2020	August 2020	August 2020
	STW-LOC-EB2-042820	STW-EB-052120	STW-EQBLK-DR- 082620	STW-EQBLK-IS-082620
Date Sampled	4/28/2020	5/20/2020	8/26/2020	8/26/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
HFPO-DA (EPA Method 537 Mod)	<4	<2	<4	<4
PFMOAA	<5	<5	<2	<2
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2	<2	<2	<2
PMPA	<10	<10	<20	<20
PEPA	<20	<20	<10	<10
PS Acid	<2	<2	<2	<2
Hydro-PS Acid R-PSDA	<2 <2	<2 <2	<2 <2	<2 <2
Hydrolyzed PSDA	<2	<2	<2	<2
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2 <2	<2 <2
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 ND	<2 ND	ND	ND
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND	ND
Other PFAS (ng/L)	110	ND	1,2	1.2
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<4	<4 <20	<4 <20
6:2 Fluorotelomer sulfonate F-53B Major (9Cl-PF3ONS)	<20 <2	<20 <2	<20	<20 <2
ADONA	<2.1			
DONA		<2	<2	<2
NaDONA	<2.1			
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid Perfluorodecane Sulfonic Acid	<2 <2	<2 <2	<2 <2	<2 <2 <2
Perfluorodecane Sulfonic Acid Perfluorodecanoic Acid	<2 <2	<2 <2	<2	<2 <2
Perfluorododecane sulfonic acid (PFDoS)	<2 <2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2		
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	<2	<2	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2 <2
Perfluorononanoic Acid Perfluorooctadecanoic acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorooctadecanoic acid Perfluorooctane Sulfonamide	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoropentane sulfonic acid (PFPeS)	<2 <2	<2	<2	<2
Perfluoropentanoic Acid	<2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

Location ID	EB	FBLK	FBLK	FBLK
Sampling Event	August 2020	April 2019	June 2019	August 2019
	STW-EQBLK-PP-082620	DSTW-TB-042519	STW-LOC-FBLK-1	STW-FB-082119
Date Sampled	8/26/2020	04/25/2019	06/27/2019	8/21/2019
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Equipment Blank	Field Blank	Field Blank	Field Blank
Table 3+ Lab SOP (ng/L)		4.0		
HFPO-DA (EPA Method 537 Mod)	<4	<4.0	<4	<2
PFMOAA PFO2HxA	<2 <2	<5 UJ	<5	<5
PFO3OA	<2	<2 UJ <2 UJ	<2 <2	<2 <2
PFO4DA	<2	<2 UJ	<2	<2
PFO5DA	<2	<2 UJ	<2	<2
PMPA	<20	<10 UJ	<10	<10
PEPA	<10	<20 UJ	<20	<20
PS Acid	<2	<2 UJ	<2	<2
Hydro-PS Acid	<2	<2 UJ	<2	<2
R-PSDA	<2	<2 UJ	<2	<2
Hydrolyzed PSDA	<2	<2 UJ	<2	<2
R-PSDCA	<2	<2 UJ	<2	<2
NVHOS	<2	<2 UJ	<2	<2
EVE Acid	<2	<2 UJ	<2	<2
Hydro-EVE Acid	<2	<2 UJ	<2	<2
R-EVE	<2 <2	<2 UJ	<2	<2
PES DEECA P	<2 <2	<2 UJ <2 UJ	<2	<2
PFECA B PFECA-G	<2	<2 UJ	<2 <2	<2 <2
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND	ND
Total Table 3+ Compounds (17 compounds)*	ND	ND	ND ND	ND
Other PFAS (ng/L)	1.2	110	11,2	112
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2			<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<60	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4	<110	<2	<4
6:2 Fluorotelomer sulfonate	<20	<20	<20	<20
F-53B Major (9Cl-PF3ONS)	<2	<b></b>		<2
ADONA		<2.1	<2.1	<2.1
DONA NaDONA	<2	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	 <20	<2.1	<2.1	<2.1
N-ethylperfluoro-1-octanesulfonamide	<2	<37	<20	<20
N-methyl perfluoro-1-octanesulfonamide	<2	<35	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	<2	<2	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2	<2	<2
Perfluorohexadecanoic acid (PFHxDA)		<2	<2	<2
Perfluorohexane Sulfonic Acid Perfluorohexanoic Acid	<2 <2	<2	<2	<2
Perfluoronexanoic Acid Perfluorononanesulfonic acid	<2 <2	<2 <2	<2 <2	<2 <2
Perfluorononanoic Acid	<2	<2	<2 <2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid	<2	<2	<2	<2
Perfluorotetradecanoic Acid	<2	<2	<2	<2
Perfluorotridecanoic Acid	<2	<2	<2	<2
Perfluoroundecanoic Acid	<2	<2	<2	<2
PFOA	<2	<2	<2	<2
PFOS	<2	<2	<2	<2

Location ID	FBLK	FBLK	FBLK	FBLK
Sampling Event	October 2019	December 2019	Jannuary 2020	April 2020
Field Sample ID	STW-FB-100919	STW-FBLK-122019	STW-LOCFB-012920	STW-LOC-FB-042820
Date Sampled	10/9/2019	12/20/2019	1/29/2020	4/28/2020
Analytical Laboratory	TestAmerica	TestAmerica	TestAmerica	TestAmerica
QA/QC	Field Blank	Field Blank	Field Blank	Field Blank
Table 3+ Lab SOP (ng/L)				
HFPO-DA (EPA Method 537 Mod)	<4	<4 UJ	<4	<4
PFMOAA	<5	<5	<5 UJ	<5
PFO2HxA	<2	<2	<2	<2
PFO3OA	<2	<2	<2	<2
PFO4DA	<2	<2	<2	<2
PFO5DA	<2 <10	<2	<2 <10	<2
PMPA PEPA	<10 <20	<20	<10	<10 <20
PS Acid	<20 <2	<20	<20 <2	<20
Hydro-PS Acid	<2	<2	<2	<2
R-PSDA	<2	<2	<2	<2
Hydrolyzed PSDA	<2	<2	<2	<2
R-PSDCA	<2	<2	<2	<2
NVHOS	<2	<2	<2	<2
EVE Acid	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	<2
R-EVE	<2	<2	<2	<2
PES	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2
Total Table 3+ Compounds (17 compounds)*	ND	10	ND	ND
Total Table 3+ Compounds (20 compounds)*	ND	10	ND	ND
Other PFAS (ng/L)				
10:2 Fluorotelomer sulfonate	<2	<2	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2	<2	<2
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20	<4 <20	<4 <20
F-53B Major (9Cl-PF3ONS)	<20 <2	<20	<20 <2	<20
ADONA	<2.1	<2.1	<2.1	<2.1
DONA				
NaDONA	<2.1	<2.1	<2.1	<2.1
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluoro-1-octanesulfonamide	<2	<2	<2	<2
N-methyl perfluorooctane sulfonamidoacetic acid	<20	<20	<20	<20
Perfluorobutane Sulfonic Acid	<2	<2	<2	<2
Perfluorobutanoic Acid	<2	<2 UJ	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2	<2	<2
Perfluorodecanoic Acid	<2	<2	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2	<2	<2
Perfluorododecanoic Acid	<2	<2	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2	<2	<2
Perfluoroheptanoic Acid	<2	<2 UJ	<2	<2
Perfluorohexadecanoic acid (PFHxDA)	<2	<2	<2	<2
Perfluorohexane Sulfonic Acid	<2	<2	<2	<2
Perfluorohexanoic Acid	<2	<2 UJ	<2	<2
Perfluorononanesulfonic acid	<2	<2	<2	<2
Perfluorononanoic Acid	<2	<2	<2	<2
Perfluorooctadecanoic acid	<2	<2	<2	<2
Perfluorooctane Sulfonamide  Perfluorooctane Sulfonia orid (DEP-S)	<2	<2	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2	<2	<2
Perfluoropentanoic Acid Perfluorotetradecanoic Acid	<2 <2	<2 UJ	<2	<2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2 <2	<2 <2	<2 <2
	<2 <2	<2 <2	<2 <2	<2 <2
Perfluoroundecanoic Acid				
Perfluoroundecanoic Acid PFOA	<2 <2	<2 UJ	<2	<2

Location II	FBLK	FBLK
Sampling Even	t May/June 2020	August 2020
Field Sample II	STW-FB-052120	STW-FBLK-082620
Date Sampled	1 5/20/2020	8/26/2020
Analytical Laboratory		TestAmerica
QA/QC Table 3+ Lab SOP (ng/L)	Field Blank	Field Blank
HFPO-DA (EPA Method 537 Mod)	<2	<4
PFMOAA	<5	<2
PFO2HxA	<2	<2
PFO3OA	<2	<2
PFO4DA PFO5DA	<2 <2	<2 <2 <2
PMPA	<10	<20
PEPA	<20	<10
PS Acid	<2	<2
Hydro-PS Acid	<2	<2
R-PSDA Hydrolyzad PSDA	<2	<2 <2
Hydrolyzed PSDA R-PSDCA	<2 <2	<2 <2
NVHOS	<2	<2
EVE Acid	<2	<2
Hydro-EVE Acid	<2	<2
R-EVE	<2	<2
PES	<2	<2
PFECA B	<2	<2
PFECA-G Total Table 3+ Compounds (17 compounds)*	<2 ND	<2 ND
Total Table 3+ Compounds (17 compounds)*  Total Table 3+ Compounds (20 compounds)*	ND ND	ND
Other PFAS (ng/L)		
10:2 Fluorotelomer sulfonate	<2	<2
F-53B Minor (11Cl-PF3OUdS)	<2	<2
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<20	<20
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<20	<20
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2	<2 <4
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol 6:2 Fluorotelomer sulfonate	<4 <20	<4 <20
F-53B Major (9Cl-PF3ONS)	<20	<2
ADONA		
DONA	<2	<2
NaDONA		
N-ethyl perfluorooctane sulfonamidoacetic acid	<20	<20
N-ethylperfluoro-1-octanesulfonamide	<2	<2
N-methyl perfluoro-1-octanesulfonamide N-methyl perfluorooctane sulfonamidoacetic acid	<2 <20	<2 <20
Perfluorobutane Sulfonic Acid	<20 <2	<20 <2
Perfluorobutanoic Acid	<2	<2
Perfluorodecane Sulfonic Acid	<2	<2
Perfluorodecanoic Acid	<2	<2
Perfluorododecane sulfonic acid (PFDoS)	<2	<2
Perfluorododecanoic Acid	<2	<2
Perfluoroheptane sulfonic acid (PFHpS)	<2	<2
Perfluoroheptanoic Acid Perfluorohexadecanoic acid (PFHxDA)	<2 <2	<2
Perfluoronexadecanoic acid (PFHXDA)  Perfluoronexane Sulfonic Acid	<2 <2	<2
Perfluorohexanoic Acid	<2	<2
Perfluorononanesulfonic acid	<2	<2
Perfluorononanoic Acid	<2	<2
Perfluorooctadecanoic acid	<2	<2
Perfluorooctane Sulfonamide	<2	<2
Perfluoropentane sulfonic acid (PFPeS)	<2	<2
Perfluoropentanoic Acid	<2	<2
Perfluorotetradecanoic Acid Perfluorotridecanoic Acid	<2 <2	<2 <2 <2
Perfluoroundecanoic Acid Perfluoroundecanoic Acid	<2 <2	<2
PFOA	<2	<2
PFOS	<2	<2