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# CAPE FEAR RIVER PFAS MASS LOADING ASSESSMENT – FIRST QUARTER 2023

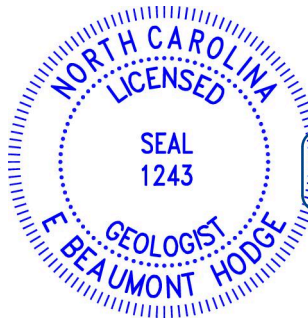
## Chemours Fayetteville Works

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## LIST OF ABBREVIATIONS

cfs	cubic feet per second
CO	Consent Order
CO Addendum	Addendum to Consent Order Paragraph 12
DVM	Data Verification Module
FTC	flow through cell
HDPE	high-density polyethylene
HFPO-DA	hexafluoropropylene oxide-dimer acid
kg	kilograms
LDPE	low-density polyethylene
mg/s	milligrams per second
m <sup>3</sup>	cubic meters
ng/L	nanograms per liter
NCDEQ	North Carolina Department of Environmental Quality
PFAS	per- and polyfluoroalkyl substances
PFHpA	perfluoroheptanoic acid
Q1	first quarter
Q2	second quarter
Q3	third quarter
Q4	fourth quarter
SOP	standard operating procedure
SWTS	stormwater treatment system
USEPA	United States Environmental Protection Agency

# 1 INTRODUCTION

Geosyntec Consultants of NC, P.C. (Geosyntec) has prepared this *Cape Fear River PFAS Mass Loading Assessment - First Quarter 2023 Report* for The Chemours Company, FC, LLC (Chemours). This report provides monitoring and assessment results pursuant to the requirements of Paragraphs 1(a) and 1(b) of the Addendum to Consent Order Paragraph 12 (CO Addendum) and Paragraph 16 of the executed Consent Order (CO) (dated February 25, 2019) between the North Carolina Department of Environmental Quality (NCDEQ), Cape Fear River Watch, and Chemours. The CO Addendum requires sampling the Cape Fear River and mass loading transport pathways for the per- and polyfluoroalkyl substances (PFAS) compounds listed in Attachment C of the CO (Geosyntec 2020a). This is the 13<sup>th</sup> report prepared since the first quarter (Q1) 2020.

## 1.1 Site Remedies

Chemours operates the Fayetteville Works facility in Bladen County, North Carolina (the Site) (Figure 1). The Site is within a 2,177-acre property at 22828 NC Highway 87, approximately 20 miles southeast of the city of Fayetteville.

Since October 2020,<sup>1</sup> Chemours installed multiple remedies to capture PFAS at the Site and to prevent PFAS from reaching the Cape Fear River. Thus far, these remedies include two treatment systems, four on-site seeps interim flow-through cells (FTC), and during this quarter, the commencement of the groundwater extraction system and the barrier wall construction. The start date of operation of each remedy are as follows:

- Old Outfall 002 treatment system (October 1, 2020)
- Seep C FTC (December 16, 2020)
- Seep A FTC (April 28, 2021)
- Seep B FTC (June 8, 2021)
- Seep D FTC (June 24, 2021)
- Outfall 002 stormwater treatment system (SWTS) (implemented on June 30, 2021)<sup>2</sup>
- Start of Barrier Wall construction (January 30, 2023)

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<sup>1</sup> There have been numerous other interim and permanent actions taken to limit PFAS reaching the Cape Fear River prior to Q1 2023, i.e., air abatement measures (installation of the thermal oxidizer and carbon beds, etc.), grouting of the terracotta pipe, sediment removal from onsite channels, among others, and these may not be reflected in the captured mass load calculations but should be considered in the overall assessment of PFAS reductions.

<sup>2</sup> Diversion sumps in the conveyance network surrounding the Monomers/IXM area capture stormwater flows that would otherwise flow to Outfall 002 and transfers the stormwater to the SWTS for treatment. The diversion sumps and SWTS are designed to convey and then treat stormwater from storm events up to 1-inch over 24-hours. Further details on the SWTS are provided in the Stormwater Treatment System Capture and Removal Efficiency Report (Geosyntec, 2021a).

- Groundwater extraction system (February 6, 2023; fully operational on March 14, 2023)

One year of monthly sampling of the mass loading model pathways per CO Paragraph 1(b) was completed in December 2021. Starting in January 2022 (Q1 2022), quarterly sampling of the mass loading model pathways was initiated and will continue for a period of 4 years (through Q4 2026), as outlined in the *Cape Fear River Mass Loading Calculation Protocol Version 2* (Geosyntec 2020a).

## 1.2 Monitoring and Report Objectives

This report presents data collected and analytical results for the first quarter 2023 (Q1 2023; January through March 2023) PFAS mass-loading assessment of the Cape Fear River. The primary objectives of the monitoring are as follows:

1. Assess the PFAS mass loads reaching the river primarily using the analytical results of the composite samples collected in the Cape Fear River at Tar Heel Ferry Road Bridge (Tar Heel), which is approximately 7 miles downstream of the Site (Figure 2).
2. Assess the PFAS mass loads that are being prevented from reaching the Cape Fear River by the remedies that have been implemented.

Along with presenting the results of the composite sampling conducted at Tar Heel, this report also presents the results of the grab samples collected at three downstream locations along the Cape Fear River: Bladen Bluffs, Tar Heel, and Kings Bluff Intake Canal (Kings Bluff) (Figure 3). The Tar Heel and Bladen Bluffs locations are within 2 miles of each other. The Kings Bluff location is farther away from the Site (48 miles downstream from Tar Heel).

This report also summarizes the surface water and groundwater sampling (Figures 3 and 4) that was conducted to estimate the relative PFAS loadings from the different PFAS transport pathways to the Cape Fear River, as identified in the conceptual site model (Figure 5) (Geosyntec 2019). As per Paragraph 1(b) of the CO Addendum, this sampling event was conducted during a wet weather event (e.g., rain event; > 0.5 inches of rainfall), and the river stages and flows measured at W.O. Huske Dam were much higher than previous dry weather events<sup>3</sup>. The estimated relative PFAS loadings were modeled for this current reporting period using the Q1 2023 data and the mass loading model. A summary of the mass loading model is presented in this report, and the scope and analysis are in Appendix A.

The results are presented as three PFAS groupings and presented in Table 1: Total Table 3+ (17 compounds)<sup>4</sup>, Total Table 3+ (20 compounds), and Total Attachment C (Geosyntec 2020b).

<sup>3</sup> An attempt was made to collect samples from the model pathways during a wet weather event in 2022, but coordination of field sampling with a predicted rain event was not achieved. As such, in addition to the wet weather event conducted in Q1 2023, a second wet weather event will be conducted in 2023.

<sup>4</sup> Total Table 3+ PFAS concentrations are calculated and presented two ways in this report: (i) summing over 17 of the 20 Table 3+ compounds “Total Table 3+ (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+ (20 compounds)”

Although the report tables include results for Total Attachment C and Total Table 3+ (20 compounds), the text, tables, and figures of this report focus on the Total Table 3+ (17 compounds) PFAS grouping.

### **1.3 Report Organization**

The remainder of this report is organized as follows:

- Section 2 presents details of the field work conducted (e.g., samples collected, measurements taken) and the laboratory analyses completed.
- Section 3 presents the sampling results.
- Section 4 presents the mass load and mass discharge calculations.
- Section 5 provides a summary and conclusions of the Q1 2023 mass load assessment.



## 2 SAMPLING ACTIVITIES AND LABORATORY ANALYSIS

The field work associated with collecting data for this Q1 2023 mass load assessment was completed by Parsons of NC (Parsons) and Geosyntec from January 1 through March 31, 2023. The scope of sampling and analysis conducted are presented below. Details of the sampling methods and flow measurement methods can be found in *Cape Fear River Mass Loading Calculation Protocol Version 2* (Geosyntec 2020a). Details of the sampling scope for the mass loading model are in Appendix A and are not presented in this section.

### 2.1 Sampling Activities

In Q1 2023, composite samples were collected from Tar Heel (sample location CFR-TARHEEL), which is approximately 7 miles downstream of the Site (Figure 2). In addition, grab samples were collected at the three downstream locations along the Cape Fear River. The flow measurements were collected at W.O. Huske Dam (Station #2105500) and Cape Fear Lock and Dam #1 (Station #2105769) and are summarized in Appendix B. Field forms are provided in Appendix C.

The composite samples were collected using an autosampler and were generally composited over 24 hours with aliquots collected at 1-hour intervals and at two samples per week. A total of 23 primary composite samples and 3 field duplicate composite samples were collected from this location from January 2, through March 30, 2023. The duplicate samples were collected on January 9, February 20, and March 20, 2023. The sampling program was interrupted on January 17, January 31, and February 15, 2023, due to high river stage events that were predicted to flood the autosampler platform (i.e., the river gage height at W.O. Huske Dam was predicted to exceed 10 feet). As a result, the sampler was temporarily removed on those occurrences, and grab samples were collected to continue a record of river concentrations over time.

The grab samples were collected using a peristaltic pump and new dedicated high-density polyethylene (HDPE) or low-density polyethylene (LDPE) tubing and dedicated silicone tubing for the pump head. A total of three grab samples were collected: one from Tar Heel (sample location CFR-TARHEEL) and one from Bladen Bluffs (sample location CFR-BLADEN) on February 22, 2023, and one from Kings Bluff (sample location CFR-KINGS) on February 24, 2023. The grab sample from Kings Bluff was collected two days after sampling conducted at Tar Heel and Bladen Bluffs to account for the estimated travel time between these locations.

For the remedies installed at Old Outfall 002; Seeps A, B, C, and D; and Outfall 002, samples were collected at the influent and effluent stilling basins and measured flows at the Old Outfall 002 treatment system. The sampling methods for the Seeps are not part of the scope of the mass loading assessment but are provided in *Interim Seep Remediation O&M Reports 14 and 15* (Geosyntec 2023a, 2023b).

## 2.2 Laboratory Analyses

Samples were sent to Eurofins Scientific (West Sacramento, California). The composite samples from Tar Heel were analyzed for PFAS by Table 3+ Laboratory standard operating procedure (SOP). The grab samples from the Bladen Bluffs, Tar Heel, and Kings Bluff were analyzed for Table 3+ Laboratory SOP and Method Mod 537 (35 compounds).

### 3 PFAS ANALYTICAL RESULTS

Table 3+ analytical results from samples collected at Bladen Bluffs, Tar Heel, and Kings Bluff in Q1 2023 are presented in Tables 3 and 4. The analytical results for the Seeps influent and effluent (to estimate remedies) are not included in this report but are provided in *Interim Seep Remediation O&M Reports 14 and 15* (Geosyntec 2023a, 2023b). The laboratory reports and Data Verification Module (DVM) reports are provided in Appendix D. The analytical data have been reviewed and validated. The duplicate samples have also been compared to the primary samples.

#### 3.1 Data Validation

The laboratory data were reviewed using the DVM within the Locus™ Environmental Information Management (EIM) system, a commercial software program used to manage data. Following the DVM process, a secondary review of the data was conducted. The DVM and secondary review results were combined in a data review narrative report for each set of sample results, which were consistent with Stage 2b of the United States Environmental Protection Agency (USEPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (USEPA 2009).

Additional details of the data validation are provided in Appendix A. Based on the review, the data are complete, representative, and comparable, with the exception of R-PSDA, Hydrolyzed PSDA, and R-EVE<sup>5</sup>.

#### 3.2 Equipment Blanks, Quality Assurance/Quality Control, and Duplicate Samples

No equipment blank samples were collected for the Tar Heel sampling program (CFR-TARHEEL) during this period because there were no maintenance activities conducted on the composite samplers. There were no other quality assurance/quality control samples collected for this reporting period.

Two equipment blank samples were collected as part of the surface water sampling activities on February 13, 2023. There were detections of HFPO-DA, PFMOAA, and PFO2HxA in the equipment collected with a dip rod. The results for samples collected using the dip rod have been B qualified as appropriate. These blank samples are further discussed in Appendix A.

PFAS results for the primary and duplicate samples had relative percent differences less than 30% for the reported compounds, except for R-PSDA in the field duplicate collected February 2, 2023,

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<sup>5</sup> As reported in the *Matrix Interference During Analysis of Table 3+ Compounds* memorandum (Geosyntec, 2020b), matrix interference studies conducted by the analytical laboratory (TestAmerica, Sacramento) have shown that the quantitation of three compounds (R-PSDA, Hydrolyzed PSDA, and R-EVE) is inaccurate due to interferences by the sample matrix in both groundwater and surface water.

at CFR-TARHEEL (CFR-TARHEEL-24-022023-D) and HFPO-DA in the field duplicate collected March 20, 2023, at CFR-TARHEEL (CFR-TARHEEL-24-032023-D).

### 3.3 Analytical Results

The Q1 2023 analytical results from the samples collected at Tar Heel are presented in Table 3. The Total Table 3+ (17 compounds) concentrations in Q1 2023 ranged from 2.6 nanograms per liter (ng/L) to 85 ng/L. This range in concentrations is within the observed range in previous quarterly sampling events that occurred after the remedies were in operation. However, the Total Table 3+ (17 compounds) concentrations were higher on January 23 and 26, 2023 (CFR-TARHEEL-24-012323 and CFR-TARHEEL-24-012623, respectively) at 53 ng/L (January 23) and 56 ng/L (January 26), when comparing to the rest of the samples collected during Q1 2023. These two sampling dates coincided with heavy rain events, where the total precipitation recorded at W.O. Huske Dam was 1.48 inches (January 23) and 3.16 inches (January 26). These two samples were subsequently re-extracted and reanalyzed with a result of 85 ng/L (January 23) and 28 ng/L (January 26). The original and reanalyzed results were both valid and reflected variability in measurements of the Table 3+ compounds (e.g., PFMOAA and PMPA) and therefore both sets of results are reported and used to calculate PFAS mass discharges and mass loads.

The Q1 2023 Table 3+ analytical results from the grab samples collected at Bladen Bluffs, Tar Heel, and Kings Bluff are presented in Table 4 and Method Mod 537 are presented in Appendix B, Table B2. The analytical results for these downstream locations are discussed in Section 4.3.

## 4 CAPE FEAR RIVER MASS LOAD AND MASS DISCHARGE CALCULATIONS

The analytical results from the sampling and the flows reported from W.O. Huske Dam (Station #2105500) and Cape Fear Lock and Dam #1 (Station #2105769) (Appendix B) were used to estimate the Total Table 3+ (17 compounds) mass loads and mass discharge in the Cape Fear River. Specifically, the mass load is calculated as the product of the concentration of PFAS and the total volume of water that flowed passed the sampling point within the sampling time interval (milligrams [mg] or kilograms [kg]); and the mass discharge is generally calculated as the product of the concentration of PFAS and the volumetric flow rate (milligrams per second [mg/s]).

The Total Table 3+ (17 compounds) mass load measured in the Cape Fear River and prevented from entering the Cape Fear River due to the remedies are summarized in Table 5. The mass load estimation intervals are presented in Tables 6A to 6G.

### 4.1 PFAS Estimations in the Cape Fear River

In Q1 2023, the in-river Total Table 3+ (17 compounds) mass load measured at Tar Heel was 20.9 kg and is based on the 52 mass loading estimation intervals (Table 6A). This total load is greater this quarter than the previous three quarters (since Q2 2022), however, the total river volume during this quarter is also the largest of the last four quarters and is approximately twice the amount of the previous quarter (Q4 2022). The Total Table 3+ (17 compounds) mass discharge among samples with detected Total Table 3+ (17 compounds) concentrations ranged from 0.56 to 18 mg/s (Table 7), with the median mass discharge being 1.5 mg/s.

The flow measured in Cape Fear River, the Total Table 3+ concentrations, and mass discharge over time have been plotted from the start of the mass loading program (from March 28, 2020, to March 31, 2023; Figure 6) and within the last 12 months (from April 1, 2022, to March 31, 2023; Figure 7). The mass discharge began to decrease at the end of June 2021, which also corresponds to the time when Old Outfall 002 treatment system, the Seep FTCs, and the SWTP were installed and operating. During this quarter, the mass discharge were highest from January 23 to February 13, 2023; although, the Total Table 3+ (17 compounds) concentrations were within the observed range in previous quarterly sampling events that occurred after the remedies were in operation. The mass discharge was higher because the flows measured during this time period coincided with a rainfall event resulting in higher than river flows than are observed during a dry sampling event. After February 13, 2023, calculated mass discharge values returned to and remained at levels typical of the 12 months as shown in Figure 7.

### 4.2 PFAS Prevented From Reaching the River

Analytical results measured from samples collected at the influent and effluent of the remedies and their respective flows were used to estimate the Total Table 3+ (17 compounds) mass loads

and PFAS mass discharge prevented from discharging to the Cape Fear River. During the Q1 2023 reporting period, the remedies prevented 27.5 kg of Total Table 3+ mass load.

- For the Old Outfall 002 treatment system, a total of 7.7 kg of PFAS was captured and prevented from reaching the Cape Fear River with a total treated flow of 160,000 cubic meters (m<sup>3</sup>) (Table 6B).
- For the Seep A FTC, a total of 4.5 kg was captured and prevented from reaching the Cape Fear River with a total measured flow of about 39,150 m<sup>3</sup> (Table 6C).
- For the Seep B FTC, a total of 9.5 kg was captured and prevented from reaching the Cape Fear River with a total measured flow of about 45,211 m<sup>3</sup> (Table 6D).
- For the Seep C FTC, a total of 2.4 kg was captured and prevented from reaching the Cape Fear River with a total measured flow about 26,031 m<sup>3</sup> (Table 6E).
- For the Seep D FTC, a total of 3.0 kg was captured and prevented from reaching the Cape Fear River with a total measured flow of about 29,580 m<sup>3</sup> (Table 6F).
- The SWTS captures PFAS originating from stormwater in the Monomers/IXM area that would otherwise flow to Outfall 002 during storm events. When stormwater is being treated at the SWTS, HFPO-DA, PFMOAA, and PMPA concentrations are measured in the SWTS influent and effluent flows. The captured total mass of HFPO-DA, PFMOAA, and PMPA during storm events between January 4, 2023, to February 17, 2023, was 0.36 kg. There was no stormwater treated in March 2023 due to dry weather. This estimate was based on mass loading estimates for 14 days when flow was recorded at the SWTS in Q1 2023, with a total treated flow of about 6,273 m<sup>3</sup> (Table 6G). This captured total mass likely underestimates the mass of PFAS captured by the SWTS during Q1 2023 because the samples collected are analyzed for the three indicator compounds (HFPO-DA, PFMOAA, and PMPA) and not the full Table 3+ analyte list.

PFAS mass discharge prevented from the groundwater extraction system at Outfall 004 was not evaluated this quarter as it was only in operation since March 14, 2023 (i.e., approximately 20% of Q1 2023). Subsequent reports will include the PFAS mass discharge prevented from discharging to the Cape Fear River by the groundwater extraction system at Outfall 004.

### **4.3 PFAS at the Downstream River Locations**

The Total Table 3+ (17 compounds) concentrations and mass discharge values from the Q1 2023 event are shown in the table below. Total Table 3+ (17 compounds) concentrations at the three downstream river locations ranged from 4.3 nanograms per liter (ng/L) (CFR-TARHEEL) to 5.5 ng/L (CFR-KINGS). The Tar Heel and Bladen Bluffs sampling locations are located within 2 miles of each other and have similar sample results. The Kings Bluff location is located further away (i.e., 48 miles from Tar Heel) but also had similar results to the other two locations.

As per the Cape Fear River Mass Loading Calculation Protocol Version 2 (Geosyntec, 2020a), CFR-KINGS was sampled two days after CFR-TARHEEL and CFR-BLADEN to account for travel time between these two locations and CFR-KINGS. Flows reported at W.O. Huske Dam (Station #2105500) are adjusted for travel time and used in the calculation of mass discharge for Bladen Bluffs and Tar Heel. Flows reported at Cape Fear Lock and Dam #1 (Station #2105769) are used in the calculation of mass discharge for Kings Bluff. No rainfall was recorded during the travel time (February 22 to 24, 2023), however, the river conditions were receding from a previous rainfall event during the week of February 13, 2023.

The Total Table 3+ (17 compounds) mass discharge ranged from 0.67 mg/s (CFR-KINGS) to 0.90 mg/s (CFR-BLADEN). The mass discharge across the three downstream river locations in Q1 2023 was relatively lower than previous quarters. Specifically, from the mass discharges from Q4 2021 to Q4 2022 were 1.1 to 3.0 mg/s at CFR-BLADEN, non-detect to 3.0 mg/s at CFR-TARHEEL (grab samples), and 1.1 to 4.4 mg/s at CFR-KINGS (Geosyntec: 2022a, 2022b, 2022c, 2022d, 2023c). There is inherent variability associated with river sample collection due to changing flow rates, precipitation near the Site and along the river, sample collection location, and grab sampling methods, which can lead to variability in the PFAS mass discharge at these three locations. However, the mass discharges at the downstream river locations remain consistently lower since Q4 2021 than in previous assessments, which reflects the reduced mass discharge from the Site due to implemented remedies described in Section 4.2.

Sample Location	Sample Collection Method	Sample Collection Date	Flow Rate (cfs)	Total Table 3+ (17 Compounds)	
				Concentration (ng/L)	Mass Discharge (mg/s)
CFR-BLADEN	Grab	2/22/2023	6,390	4.3	0.90
CFR-TARHEEL	Grab	2/22/2023	6,390	5.0	0.78
CFR-KINGS	Grab	2/24/2023	4,300	5.5	0.67

#### 4.4 Mass Loading Model Assessment

Where Section 3 presented the Total Table 3+ PFAS mass load in the Cape Fear River, this section presents the estimation of mass discharge from the identified PFAS transport pathways using the mass loading model and an assessment of the relative contributions by pathway. The results of the mass loading model assessment for Q1 2023 are briefly described below. Details on the mass loading model results and calculations are provided in Appendix A.

The reduction in mass discharge is estimated as the difference between the mass discharge calculated upgradient of the remedies (“before” remedies) and downgradient of the remedies (“after” remedies). In Q1 2023 (February 2023), the total reduction in Total Table 3+ mass discharges due to the operation of the remedies was 6.36 mg/s, which was estimated during a wet weather event (i.e., rainfall event). Specifically, the reduction of mass discharge was 0.99 mg/s at Old Outfall 002; 2.67 mg/s at Seep A; 1.98 mg/s at Seep B; 0.45 mg/s at Seep C; and 0.23 mg/s at Seep D.

In terms of relative contributions, the largest contributing pathways upgradient of the remedies (i.e., before the water passes through the remedies) are the seeps, onsite groundwater, the upstream river water and groundwater, the offsite adjacent and downstream groundwater, and to a lesser extent Old Outfall 002 (see below an excerpt from Appendix A Table A8). A complete comparison of relative contributions per pathway for the Q1 2023 mass loading model assessments is provided in Appendix A.

The implementation of the Old Outfall 002 treatment system, the Stormwater Treatment System at Outfall 002, and FTCs at Seeps A, B, C, and D have reduced the potential loading at these pathways to <1% of the Total Table 3+ (17 compounds) mass load reaching the Cape Fear River.

The largest remaining contributing pathways downgradient of the remedies (i.e., after the water passes through the remedies) are the upstream river water and groundwater, and the onsite groundwater. The onsite groundwater reaching the Cape Fear River are currently addressed by the groundwater barrier wall remedy which includes a groundwater extraction and treatment system.

Unlike previous mass loading assessments (Geosyntec: 2019b; 2020b; 2020c; 2020d; 2021b; 2021c; 2021d; 2021e; 2022b, 2022c, 2022d), the upstream river water and groundwater pathway and the offsite adjacent and downstream groundwater pathway had higher relative contributions to the total mass discharge this quarter because of the high river flows from the rain event and a detection of PMPA at CFR-MILE-76. As described in the *Cape Fear River Mass Loading Calculation Protocol Version 2* (Geosyntec, 2020a), the mass loadings from these pathways are estimated using the concentrations at CFR-MILE-76 and the flows measured at W.O. Huske Dam. During Q1 2023, the flows measured at W.O. Huske Dam were much higher than previous mass loading dry weather events. As well, the only Table 3+ PFAS compound detected at CFR-MILE-76 was PMPA (12 ng/L), which has not been detected above the reporting limit of 10 ng/L in previous events.



Pathway	Q1 2023	
	Lower	Upper
Upstream River Water and Groundwater	31%	30%
Offsite Adjacent and Downstream Groundwater	12%	11%
Onsite Groundwater <sup>1</sup>	10%	12%
Seeps	37%	36%
<i>Seeps (After Remedies)</i>	<1%	<1%
Old Outfall 002	7%	7%
<i>Old Outfall 002 (After Remedies)</i>	<1%	<1%

- 1 - It is anticipated that the onsite groundwater flows will change due to the implementation of the groundwater extraction system and the barrier wall remedy. Therefore, the approach to estimate mass loading from onsite groundwater will be re-evaluated in subsequent reports.

## 5 SUMMARY AND CONCLUSIONS

This Q1 2023 Cape Fear River PFAS assessment at Tar Heel estimated the Total Table 3+ (17 compounds) that was measured at the Cape Fear River over the load assessment period of January 1, 2023, through March 31, 2023. Over this period, the in-river Total Table 3+ (17 compounds) mass load measured at Tar Heel was 20.9 kg. The remedies that have been installed at SWTS, Old Outfall 002 and at Seeps A, B, C, and D prevented a load of 27.5 kg of Total Table 3+ (17 compounds).

The PFAS mass discharge sampling at Bladen Bluffs, Tar Heel, and Kings Bluff consisted of three grab samples collected at the three downstream locations along Cape Fear River. There is inherent variability associated with river sample collection due to changing flow rates, precipitation near the Site and along the river, sample collection location, and grab sampling methods, which can lead to variability in the PFAS mass discharge at these three locations. Overall, the mass discharges measured at the downstream river locations were relatively consistent in Q1 2023 and have been consistently lower since Q4 2021, which might in part reflect the reduced mass discharge from the Site due to implemented remedies.

In February 2023, samples were collected from the PFAS transport pathways (seeps, creeks, Old Outfall, Outfall 002, groundwater) during a wet weather event and were used to estimate the mass discharge and the relative contribution per transport pathway to the Cape Fear River. The implementation of remedies at the Old Outfall 002 and Seeps A, B, C, and D resulted in reductions of model-estimated mass discharges of about 6.36 mg/s. These reductions represent the estimated reductions for this single mass loading event and are higher than the model-estimated reductions reported in Q4 2022 of 4.37 mg/s (Geosyntec, 2023c), because this event was completed during a wet weather event where the flows at the Seeps flow through cells were higher than previous events.

The pathways with the largest PFAS mass discharges upgradient of the remedies (i.e., “before remedies”) are the seeps (transport pathway 6), onsite groundwater (transport pathway 5), the upstream river water and groundwater (transport pathway 1) and the offsite adjacent and downstream groundwater (transport pathway 8), and to a lesser extent Old Outfall 002 (transport pathway 7). For the Seeps and Old Outfall 002 (transport pathways 6 and 7), the implementation of the Old Outfall 002 treatment system and the seep FTC remedies have reduced the potential loading to <1% of the Total Table 3+ (17 compounds) mass load reaching the Cape Fear River. Accounting for implemented remedies, the remaining largest contributing pathways during this quarter are the upstream river water and groundwater (transport pathway 1), the offsite adjacent and downstream groundwater (transport pathway 8), and onsite groundwater (transport pathway 5). Onsite groundwater reaching the Cape Fear River is currently addressed by the groundwater barrier wall remedy which includes a groundwater extraction and treatment system. Unlike previous mass loading assessments, the upstream river water and groundwater, and offsite adjacent and downstream groundwater pathways (transport pathways 1 and 8) had higher relative

contributions to the total mass discharge during this wet event due to the higher river flows and a detection of PMPA (12 ng/L) at CFR-MILE-76. In general, PMPA has not been detected above the reporting limit of 10 ng/L in previous events.

Quarterly sample collection was initiated in January 2022 and will continue for a period of 4 years (through Q4 2026). Assessment of PFAS mass loads will continue in future sampling events, including evaluation of reductions in mass loads from the model pathways due to the implemented remedies and calculations of measured mass loads at Tar Heel.

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# Tables

**TABLE 1**  
**PFAS ANALYTE LIST**  
**Chemours Fayetteville Works, North Carolina**

Common Name <sup>1</sup>	PFAS Grouping <sup>2</sup>			Chemical Name	CASN	Chemical Formula
	Attachment C	Table 3+ (17 compounds)	Table 3+ (20 compounds)			
HFPO-DA <sup>3</sup>	✓	✓	✓	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-trifluoroethyl)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-pentaododecanoic acid	39492-91-6	C7HF13O7
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	801209-99-4	C4H2F8O4S
PES	--	✓	✓	Perfluoro-2-ethoxyethanesulfonic acid	113507-82-7	C4HF9O4S
PS Acid	✓	✓	✓	Ethanesulfonic acid, 2-[1-[difluoro[(1,2,2-trifluoroethyl)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
PFHpA <sup>3</sup>	✓	--	--	Perfluoroheptanoic acid	375-85-9	C7HF13O2

**Notes:**

1 - Analyzed under analytical method Table 3+ Lab SOP.

2 - 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, 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 have been calculated and presented as: (i) the summation of 17 of the 20 Table 3+ compounds "Total Table 3+ (17 compounds)", i.e., excluding results of R-PSDA, Hydrolyzed PSDA, and R-EVE, and (ii) the summation of 20 of the Table 3+ compounds "Total Table 3+ (20 compounds)".

3 - HFPO-DA and PFHpA can be analyzed under methods Table 3+ SOP and EPA Method 537 Mod.

EPA - Environmental Protection Agency

PFAS - Per- and Polyfluoroalkyl substances

SOP - Standard Operating Procedure

TABLE 2  
RIVER SAMPLES AT TAR HEEL AND DOWNSTREAM LOCATIONS - Q1 2023  
Chemours Fayetteville Works, North Carolina

Location ID	Sample ID	QA/QC	Date and Time	Sample Collection								Flow Measurement		
				Method	Hours Compositel <sup>1</sup>	pH (S.U.)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Specific Conductivity (µS/cm)	Temperature (°C)	Method	Total Volume (ft <sup>3</sup> ) <sup>2</sup>	Instantaneous Flow Rate (ft <sup>3</sup> /s)
CFR-TARHEEL <sup>4</sup>	CFR-TARHEEL-24-010223		1/2/23 23:01	Composite	24	7.68	6.56	90.80	27.97	2113.10	20.45	USGS Data <sup>7</sup>	213,280,000	--
	CFR-TARHEEL-24-010523		1/5/23 23:01	Composite	24	8.53	10.56	36.10	29.80	469.77	16.01	USGS Data <sup>7</sup>	383,940,000	--
	CFR-TARHEEL-24-010923		1/9/23 23:01	Composite	24	8.24	11.45	42.30	34.90	267.26	4.83	USGS Data <sup>7</sup>	412,720,000	--
	CFR-TARHEEL-24-010923-D	Field Duplicate	1/9/23 23:01	Composite	24	8.24	11.45	42.30	34.90	267.26	4.83	USGS Data <sup>7</sup>	412,720,000	--
	CFR-TARHEEL-24-011223		1/12/23 23:01	Composite	24	8.53	10.48	21.50	21.30	185.39	15.72	USGS Data <sup>7</sup>	293,280,000	--
	CFR-TARHEEL-011723		1/17/23 13:00	Grab	0	9.42	10.04	-37.50	23.40	211.16	10.41	USGS Data <sup>8</sup>	--	5,110
	CFR-TARHEEL-24-011923		1/19/23 23:01	Composite	24	7.33	9.40	59.20	25.30	160.00	16.84	USGS Data <sup>7</sup>	343,810,000	--
	CFR-TARHEEL-24-012323		1/23/23 23:01	Composite	24	8.82	11.15	-17.30	100.00	140.03	4.27	USGS Data <sup>7</sup>	287,080,000	--
	CFR-TARHEEL-24-012623		1/26/23 23:01	Composite	24	8.29	9.56	32.90	50.90	373.36	13.15	USGS Data <sup>7</sup>	950,040,000	--
	CFR-TARHEEL-013123		1/31/23 12:18	Grab	0	7.76	10.77	126.20	96.20	316.25	12.62	USGS Data <sup>8</sup>	--	7,910
	CFR-TARHEEL-24-020223		2/2/23 23:01	Composite	24	7.67	11.31	60.00	44.00	265.23	11.10	USGS Data <sup>7</sup>	553,340,000	--
	CFR-TARHEEL-24-020623		2/6/23 23:01	Composite	24	8.73	11.52	7.80	29.40	181.43	11.15	USGS Data <sup>7</sup>	769,920,000	--
	CFR-TARHEEL-24-020823		2/8/23 23:01	Composite	24	7.20	10.29	10.30	20.70	172.17	19.45	USGS Data <sup>7</sup>	332,420,000	--
	CFR-TARHEEL-24-021223		2/12/23 23:01	Composite	24	7.48	10.26	58.20	58.60	261.19	17.28	USGS Data <sup>7</sup>	270,530,000	--
	CAPIQ23-CFR-TARHEEL-021323		2/13/23 15:30	Grab	0	7.48	10.26	58.20	58.60	261.19	17.28	USGS Data <sup>8</sup>	--	14,600
	CAPIQ23-CFR-TARHEEL-021323-D	Field Duplicate	2/13/23 15:30	Grab	0	7.48	10.26	58.20	58.60	261.19	17.28	USGS Data <sup>8</sup>	--	14,600
	CFR-TARHEEL-021523		2/15/23 9:22	Grab	0	7.60	10.52	105.90	158.00	141.26	14.58	USGS Data <sup>8</sup>	--	16,600
	CFR-TARHEEL-24-022023		2/20/23 23:01	Composite	24	9.39	9.71	-9.40	94.70	440.13	15.58	USGS Data <sup>7</sup>	681,810,000	--
	CFR-TARHEEL-24-022023-D	Field Duplicate	2/20/23 23:01	Composite	24	9.39	9.71	-9.40	94.70	440.13	15.58	USGS Data <sup>7</sup>	681,810,000	--
	CAPIQ23-CFR-TARHEEL-022223		2/22/23 13:20	Grab	0	8.80	7.48	43.20	32.30	789.61	22.29	USGS Data <sup>8</sup>	--	6,390
	CFR-TARHEEL-24-022323		2/23/23 23:01	Composite	24	8.32	9.29	20.40	22.40	433.70	19.98	USGS Data <sup>7</sup>	339,060,000	--
	CFR-TARHEEL-24-022723		2/27/23 23:01	Composite	24	9.26	8.54	-56.70	15.30	422.56	21.20	USGS Data <sup>7</sup>	242,460,000	--
	CFR-TARHEEL-24-030223		3/2/23 23:01	Composite	24	9.35	8.21	-28.00	16.20	376.09	16.94	USGS Data <sup>7</sup>	220,930,000	--
	CFR-TARHEEL-24-030623		3/6/23 23:01	Composite	24	8.99	8.71	1.60	41.39	503.62	19.43	USGS Data <sup>7</sup>	514,050,000	--
	CFR-TARHEEL-24-030923		3/9/23 23:01	Composite	24	8.71	8.42	23.50	17.30	1388.70	13.26	USGS Data <sup>7</sup>	239,670,000	--
	CFR-TARHEEL-24-031323		3/13/23 23:01	Composite	24	8.16	9.56	47.60	24.90	519.07	10.48	USGS Data <sup>7</sup>	210,500,000	--
	CFR-TARHEEL-24-031623		3/16/23 23:01	Composite	24	9.92	10.44	-53.00	15.00	316.59	14.04	USGS Data <sup>7</sup>	319,270,000	--
	CFR-TARHEEL-24-032023		3/20/23 23:01	Composite	24	9.15	11.52	42.80	15.10	235.17	8.46	USGS Data <sup>7</sup>	203,850,000	--
	CFR-TARHEEL-24-032023-D	Field Duplicate	3/20/23 23:01	Composite	24	9.15	11.52	42.80	15.10	235.17	8.46	USGS Data <sup>7</sup>	203,850,000	--
	CFR-TARHEEL-24-032323		3/23/23 23:01	Composite	24	9.42	8.15	-36.40	13.70	257.87	16.84	USGS Data <sup>7</sup>	257,340,000	--
CFR-TARHEEL-24-032723		3/27/23 23:01	Composite	24	9.21	7.34	58.40	15.70	625.01	23.29	USGS Data <sup>7</sup>	197,890,000	--	
CFR-TARHEEL-24-033023		3/30/23 23:01	Composite	24	8.35	8.15	147.70	53.30	395.70	18.81	USGS Data <sup>7</sup>	661,750,000	--	
CFR-BLADEN <sup>5</sup>	CAPIQ23-CFR-BLADEN-022223		2/22/23 12:05	Grab	0	6.67	9.06	8.60	25.00	404.16	18.96	USGS Data <sup>9</sup>	--	6,390
CFR-KINGS <sup>6</sup>	CAPIQ23-CFR-KINGS-022423		2/24/23 11:35	Grab	0	8.94	9.21	21.70	22.10	120.55	20.47	USGS Data <sup>10</sup>	--	4,300

Notes

- not applicable
- °C - degrees Celsius
- ft<sup>3</sup> - cubic feet
- ft<sup>3</sup>/s - cubic feet per second
- mg/L - milligrams per liter
- mV- millivolts
- NTU - nephelometric Turbidity Unit
- ORP - oxidation reduction potential
- QA/QC - Quality assurance/ quality control
- S.U. - Standard Units
- USGS - United States Geological Survey
- µS/cm - microsiemens per centimeter
- 1 - Samples with a compositing duration of zero (0) hours are grab samples.
- 2 - Total flow volume is determined based on measurements taken over the sample collection period.
- 3 - For samples with a duration of zero (0) hours, i.e., grab samples, the instantaneous flow rate was used.
- 4 - The sample location is along the Cape Fear River at Tar Heel Ferry Road Bridge.
- 5 - The sample location is along the Cape Fear River at Bladen Bluffs.
- 6 - The sample location is along the Cape Fear River at Kings Bluff.
- 7 - Flow rate measured at USGS gauging station #02105500 located at William O Huske Lock & Dam used to estimate flow rate at Tar Heel Ferry Road Bridge during the 24 hr period between the collection of the composite sample.
- 8 - Flow rate measured at USGS gauging station #02105500 located at William O Huske Lock & Dam used to estimate flow rate at Tar Heel Ferry Road Bridge during grab sample collection.
- 9 - Flow rate measured at USGS gauging station #02105500 located at William O Huske Lock & Dam used to estimate flow rate at Bladen Bluff during sample collection.
- 10 - Flow rate measured at USGS gauging station #02105769 located at Lock #1 near Kelly used to estimate flow rate at Kings Bluff during sample collection.



**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-010223	CFR-TARHEEL-24-010523	CFR-TARHEEL-24-010923	CFR-TARHEEL-24-010923-D	CFR-TARHEEL-24-011223
Sample Date	01/02/23	01/05/23	01/09/23	01/09/23	01/12/23
Sample Type	Composite	Composite	Composite	Composite	Composite
Sample Start Date and Time	01/02/23 00:01	01/05/23 00:01	01/09/23 00:01	01/09/23 00:01	01/12/23 00:01
Sample Stop Date and Time	01/02/23 23:01	01/05/23 23:01	01/09/23 23:01	01/09/23 23:01	01/12/23 23:01
Composite Duration (hours) <sup>1</sup>	24	24	24	24	24
QA/QC				Field Duplicate	
Sample Delivery Group (SDG)	320-95803-1	320-95803-1	320-95935-1	320-95935-1	320-96111-1
Lab Sample ID	320-95803-2	320-95803-1	320-95935-1	320-95935-2	320-96111-1
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	4.2	3.2	4.5	2.8	2.9
PFMOAA	<5.0	<5.0	<5.0	<5.0	8.0
PFO2HxA	10	5.0	<2.0 UJ	2.3	4.1
PFO3OA	<2.0	<2.0	<2.0 UJ	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0	<2.0
PMPA	19	14	<10 UJ	<10	<10
PEPA	<20	<20	<20 UJ	<20	<20
PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-PSDA	<2.0	<2.0	<2.0	<2.0	<2.0
Hydrolyzed PSDA	<2.0	<2.0	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0	<2.0	<2.0
NVHOS	<2.0	<2.0	<2.0 UJ	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0 UJ	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	4.0	3.3	4.7	3.3	3.3
<b>Total Attachment C<sup>2,3</sup></b>	<b>33</b>	<b>22</b>	<b>4.5</b>	<b>5.1</b>	<b>15</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>33</b>	<b>22</b>	<b>4.5</b>	<b>5.1</b>	<b>15</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>33</b>	<b>22</b>	<b>4.5</b>	<b>5.1</b>	<b>15</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-011723	CFR-TARHEEL-24-011923	CFR-TARHEEL-24-012323	CFR-TARHEEL-24-012323	CFR-TARHEEL-24-012623
Sample Date	01/17/23	01/19/23	01/23/23	01/23/23	01/26/23
Sample Type	Grab	Composite	Composite	Composite	Composite
Sample Start Date and Time	01/17/23 13:00	01/19/23 00:01	01/23/23 00:01	01/23/23 00:01	01/26/23 00:01
Sample Stop Date and Time	01/17/23 13:00	01/19/23 23:01	01/23/23 23:01	01/23/23 23:01	01/26/23 23:01
Composite Duration (hours) <sup>1</sup>	0	24	24	24	24
QA/QC				Reanalyzed	
Sample Delivery Group (SDG)	320-96111-1	320-96311-1	320-96311-1	320-96311-2	320-96456-1
Lab Sample ID	320-96111-2	320-96311-1	320-96311-2	320-96311-2	320-96456-1
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	3.1	3.8	34	32 J	23
PFMOAA	4.8	<2.0	5.4	21 J	9.1
PFO2HxA	3.0	3.5	11	12 J	5.6
PFO3OA	<2.0	<2.0	2.6	2.3 J	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
PMPA	<10	<10	<10	15 J	19
PEPA	<20	<20	<20	<20 UJ	<20
PS Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
R-PSDA	<2.0	<2.0	<2.0	3.1 J	4.6 J
Hydrolyzed PSDA	<2.0	<2.0	3.5 J	7.9 J	6.7 J
R-PSDCA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
NVHOS	<2.0	<2.0	<2.0	2.9 J	<2.0
EVE Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
R-EVE	<2.0	<2.0	<2.0	<2.0 UJ	4.2 J
PES	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
Perfluoroheptanoic Acid	3.6	4.1	4.2	3.9 J	4
<b>Total Attachment C<sup>2,3</sup></b>	<b>11</b>	<b>7.3</b>	<b>53</b>	<b>82</b>	<b>57</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>11</b>	<b>7.3</b>	<b>53</b>	<b>85</b>	<b>57</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>11</b>	<b>7.3</b>	<b>57</b>	<b>96</b>	<b>72</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-012623	CFR-TARHEEL-013123	CFR-TARHEEL-24-020223	CFR-TARHEEL-24-020623	CFR-TARHEEL-24-020823
Sample Date	01/26/23	01/31/23	02/02/23	02/06/23	02/08/23
Sample Type	Composite	Grab	Composite	Composite	Composite
Sample Start Date and Time	01/26/23 00:01	01/31/23 12:18 PM	02/02/23 00:01	02/06/23 00:01	02/08/23 00:01
Sample Stop Date and Time	01/26/23 23:01	01/31/23 12:18 PM	02/02/23 23:01	02/06/23 23:01	02/08/23 23:01
Composite Duration (hours) <sup>1</sup>	24	0	24	24	24
QA/QC	Reanalyzed				
Sample Delivery Group (SDG)	320-96456-2	320-96456-1	320-96707-1	320-96707-1	320-96707-1
Lab Sample ID	320-96456-1	320-96456-2	320-96707-1	320-96707-2	320-96707-3
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	22 J	5.7	6.1	4.8	4.4
PFMOAA	<2.0 UJ	5.1	6.1	6.1	8.2
PFO2HxA	6.3 J	2.7	2.9	3.2	4.2
PFO3OA	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PFO4DA	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PFO5DA	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PMPA	<10 UJ	14	<10	<10	<10
PEPA	<20 UJ	<20	<20	<20	<20
PS Acid	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
R-PSDA	3.4 J	4.0 J	4.2 J	6.2 J	4.6 J
Hydrolyzed PSDA	6.7 J	2.1 J	3.6 J	3.9 J	2.5 J
R-PSDCA	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
NVHOS	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
EVE Acid	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
R-EVE	2.5 J	<2.0	2.4 J	3.0 J	<2.0
PES	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	2.8 J	3.7	4.1	3.0	3.1
<b>Total Attachment C<sup>2,3</sup></b>	<b>28</b>	<b>28</b>	<b>15</b>	<b>14</b>	<b>17</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>28</b>	<b>28</b>	<b>15</b>	<b>14</b>	<b>17</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>41</b>	<b>34</b>	<b>25</b>	<b>27</b>	<b>24</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-021223	CAPIQ23-CFR-TARHEEL-021323	CAPIQ23-CFR-TARHEEL-021323-D	CFR-TARHEEL-021523	CFR-TARHEEL-24-022023
Sample Date	02/12/23	02/13/23	02/13/23	02/15/23	02/20/23
Sample Type	Composite	Grab	Grab	Grab	Composite
Sample Start Date and Time	02/12/23 00:01	02/13/23 15:30	02/13/23 15:30	02/15/23 09:22	02/20/23 00:01
Sample Stop Date and Time	02/12/23 23:01	02/13/23 15:30	02/13/23 15:30	02/15/23 09:22	02/20/23 23:01
Composite Duration (hours) <sup>1</sup>	24	0	0	0	24
QA/QC			Field Duplicate		
Sample Delivery Group (SDG)	320-96851-1	320-96850-1	320-96850-1	320-96851-1	320-97131-1
Lab Sample ID	320-96851-1	320-96850-5	320-96850-6	320-96851-2	320-97131-1
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	6.1	<2.0	2.0	<2.0	2.7
PFMOAA	13	<2.0	2.4	2.6	<2.0
PFO2HxA	5.8	<2.0	<2.0	<2.0	2.7
PFO3OA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0	<2.0
PMPA	<10	14	13	<10	<10
PEPA	<20	<20	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-PSDA	<2.0	<2.0	<2.0	<2.0	<2.0
Hydrolyzed PSDA	4.3 J	<2.0	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0	<2.0	<2.0
NVHOS	2.0	2.2	<2.0	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	2.7	2.6	2.5	<2.0	4.9
<b>Total Attachment C<sup>2,3</sup></b>	<b>25</b>	<b>14</b>	<b>17</b>	<b>2.6</b>	<b>5.4</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>27</b>	<b>16</b>	<b>17</b>	<b>2.6</b>	<b>5.4</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>31</b>	<b>16</b>	<b>17</b>	<b>2.6</b>	<b>5.4</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL <sup>4</sup>	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-022023-D	CAPIQ23-CFR-TARHEEL-022223	CFR-TARHEEL-24-022323	CFR-TARHEEL-24-022723	CFR-TARHEEL-24-030223
Sample Date	02/20/23	02/22/2023	02/23/23	02/27/23	03/02/23
Sample Type	Composite	Grab	Composite	Composite	Composite
Sample Start Date and Time	02/20/23 00:01	02/22/23 13:20	02/23/23 00:01	02/27/23 00:01	03/02/23 00:01
Sample Stop Date and Time	02/20/23 23:01	02/22/23 13:20	02/23/23 23:01	02/27/23 23:01	03/02/23 23:01
Composite Duration (hours) <sup>1</sup>	24	0	24	24	24
QA/QC	Field Duplicate				
Sample Delivery Group (SDG)	320-97131-1	320-97412-1	320-97131-1	320-97428-1	320-97428-1
Lab Sample ID	320-97131-2	320-97412-1	320-97131-3	320-97428-1	320-97428-2
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	2.7	2.1	4.1	4.5	4.0
PFMOAA	<2.0	<2.0	<2.0	8.5	8.1
PFO2HxA	2.7	2.2	2.8	3.9	4.4
PFO3OA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0	<2.0
PMPA	<10	<10	<10	<10	<10
PEPA	<20	<20	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-PSDA	4.5 J	<2.0	<2.0	<2.0	<2.0
Hydrolyzed PSDA	2.7 J	<2.0	<2.0	2.1 J	3.7 J
R-PSDCA	<2.0	<2.0	<2.0	<2.0	<2.0
NVHOS	<2.0	<2.0	<2.0	2.6	4.0
EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	4.7	3.8	3.5	3.4	3.5
<b>Total Attachment C<sup>2,3</sup></b>	<b>5.4</b>	<b>4.3</b>	<b>6.9</b>	<b>17</b>	<b>17</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>5.4</b>	<b>4.3</b>	<b>6.9</b>	<b>20</b>	<b>21</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>13</b>	<b>4.3</b>	<b>6.9</b>	<b>22</b>	<b>24</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-030623	CFR-TARHEEL-24-030923	CFR-TARHEEL-24-031323	CFR-TARHEEL-24-031623	CFR-TARHEEL-24-032023
Sample Date	03/06/23	03/09/23	03/13/23	03/16/23	03/20/23
Sample Type	Composite	Composite	Composite	Composite	Composite
Sample Start Date and Time	03/06/23 00:01	03/09/23 00:01	03/13/23 00:01	03/16/23 00:01	03/20/23 00:01
Sample Stop Date and Time	03/06/23 23:01	03/09/23 23:01	03/13/23 23:01	03/16/23 23:01	03/20/23 23:01
Composite Duration (hours) <sup>1</sup>	24	24	24	24	24
QA/QC					
Sample Delivery Group (SDG)	320-97830-1	320-97830-1	320-97830-1	320-97997-1	320-97997-1
Lab Sample ID	320-97830-1	320-97830-2	320-97830-3	320-97997-1	320-97997-2
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	2.2	15	4.5	3.1	8.1 J
PFMOAA	<2.0	<2.0	<2.0	<2.0	5.7
PFO2HxA	2.5	6.0	6.5	3.2	4.8
PFO3OA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0	<2.0
PMPA	<10	20	12	<10	<10
PEPA	<20	<20	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-PSDA	<2.0	8.7 J	<2.0	2.6 J	<2.0
Hydrolyzed PSDA	<2.0	15 J	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0	<2.0	<2.0
NVHOS	<2.0	2.1	<2.0	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0	<2.0
R-EVE	<2.0	6.0 J	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	3.3	4.8	3.1	3.1	4.1
<b>Total Attachment C<sup>2,3</sup></b>	4.7	41	23	6.3	19
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	4.7	43	23	6.3	19
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	4.7	73	23	8.9	19

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

Sampling Event	Q1 2023	Q1 2023	Q1 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-032023-D	CFR-TARHEEL-24-032323	CFR-TARHEEL-24-032723
Sample Date	03/20/23	03/23/23	03/27/23
Sample Type	Composite	Composite	Composite
Sample Start Date and Time	03/20/23 00:01	03/23/23 00:01	03/27/23 00:01
Sample Stop Date and Time	03/20/23 23:01	03/23/23 23:01	03/27/23 23:01
Composite Duration (hours) <sup>1</sup>	24	24	24
QA/QC	Field Duplicate		
Sample Delivery Group (SDG)	320-97997-1	320-98446-1	320-98446-1
Lab Sample ID	320-97997-3	320-98446-1	320-98446-2
<i>Table 3+ SOP (ng/L)</i>			
HFPO-DA	4.4 J	3.3	6.8
PFMOAA	5.6	<2.0	9
PFO2HxA	4.5	3.1	6.5
PFO3OA	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0
PMPA	<10	<10	<10
PEPA	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0
R-PSDA	<2.0	<2.0	<2.0
Hydrolyzed PSDA	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0
NVHOS	<2.0	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	3.5	3.1	4.2
<b>Total Attachment C<sup>2,3</sup></b>	<b>15</b>	<b>6.4</b>	<b>22</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>15</b>	<b>6.4</b>	<b>22</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>15</b>	<b>6.4</b>	<b>22</b>

**TABLE 3**  
**CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q4 2022**  
**Chemours Fayetteville Works, North Carolina**

<b>Sampling Event</b>	<b>Q1 2023</b>
<b>Location ID</b>	<b>CFR-TARHEEL</b>
<b>Field Sample ID</b>	<b>CFR-TARHEEL-24-033023</b>
<b>Sample Date</b>	<b>03/30/23</b>
<b>Sample Type</b>	<b>Composite</b>
<b>Sample Start Date and Time</b>	<b>03/30/23 00:01</b>
<b>Sample Stop Date and Time</b>	<b>03/30/23 23:01</b>
<b>Composite Duration (hours)<sup>1</sup></b>	<b>24</b>
<b>QA/QC</b>	
<b>Sample Delivery Group (SDG)</b>	<b>320-98715-1</b>
<b>Lab Sample ID</b>	<b>320-98715-1</b>
<b>Table 3+ SOP (ng/L)</b>	
HFPO-DA	<b>2.1</b>
PFMOAA	<2.0
PFO2HxA	<b>2.3</b>
PFO3OA	<2.0
PFO4DA	<2.0
PFO5DA	<2.0
PMPA	<10
PEPA	<20
PS Acid	<2.0
Hydro-PS Acid	<2.0
R-PSDA	<2.0
Hydrolyzed PSDA	<2.0
R-PSDCA	<2.0
NVHOS	<2.0
EVE Acid	<2.0
Hydro-EVE Acid	<2.0
R-EVE	<2.0
PES	<2.0
PFECA B	<2.0
PFECA-G	<2.0
Perfluoroheptanoic Acid	<b>3.2</b>
<b>Total Attachment C<sup>2,3</sup></b>	<b>4.4</b>
<b>Total Table 3+ (17 compounds)<sup>3,4</sup></b>	<b>4.4</b>
<b>Total Table 3+ (20 compounds)<sup>3</sup></b>	<b>4.4</b>

**Notes:**

**Bold** - Analyte detected above associated reporting limit.  
 B - analyte detected in an associated blank.

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.

1 - Samples with a compositing duration of zero (0) hours are grab samples.

2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

3 - Total Table 3+ and Total Attachment C were calculated including J qualified data but not non-detect data. The sum is rounded to two significant figures.

4 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

5 - Results for this grab sample are also presented in Table 4.



**TABLE 4**  
**SURFACE WATER ANALYTICAL RESULTS AT DOWNSTREAM LOCATIONS**  
 Chemours Fayetteville Works, North Carolina

Location ID	CFR-BLADEN	CFR-KINGS	CFR-TARHEEL
Field Sample ID	CAP1Q23-CFR-BLADEN-022223	CAP1Q23-CFR-KINGS-022423	CAP1Q23-CFR-TARHEEL-022223
Sample Date and Time	02/22/2023 12:05	02/24/2023 11:35	2/22/2023 013:20
QA/QC			
Sample Delivery Group (SDG)	320-97412-1	320-97412-1	320-97412-1
Lab Sample ID	320-97412-2	320-97412-3	320-97412-1
<b>Table 3+ SOP (ng/L)</b>			
HFPO-DA	<b>3.0</b>	<b>2.5</b>	<b>2.1</b>
PFMOAA	<2.0	<2.0	<2.0
PFO2HxA	<b>2.0</b>	<b>3.0</b>	<b>2.2</b>
PFO3OA	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0
PMPA	<10	<10	<10
PEPA	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0
R-PSDA	<2.0	<2.0	<2.0
Hydrolyzed PSDA	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0
NVHOS	<2.0	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	<b>3.4</b>	<b>3.4</b>	<b>3.8</b>
<b>Total Attachment C<sup>1</sup></b>	<b>5.0</b>	<b>5.5</b>	<b>4.3</b>
<b>Total Table 3+ (17 compounds)<sup>1</sup></b>	<b>5.0</b>	<b>5.5</b>	<b>4.3</b>
<b>Total Table 3+ (20 compounds)<sup>2</sup></b>	<b>5.0</b>	<b>5.5</b>	<b>4.3</b>

**Notes:**

B - analyte detected in an associated blank

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

EPA - Environmental Protection Agency

ND - no 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

&lt; - Analyte not detected above associated reporting limit.

1 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

2 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

**TABLE 5**  
**SUMMARY OF CALCULATED TOTAL MASS LOAD IN THE CAPE FEAR RIVER**  
**Chemours Fayetteville Works, North Carolina**

Reporting Period <sup>1,2,3</sup>	River volume (m <sup>3</sup> )	Total Attachment C <sup>4</sup>			Total Table 3+ (17 Compounds) <sup>5</sup>			Total Table 3+ (20 Compounds)		
		Projected Load (kg) <sup>6</sup>	Measured Load in Cape Fear River (kg) <sup>7</sup>	Remedy Reduction Load (kg) <sup>8</sup>	Projected Load (kg) <sup>6</sup>	Measured Load in Cape Fear River (kg) <sup>7</sup>	Remedy Reduction Load (kg) <sup>8</sup>	Projected Load (kg) <sup>6</sup>	Measured Load in Cape Fear River (kg) <sup>7</sup>	Remedy Reduction Load (kg) <sup>8</sup>
2020 Q2	1,734,001,289	116	116	--	117	117	--	151	151	--
2020 Q3	1,035,966,622	78	78	--	79	79	--	100	100	--
2020 Q4	2,192,048,740	102	77	26	104	78	26	127	100	27
2021 Q1	3,085,926,339	126	97	28	127	98	29	152	122	29
2021 Q2	700,543,076	118	75	43	121	77	44	152	106	47
2021 Q3	590,536,121	97	39	58	99	41	59	112	49	64
2021 Q4	278,609,600	61	17	44	64	19	45	72	22	50
2022 Q1	1,439,412,208	68	31	37	71	33	38	82	40	42
2022 Q2	664,371,267	55	13	42	58	15	42	65	19	46
2022 Q3	297,747,556	53	9	44	55	11	45	61	13	49
2022 Q4	625,939,023	54	16	37	55	17	38	60	19	41
2023 Q1	1,246,072,017	47	21	26	48	21	28	56	26	30
<i>Last Four Quarters</i>	<i>2,834,129,864</i>	<i>209</i>	<i>60</i>	<i>149</i>	<i>217</i>	<i>64</i>	<i>153</i>	<i>243</i>	<i>76</i>	<i>167</i>

**Notes:**

- 1 - Prior to Q2 2022, the reporting periods were based on the start and end time and date intervals of the sample. The reporting period has been adjusted to the date range of the reporting period.
- 2 - Calculated total mass loads by compound and time interval are provided in Tables 6A through 6G for 2023 Q1 and in Appendix B for previous reporting periods.
- 3 - The remedies at Old Outfall 002, Seeps A, B, C, and D, and at Outfall 002 were operational since Q3 2021.
- 4 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
- 5 - Total Table 3+ (17 compounds) does not include Perfluoroheptanoic acid (PFHpA), R-PSDA, Hydrolyzed PSDA, and R-EVE.
- 6 - Projected load is calculated as the total of the measured load in the Cape Fear River and the calculated remedy reduction load.
- 7 - Measured load in Cape Fear River represent loads measured in the Cape Fear River at the CFR-TARHEEL sampling location downstream of the Site.
- 8 - Calculated remedy reduction loads represent the total load that was prevented from reaching the Cape Fear River. This is calculated as the total load from Old Outfall 002, Seeps A to D and the Stormwater Treatment System.

kg - kilograms  
m<sup>3</sup> - cubic meters

**TABLE 6A**  
**CAPE FEAR RIVER PFAS MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Interval Details				Calculated Mass Load <sup>2</sup> (kg)																				Total Attachment C <sup>3</sup>	Total Table 3+ (17 Compounds) <sup>4</sup>	Total Table 3+ (20 Compounds)	
Interval ID	Start Time <sup>1</sup>	End Time <sup>1</sup>	Total River Flow (m <sup>3</sup> )	HFPO-DA	PFMOAA	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	PFCEA B	PFCEA-G				PFHpA
2023_1_Q1	1/1/23 0:01	1/2/23 0:01	5,829,221	0.02	0.00	0.04	0.00	0	0.00	0.10	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.2	0.2	0.2
2023_2_Q1	1/2/23 0:01	1/2/23 23:01	6,039,474	0.03	0.00	0.06	0.00	0	0.00	0.11	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.2	0.2	0.2
2023_3_Q1	1/2/23 23:01	1/5/23 0:01	15,162,652	0.06	0.00	0.13	0.00	0	0.00	0.26	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.06	0.5	0.5	0.5
2023_4_Q1	1/5/23 0:01	1/5/23 23:01	10,871,970	0.03	0.00	0.05	0.00	0	0.00	0.15	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.04	0.2	0.2	0.2
2023_5_Q1	1/5/23 23:01	1/9/23 0:01	51,838,348	0.18	0.00	0.20	0.00	0	0.00	0.55	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.19	0.9	0.9	0.9
2023_6_Q1	1/9/23 0:01	1/9/23 23:01	11,686,986	0.04	0.00	0.01	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.05	0.1	0.1	0.1
2023_7_Q1	1/9/23 23:01	1/12/23 0:01	21,092,285	0.08	0.05	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.09	0.2	0.2	0.2
2023_8_Q1	1/12/23 0:01	1/12/23 23:01	8,304,850	0.02	0.07	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.03	0.1	0.1	0.1
2023_9_Q1	1/12/23 23:01	1/17/23 13:00	51,176,754	0.15	0.38	0.20	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.17	0.7	0.7	0.7
2023_10_Q1	1/17/23 13:00	1/19/23 0:01	17,009,816	0.05	0.08	0.05	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.06	0.2	0.2	0.2
2023_11_Q1	1/19/23 0:01	1/19/23 23:01	9,735,587	0.04	0.00	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.04	0.1	0.1	0.1
2023_12_Q1	1/19/23 23:01	1/23/23 0:01	19,216,322	0.21	0.02	0.10	0.01	0	0.00	0.00	0	0	0	0	0.02	0	0	0	0	0.00	0	0	0	0.08	0.4	0.4	0.4
2023_13_Q1	1/23/23 0:01	1/23/23 23:01	8,129,257	0.28	0.04	0.09	0.02	0	0.00	0.00	0	0	0	0	0.03	0	0	0	0	0.00	0	0	0	0.03	0.4	0.4	0.5
2023_14_Q1	1/23/23 23:01	1/26/23 0:01	44,051,867	1.33	0.16	0.42	0.08	0	0.00	0.00	0	0	0	0	0.20	0	0	0	0	0.04	0	0	0	0.17	2.0	2.0	2.3
2023_15_Q1	1/26/23 0:01	1/26/23 23:01	26,902,137	0.59	0.00	0.17	0.00	0	0.00	0.00	0	0	0	0	0.18	0	0	0	0	0.07	0	0	0	0.08	0.8	0.8	1.1
2023_16_Q1	1/26/23 23:01	1/31/23 12:18	121,157,989	2.32	0.11	0.69	0.00	0	0.00	0.29	0	0	0	0	0.71	0	0	0	0	0.25	0	0	0	0.36	3.4	3.4	4.8
2023_17_Q1	1/31/23 12:18	2/2/23 0:01	28,243,931	0.16	0.14	0.08	0.00	0	0.00	0.40	0	0	0	0	0.06	0	0	0	0	0.00	0	0	0	0.10	0.8	0.8	0.9
2023_18_Q1	2/2/23 0:01	2/2/23 23:01	15,668,787	0.10	0.10	0.05	0.00	0	0.00	0.00	0	0	0	0	0.06	0	0	0	0	0.04	0	0	0	0.06	0.2	0.2	0.4
2023_19_Q1	2/2/23 23:01	2/6/23 0:01	71,894,661	0.42	0.44	0.21	0.00	0	0.00	0.00	0	0	0	0	0.26	0	0	0	0	0.18	0	0	0	0.28	1.1	1.1	1.9
2023_20_Q1	2/6/23 0:01	2/6/23 23:01	21,801,791	0.10	0.13	0.07	0.00	0	0.00	0.00	0	0	0	0	0.09	0	0	0	0	0.07	0	0	0	0.07	0.3	0.3	0.6
2023_21_Q1	2/6/23 23:01	2/8/23 0:01	16,820,717	0.08	0.12	0.06	0.00	0	0.00	0.00	0	0	0	0	0.05	0	0	0	0	0.03	0	0	0	0.05	0.3	0.3	0.4
2023_22_Q1	2/8/23 0:01	2/8/23 23:01	9,413,199	0.04	0.08	0.04	0.00	0	0.00	0.00	0	0	0	0	0.02	0	0	0	0	0.00	0	0	0	0.03	0.2	0.2	0.2
2023_23_Q1	2/8/23 23:01	2/12/23 0:01	23,247,310	0.11	0.22	0.11	0.00	0	0.00	0.00	0	0	0	0	0.07	0	0	0	0	0.00	0	0	0	0.07	0.4	0.4	0.6
2023_24_Q1	2/12/23 0:01	2/12/23 23:01	7,660,585	0.05	0.10	0.04	0.00	0	0.00	0.00	0	0	0	0	0.03	0	0	0	0	0.00	0	0	0	0.02	0.2	0.2	0.2
2023_25_Q1	2/12/23 23:01	2/13/23 15:30	15,561,750	0.04	0.08	0.04	0.00	0	0.00	0.13	0	0	0	0	0.03	0	0	0	0	0.00	0	0	0	0.04	0.3	0.3	0.3
2023_26_Q1	2/13/23 15:30	2/15/23 9:22	76,034,981	0.15	0.18	0.00	0.00	0	0.00	0.99	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.19	1.3	1.3	1.3
2023_27_Q1	2/15/23 9:22	2/20/23 0:01	133,726,761	0.00	0.35	0.00	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.00	0.3	0.3	0.3
2023_28_Q1	2/20/23 0:01	2/20/23 23:01	19,306,794	0.05	0.00	0.05	0.00	0	0.00	0.00	0	0	0	0	0.03	0	0	0	0	0.00	0	0	0	0.09	0.1	0.1	0.2
2023_29_Q1	2/20/23 23:01	2/22/23 13:20	29,822,991	0.07	0.00	0.07	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.13	0.1	0.1	0.1
2023_30_Q1	2/22/23 13:20	2/23/23 0:01	5,629,927	0.01	0.00	0.01	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.0	0.0	0.0
2023_31_Q1	2/23/23 0:01	2/23/23 23:01	9,601,025	0.04	0.00	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.03	0.1	0.1	0.1
2023_32_Q1	2/23/23 23:01	2/27/23 0:01	23,373,461	0.10	0.05	0.07	0.00	0	0.00	0.00	0	0	0	0	0.01	0	0	0	0	0.00	0	0	0	0.08	0.2	0.2	0.2
2023_33_Q1	2/27/23 0:01	2/27/23 23:01	6,865,703	0.03	0.06	0.03	0.00	0	0.00	0.00	0	0	0	0	0.01	0	0	0	0	0.00	0	0	0	0.02	0.1	0.1	0.1
2023_34_Q1	2/27/23 23:01	3/2/23 0:01	14,497,489	0.06	0.12	0.06	0.00	0	0.00	0.00	0	0	0	0	0.04	0	0	0	0	0.00	0	0	0	0.05	0.2	0.3	0.3
2023_35_Q1	3/2/23 0:01	3/2/23 23:01	6,256,098	0.03	0.05	0.03	0.00	0	0.00	0.00	0	0	0	0	0.02	0	0	0	0	0.00	0	0	0	0.02	0.1	0.1	0.2
2023_36_Q1	3/2/23 23:01	3/6/23 0:01	35,395,577	0.13	0.22	0.14	0.00	0	0.00	0.00	0	0	0	0	0.10	0	0	0	0	0.00	0	0	0	0.12	0.5	0.6	0.7
2023_37_Q1	3/6/23 0:01	3/6/23 23:01	14,556,360	0.03	0.00	0.04	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.05	0.1	0.1	0.1
2023_38_Q1	3/6/23 23:01	3/9/23 0:01	21,113,692	0.13	0.00	0.08	0.00	0	0.00	0.13	0	0	0	0	0.10	0	0	0	0	0.04	0	0	0	0.08	0.3	0.4	0.6
2023_39_Q1	3/9/23 0:01	3/9/23 23:01	6,786,699	0.10	0.00	0.04	0.00	0	0.00	0.14	0	0	0	0	0.10	0	0	0	0	0.04	0	0	0	0.03	0.3	0.3	0.5
2023_40_Q1	3/9/23 23:01	3/13/23 0:01	15,897,644	0.20	0.00	0.10	0.00	0	0.00	0.29	0	0	0	0	0.18	0	0	0	0	0.07	0	0	0	0.07	0.6	0.6	1.0
2023_41_Q1	3/13/23 0:01	3/13/23 23:01	5,960,725	0.03	0.00	0.04	0.00	0	0.00	0.07	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.1	0.1	0.1
2023_42_Q1	3/13/23 23:01	3/16/23 0:01	21,638,941	0.09	0.00	0.12	0.00	0	0.00	0.18	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.07	0.4	0.4	0.4
2023_43_Q1	3/16/23 0:01	3/16/23 23:01	9,040,861	0.03	0.00	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.03	0.1	0.1	0.1
2023_44_Q1	3/16/23 23:01	3/20/23 0:01	18,988,994	0.08	0.03	0.07	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.06	0.2	0.2	0.2
2023_45_Q1	3/20/23 0:01	3/20/23 23:01	5,772,389	0.04	0.03	0.03	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.1	0.1	0.1
2023_46_Q1	3/20/23 23:01	3/23/23 0:01	21,430,473	0.14	0.08	0.09	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.08	0.3	0.3	0.3

**TABLE 6A**  
**CAPE FEAR RIVER PFAS MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Interval Details				Calculated Mass Load <sup>2</sup> (kg)																							
Interval ID	Start Time <sup>1</sup>	End Time <sup>1</sup>	Total River Flow (m <sup>3</sup> )	HFPO-DA	PFMOAA	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	PFHpA	Total Attachment C <sup>3</sup>	Total Table 3+ (17 Compounds) <sup>4</sup>	Total Table 3+ (20 Compounds)
2023_47_Q1	3/23/23 0:01	3/23/23 23:01	7,286,972	0.02	0.00	0.02	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.0	0.0	0.0
2023_48_Q1	3/23/23 23:01	3/27/23 0:01	16,418,561	0.07	0.04	0.06	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.06	0.2	0.2	0.2
2023_49_Q1	3/27/23 0:01	3/27/23 23:01	5,603,677	0.04	0.05	0.04	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.02	0.1	0.1	0.1
2023_50_Q1	3/27/23 23:01	3/30/23 0:01	25,586,593	0.14	0.16	0.13	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.10	0.4	0.4	0.4
2023_51_Q1	3/30/23 0:01	3/30/23 23:01	18,738,730	0.04	0.00	0.04	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.06	0.1	0.1	0.1
2023_52_Q1	3/30/23 0:01	4/1/23 0:00	32,221,655	0.07	0.00	0.07	0.00	0	0.00	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0	0.10	0.1	0.1	0.1

**Notes**

1 - Start and end times are adjusted based on sampling times ± one hour to account for the total flow of the Cape Fear River.

2 - The calculated mass load is a product of weighted concentration and total river flow. Refer to the Cape Fear River PFAS Mass Loading Calculation Protocol Version 2 (Geosyntec, 2020a) for more details.

3 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

4 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.

kg - kilogram

m<sup>3</sup> - cubic meter

NA - Compound not analyzed

**TABLE 6B  
 OLD OUTFALL 002 CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023  
 Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) <sup>1</sup>																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m <sup>3</sup> )	HFPO-DA	PFMOAA	PFO2HxA	PFO3OA	PFO4DA	PFO5DA	PMPA	PEFA	PS Acid	Hydro-PS Acid	R-PSDA	Hydrolyzed PSDA	R-PSDCA	NVHOS	EVE Acid	Hydro-EVE Acid	R-EVE	PES	PFECAB	PFECAG	Total Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)
OF003 2023 1 Q1	1/1/23 0:00	1/31/23 23:59	744	60,000	0.34	1.6	0.58	0.16	0.070	0.040	0.22	0	0.087	0.022	0.022	0.052	0	0.025	0	0.015	0	0	0	0	3.1	3.1	3.2
OF003 2023 2 Q1	2/1/23 0:00	2/28/23 23:59	672	50,000	0.35	1.2	0.42	0.13	0.050	0.030	0.17	0	0.050	0.019	0.026	0.058	0	0.018	0	0.010	0	0	0	0	2.4	2.4	2.5
OF003 2023 3 Q1	3/1/23 0:00	3/31/23 23:59	744	50,000	0.25	1.1	0.41	0.11	0.059	0.028	0.18	0	0	0.016	0.019	0.051	0	0.018	0	0	0	0	0	0	2.2	2.2	2.2
<b>Total</b>				<b>160,000</b>	<b>0.93</b>	<b>3.8</b>	<b>1.4</b>	<b>0.40</b>	<b>0.18</b>	<b>0.10</b>	<b>0.57</b>	<b>0</b>	<b>0.14</b>	<b>0.056</b>	<b>0.067</b>	<b>0.16</b>	<b>0</b>	<b>0.061</b>	<b>0</b>	<b>0.025</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7.6</b>	<b>7.7</b>	<b>7.9</b>

**Notes:**  
 1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow at the influent for the sampling interval, see Appendix B for more details.  
 2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).  
 3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.  
 Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.  
 OF003 - Outfall 003, i.e., Old Outfall 002 treatment system  
 kg - kilogram  
 m<sup>3</sup> - cubic meter

**TABLE 6C**  
**SEEP A FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) <sup>1</sup>																								
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m <sup>3</sup> )	Hfpo Dimer Acid	PFMOAA	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 Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)		
SeepA 2023 1 Q1 <sup>4</sup>	1/1/23 0:00	1/14/23 18:00	330	6,391	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>	-- <sup>4</sup>
SeepA 2023 2 Q1	1/14/23 18:01	2/1/23 15:45	430	7,094	0.14	0.35	0.18	0.066	0.030	0.013	0.078	0.030	0.021	0.0060	0.012	0.12	0.00023	0.0058	0.0020	0.008	0.0045	0	0	0	0.9	0.9	1.1		
SeepA 2023 3 Q1	2/1/23 15:46	2/13/23 12:00	284	4,243	0.093	0.20	0.11	0.034	0.017	0.0076	0.042	0.017	0.0089	0.0031	0.0068	0.085	0.000093	0.0037	0.0011	0.0039	0.0028	0	0	0	0.5	0.6	0.6		
SeepA 2023 4 Q1	2/13/23 12:01	2/28/23 12:00	360	9,662	0.19	0.54	0.25	0.084	0.046	0.019	0.11	0.043	0.021	0.0106	0.021	0.22	0.00035	0.0086	0.0028	0.014	0.0097	0	0	0	1.4	1.4	1.6		
SeepA 2023 5 Q1	2/28/23 12:01	3/14/23 18:00	342	5,136	0.12	0.31	0.15	0.051	0.022	0.010	0.077	0.031	0.0067	0.0045	0.0087	0.092	0.00017	0.0044	0.0010	0.0049	0.0034	0	0	0	0.77	0.77	0.87		
SeepA 2023 6 Q1	3/14/23 18:01	3/31/23 23:59	414	6,625	0.15	0.30	0.19	0.061	0.026	0.014	0.093	0.041	0.0073	0.0053	0.013	0.086	0.00018	0.0060	0.0017	0.0048	0.0050	0	0	0	0.86	0.93	1.0		
<b>Total</b>				<b>39,150</b>	<b>0.70</b>	<b>1.7</b>	<b>0.88</b>	<b>0.30</b>	<b>0.14</b>	<b>0.065</b>	<b>0.40</b>	<b>0.16</b>	<b>0.065</b>	<b>0.030</b>	<b>0.061</b>	<b>0.61</b>	<b>0.00102</b>	<b>0.028</b>	<b>0.0086</b>	<b>0.035</b>	<b>0.026</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.4</b>	<b>4.5</b>	<b>5.2</b>		

**Notes:**

- 1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow recorded at the influent for the sampling interval.
- 2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
- 3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.
- 4 - Mass loads were not calculated for this interval, since, for unknown reasons, there was no Table 3+ compounds detected in the influent sample but detected in the effluent sample.

Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.

-- mass load not calculated

kg - kilogram

m<sup>3</sup> - cubic meter

**TABLE 6D  
SEEP B FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023  
Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) <sup>1</sup>																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m <sup>3</sup> )	Hfpo Dimer Acid	PFMOAA	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 Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)
SeepB_2023_1_Q1	1/1/2023 00:00	1/14/2023 18:00	330	8,763	0.17	1.2	0.37	0.088	0.013	0	0.20	0.076	0.0010	0.0048	0.025	0.24	0.00033	0.017	0.00019	0.010	0.012	0	0	0	2.1	2.2	2.5
SeepB_2023_2_Q1	1/14/2023 18:01	1/30/2023 08:00	374	11,572	0.30	0.89	0.31	0.086	0.015	0.0016	0.27	0.13	0.0068	0.0081	0.035	0.28	0.00047	0.022	0.0054	0.022	0.021	0	0	0	2.0	2.1	2.4
SeepB_2023_3_Q1	1/30/2023 08:01	2/13/2023 12:00	340	8,034	0.33	0.50	0.20	0.052	0.011	0.0022	0.23	0.14	0.015	0.0096	0.039	0.30	0.00051	0.019	0.013	0.022	0.023	0	0	0	1.5	1.5	1.9
SeepB_2023_4_Q1	2/13/2023 12:01	2/28/2023 12:00	360	8,654	0.28	0.77	0.22	0.060	0.011	0.0014	0.23	0.12	0.012	0.010	0.042	0.32	0.00061	0.021	0.0080	0.025	0.027	0	0	0	1.7	1.8	2.2
SeepB_2023_5_Q1	2/28/2023 12:01	3/14/2023 18:00	342	3,565	0.12	0.43	0.14	0.035	0.0061	0.00082	0.11	0.053	0.0061	0.0057	0.018	0.18	0.00031	0.0089	0.0046	0.009	0.0078	0	0	0	0.89	0.93	1.1
SeepB_2023_6_Q1	3/14/2023 18:01	3/31/2023 23:59	414	4,623	0.22	0.13	0.083	0.024	0.0083	0.0028	0.22	0.14	0.024	0.014	0.043	0.29	0.00069	0.019	0.018	0.024	0.025	0	0	0	0.88	0.92	1.3
<b>Total</b>				<b>45,211</b>	<b>1.4</b>	<b>3.9</b>	<b>1.3</b>	<b>0.34</b>	<b>0.065</b>	<b>0.0089</b>	<b>1.3</b>	<b>0.65</b>	<b>0.065</b>	<b>0.053</b>	<b>0.20</b>	<b>1.6</b>	<b>0.0029</b>	<b>0.11</b>	<b>0.050</b>	<b>0.11</b>	<b>0.12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.1</b>	<b>9.5</b>	<b>11</b>

**Notes:**

1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow recorded at the influent for the sampling interval.

2 - Total Attachment C does not include Perfluorheptanoic acid (PFHpA).

3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.

kg - kilogram

m<sup>3</sup> - cubic meter

**TABLE 6E**  
**SEEP C FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) <sup>1</sup>																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m <sup>3</sup> )	Hfpo Dimer Acid	PFMOAA	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 Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)
SeepC 2023 1 Q1	1/1/23 0:00	1/14/23 18:00	330	3,283	0.066	0.17	0.079	0.026	0.0085	0	0.027	0.0085	0	0.0012	0.0026	0.0030	0	0.0022	0	0.0046	0.0028	0	0	0	0.39	0.39	0.39
SeepC 2023 2 Q1	1/14/23 18:01	1/30/23 8:00	374	2,543	0.038	0.074	0.038	0.013	0.0046	0	0.013	0.0043	0	0.00058	0.0014	0.0013	0	0.0010	0	0.0028	0.0013	0	0	0	0.19	0.19	0.19
SeepC 2023 3 Q1	1/30/23 8:01	2/13/23 12:00	340	3,516	0.056	0.11	0.056	0.020	0.0070	0.00028	0.022	0.0074	0	0.0010	0.0022	0.0025	0	0.0019	0	0.0035	0.0021	0	0	0	0.28	0.29	0.30
SeepC 2023 4 Q1	2/13/23 12:01	2/28/23 12:00	360	7,180	0.12	0.30	0.12	0.041	0.0136	0	0.045	0.017	0	0.0026	0.0061	0.0058	0	0.0041	0	0.0093	0.0056	0	0	0	0.66	0.68	0.69
SeepC 2023 5 Q1	2/28/23 12:01	3/14/23 18:00	342	3,436	0.055	0.17	0.069	0.023	0.0076	0.00027	0.024	0.0076	0	0.0013	0.0023	0.0034	0	0.0018	0	0.0038	0.0018	0	0	0	0	0.38	0.38
SeepC 2023 6 Q1	3/14/23 18:01	3/31/23 23:59	414	6,073	0.079	0.22	0.11	0.035	0.0127	0.00058	0.039	0.013	0	0.0019	0.0043	0.0050	0	0.0032	0	0.0056	0.0032	0	0	0	0.51	0.52	0.53
<b>Total</b>				<b>26,031</b>	<b>0.41</b>	<b>1.1</b>	<b>0.47</b>	<b>0.16</b>	<b>0.054</b>	<b>0.0011</b>	<b>0.17</b>	<b>0.057</b>	<b>0</b>	<b>0.0087</b>	<b>0.019</b>	<b>0.021</b>	<b>0</b>	<b>0.014</b>	<b>0</b>	<b>0.030</b>	<b>0.017</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.0</b>	<b>2.4</b>	<b>2.5</b>

**Notes:**

1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow recorded at the influent for the sampling interval.

2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.

kg - kilogram

m<sup>3</sup> - cubic meter



**TABLE 6F  
SEEP D FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q1 2023  
Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) <sup>1</sup>																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m <sup>3</sup> )	Hfpo Dimer Acid	PFMOAA	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 Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)
SeepD 2023 1 Q1	1/1/23 0:00	1/14/23 18:00	330	5,270	0.079	0.29	0.13	0.039	0.012	0.00047	0.038	0.012	0	0.0017	0.0048	0.0105	0	0.0037	0	0.0063	0.0048	0	0	0	0.58	0.63	0.63
SeepD 2023 2 Q1	1/14/23 18:01	1/30/23 8:00	374	6,805	0.095	0.32	0.14	0.047	0.014	0.00082	0.041	0.014	0	0.0019	0.0054	0.0116	0	0.0041	0	0.0082	0.0052	0	0	0	0.67	0.68	0.68
SeepD 2023 3 Q1	1/30/23 8:01	2/13/23 12:00	340	3,186	0.048	0.14	0.057	0.020	0.0054	0.00031	0.019	0.0057	0	0.0008	0.0024	0.0061	0	0.0020	0	0.0035	0.0023	0	0	0	0.29	0.30	0.31
SeepD 2023 4 Q1	2/13/23 12:01	2/28/23 12:00	360	5,001	0.075	0.24	0.085	0.030	0.0085	0.00055	0.029	0.0095	0	0.0014	0.0045	0.0090	0	0.0030	0	0.0065	0.0043	0	0	0	0.48	0.49	0.50
SeepD 2023 5 Q1	2/28/23 12:01	3/14/23 18:00	342	4,431	0.066	0.23	0.089	0.031	0.0093	0.00066	0.028	0.0089	0	0.0013	0.0030	0.0093	0	0.0026	0	0.0042	0.0027	0	0	0	0.44	0.49	0.49
SeepD 2023 6 Q1	3/14/23 18:01	3/31/23 23:59	414	4,888	0.054	0.21	0.093	0.030	0.0098	0.00088	0.031	0.010	0	0.0015	0.0037	0.0098	0	0.0030	0	0.0040	0.0032	0	0	0	0.44	0.45	0.46
<b>Total</b>				<b>29,580</b>	<b>0.42</b>	<b>1.4</b>	<b>0.59</b>	<b>0.20</b>	<b>0.059</b>	<b>0.0037</b>	<b>0.19</b>	<b>0.060</b>	<b>0</b>	<b>0.0086</b>	<b>0.024</b>	<b>0.056</b>	<b>0</b>	<b>0.018</b>	<b>0</b>	<b>0.033</b>	<b>0.022</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2.9</b>	<b>3.0</b>	<b>3.1</b>

**Notes:**

1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow recorded at the influent for the sampling interval.

2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.

Where mass loads are equal to 0 kg, the compound was not detected above the reporting limit.

kg - kilogram

m<sup>3</sup> - cubic meter

**TABLE 6G**  
**STORMWATER TREATMENT SYSTEM CAPTURED MASS LOAD**  
**BY COMPOUND AND DATE - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Date <sup>1</sup>	Total Flow (m <sup>3</sup> ) <sup>2</sup>	Calculated Captured Mass Load (kg) <sup>3,4</sup>			
		HFPO-DA	PFMOAA	PMPA	Total of 3 Compounds <sup>5</sup>
1/4/23 <sup>6</sup>	146	0.005	0.0278	0.0001	0.033
1/5/23	169	0.006	0.0322	0.0001	0.038
1/21/23	205	0.011	0.0043	0.0007	0.000
1/22/23	573	0.030	0.0120	0.0019	0.04
1/23/23	771	0.041	0.0162	0.0025	0.06
1/24/23	317	0.015	0.0073	0.0012	0.023
1/26/23	683	0.021	0.0064	0.0016	0.03
1/27/23	616	0.019	0.0058	0.0014	0.026
1/28/23	378	0.012	0.0036	0.0009	0.02
1/30/23	353	0.009	0.0056	0.0006	0.02
2/14/23	520	0.010	0.0031	0.0008	0.01
2/15/23	542	0.011	0.0032	0.0009	0.01
2/16/23	608	0.012	0.0036	0.0010	0.02
2/17/23	390	0.011	0.0024	0.0006	0.01
<b>Total</b>	<b>6,273</b>	<b>0.21</b>	<b>0.13</b>	<b>0.01</b>	<b>0.36</b>

**Notes:**

1 - Listed dates are days when flow was recorded at the Stormwater Treatment System. There was no stormwater treated in March 2023 due to dry weather.

2 - Total daily flows were based on the volume recorded via a totalizer at the Stormwater Treatment System effluent.

3 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow at the effluent for the sampling date, see Appendix B for

4 - For days where only flow was recorded, the concentrations from the closest date was used to calculate mass loads.

5 - Only HFPO-DA, PFMOAA and PMPA are recorded at this location. Thus, the total captured mass load presented here is summed over these three compounds only.

6 - Due to the dilution factored required to analyze the sample, the PMPA result for 1/4/2023 was not detected above the reporting limit. For the purposes of this calculation, a concentration of 820 ng/L was estimated by the laboratory.

**TABLE 7**  
**SUMMARY OF TOTAL PFAS MASS DISCHARGE AT TAR HEEL FERRY ROAD BRIDGE - Q1 2023**  
**Chemours Fayetteville Works, North Carolina**

Field Sample ID	Collection Date	Hours Composited <sup>1</sup>	Concentrations (ng/L)			Total Volume (ft <sup>3</sup> ) <sup>4</sup>	Instantaneous Flow Rate (ft <sup>3</sup> /s) <sup>5</sup>	Mass Discharge (mg/s)		
			Total Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)			Total Attachment C <sup>2</sup>	Total Table 3+ (17 compounds) <sup>3</sup>	Total Table 3+ (20 compounds)
CFR-TARHEEL-24-010223	1/2/23 23:01	24	33	33	33	213,280,000	--	2.4	2.4	2.4
CFR-TARHEEL-24-010523	1/5/23 23:01	24	22	22	22	383,940,000	--	2.9	2.9	2.9
CFR-TARHEEL-24-010923	1/9/23 23:01	24	4.5	4.5	4.5	412,720,000	--	0.64	0.64	0.64
CFR-TARHEEL-24-010923-D	1/9/23 23:01	24	5.1	5.1	5.1	412,720,000	--	0.72	0.72	0.72
CFR-TARHEEL-24-011223	1/12/23 23:01	24	15	15	15	293,280,000	--	1.5	1.5	1.5
CFR-TARHEEL-011723	1/17/23 13:00	0	11	11	11	--	5,110	1.6	1.6	1.6
CFR-TARHEEL-24-011923	1/19/23 23:01	24	7.3	7.3	7.3	343,810,000	--	0.86	0.86	0.86
CFR-TARHEEL-24-012323	1/23/23 23:01	24	53	53	57	287,080,000	--	5.2	5.2	5.5
CFR-TARHEEL-24-012323 (Reanalyzed)	1/23/23 23:01	24	82	82	93	287,080,000	--	8.1	8.1	9.2
CFR-TARHEEL-24-012623	1/26/23 23:01	24	57	57	72	950,040,000	--	18	18	23
CFR-TARHEEL-24-012623 (Reanalyzed)	1/26/23 23:01	24	28	28	41	950,040,000	--	9.2	9.2	13
CFR-TARHEEL-013123	1/31/23 12:18	0	28	28	34	--	7,910	6.2	6.3	7.6
CFR-TARHEEL-24-020223	2/2/23 23:01	24	15	15	25	553,340,000	--	2.9	2.9	4.8
CFR-TARHEEL-24-020623	2/6/23 23:01	24	14	14	27	769,920,000	--	3.7	3.7	7.2
CFR-TARHEEL-24-020823	2/8/23 23:01	24	17	17	24	332,420,000	--	1.9	1.9	2.7
CFR-TARHEEL-24-021223	2/12/23 23:01	24	25	27	31	270,530,000	--	2.3	2.5	2.9
CAPIQ23-CFR-TARHEEL-021323	2/13/23 15:30	0	14	16	16	--	14,600	5.8	6.6	6.6
CAPIQ23-CFR-TARHEEL-021323-D	2/13/23 15:30	0	17	17	17	--	14,600	7.2	7	7
CFR-TARHEEL-021523	2/15/23 9:22	0	2.6	2.6	2.6	--	16,600	1.2	1.2	1.2
CFR-TARHEEL-24-022023	2/20/23 23:01	24	5.4	5.4	5.4	681,810,000	--	1.3	1.3	1.3
CFR-TARHEEL-24-022023-D	2/20/23 23:01	24	5.4	5.4	13	681,810,000	--	1.3	1.3	2.9
CAPIQ23-CFR-TARHEEL-022223	2/22/23 13:20	0	4.3	4.3	4.3	--	6,390	0.78	0.78	0.78
CFR-TARHEEL-24-022323	2/23/23 23:01	24	6.9	6.9	6.9	339,060,000	--	0.80	0.80	0.80
CFR-TARHEEL-24-022723	2/27/23 23:01	24	17	17	19	242,460,000	--	1.4	1.4	1.6
CFR-TARHEEL-24-030223	3/2/23 23:01	24	17	17	20	220,930,000	--	1.2	1.2	1.5
CFR-TARHEEL-24-030623	3/6/23 23:01	24	4.7	4.7	4.7	514,050,000	--	0.83	0.83	0.83
CFR-TARHEEL-24-030923	3/9/23 23:01	24	41	41	71	239,670,000	--	3.4	3.4	5.8
CFR-TARHEEL-24-031323	3/13/23 23:01	24	23	23	23	210,500,000	--	1.7	1.7	1.7
CFR-TARHEEL-24-031623	3/16/23 23:01	24	6.3	6.3	8.9	319,270,000	--	0.69	0.69	0.97
CFR-TARHEEL-24-032023	3/20/23 23:01	24	19	19	19	203,850,000	--	1.3	1.3	1.3
CFR-TARHEEL-24-032023-D	3/20/23 23:01	24	15	15	15	203,850,000	--	1.0	1.0	1.0
CFR-TARHEEL-24-032323	3/23/23 23:01	24	6.4	6.4	6.4	257,340,000	--	0.56	0.56	0.56
CFR-TARHEEL-24-032723	3/27/23 23:01	24	22	22	22	197,890,000	--	1.5	1.5	1.5
CFR-TARHEEL-24-033023	3/30/23 23:01	24	4.4	4.4	4.4	661,750,000	--	1.0	1.0	1.0

**Notes:**

- 1 - Samples with a compositing duration of zero (0) hours are grab samples.
- 2 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
- 3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.
- 4 - Total flow volume is determined based on measurements taken over the sample collection period.
- 5 - For samples with a duration of zero (0) hours, i.e., grab samples, the instantaneous flow rate was used to calculate the mass discharge.

-- - not applicable

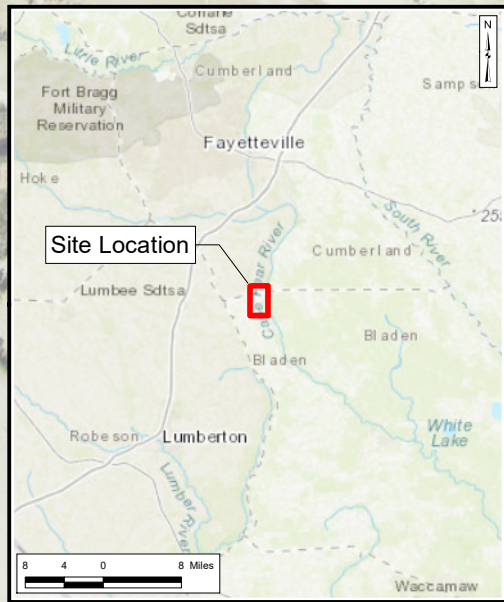
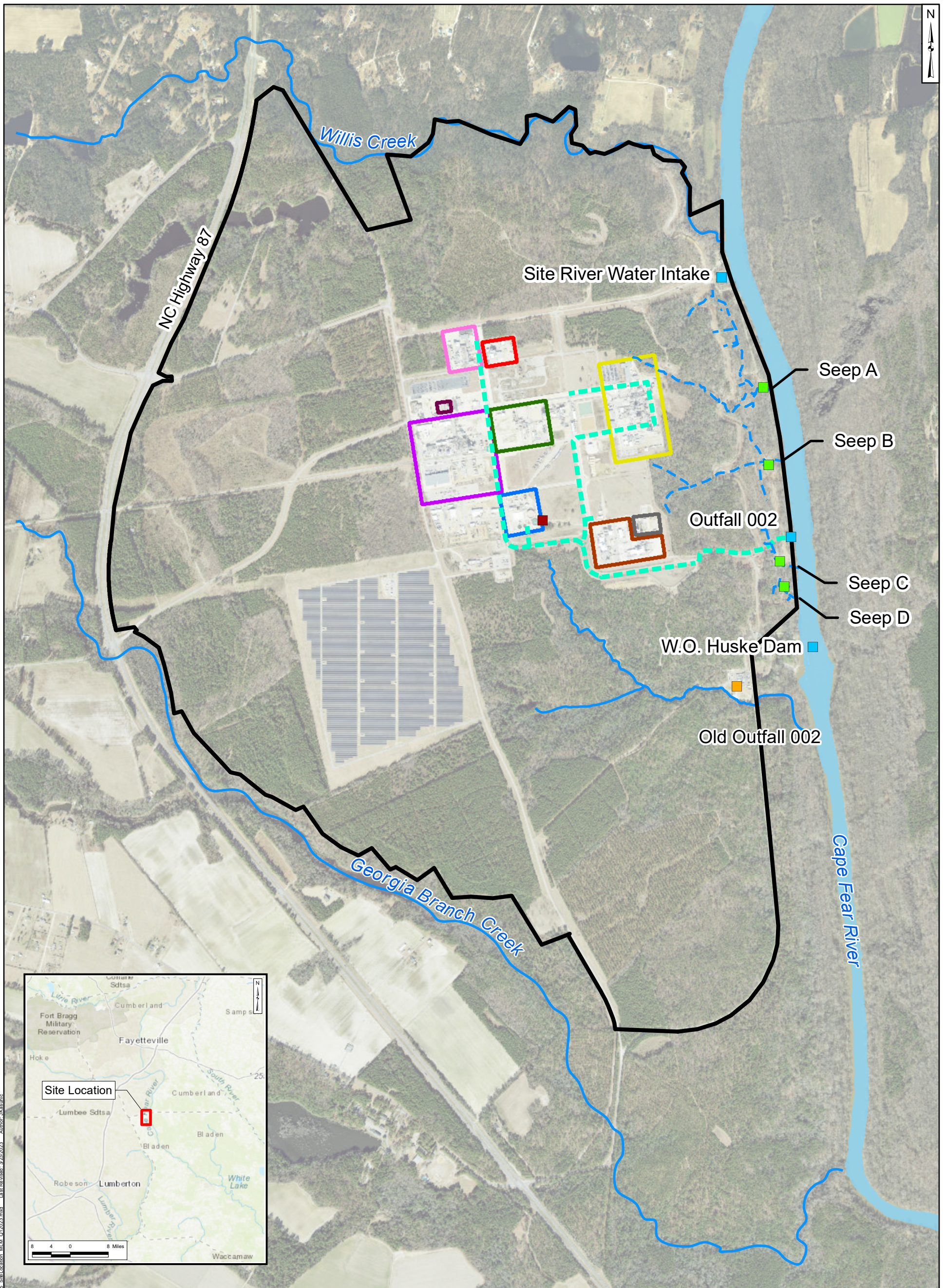
ng/L - nanograms per liter

ft<sup>3</sup> - cubic feet

mg/s - milligrams per second

ft<sup>3</sup>/s - cubic feet per second

# Figures



Legend		Areas at Site	
<span style="color: green;">■</span>	Flow-Through Cell	<span style="border: 1px solid yellow; padding: 2px;"> </span>	Chemours Monomers IXM
<span style="color: orange;">■</span>	Old Outfall 002 Treatment System	<span style="border: 1px solid red; padding: 2px;"> </span>	Chemours Polymer Processing Aid Area
<span style="color: brown;">■</span>	Stormwater Treatment System	<span style="border: 1px solid orange; padding: 2px;"> </span>	DuPont Polyvinyl Fluoride Leased Area
<span style="color: blue;">■</span>	Site Features	<span style="border: 1px solid grey; padding: 2px;"> </span>	Former DuPont PMDF Area
<span style="border-bottom: 2px solid black; width: 20px; display: inline-block;"></span>	Site Boundary	<span style="border: 1px solid pink; padding: 2px;"> </span>	Kuraray SentryGlas® Leased Area
<span style="color: blue;">—</span>	Nearby Tributary	<span style="border: 1px solid purple; padding: 2px;"> </span>	Kuraray Trosifol® Leased Area
<span style="color: blue;">- - -</span>	Observed Seep (Natural Drainage)	<span style="border: 1px solid blue; padding: 2px;"> </span>	Wastewater Treatment Plant
<span style="color: cyan;">- - -</span>	Site Conveyance Network	<span style="border: 1px solid green; padding: 2px;"> </span>	Power - Filtered and Demineralized Water Production
Notes:		<span style="border: 1px solid purple; padding: 2px;"> </span>	Kuraray Laboratory
1. The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS (MajorHydro shapefile). 2. Basemap sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community			

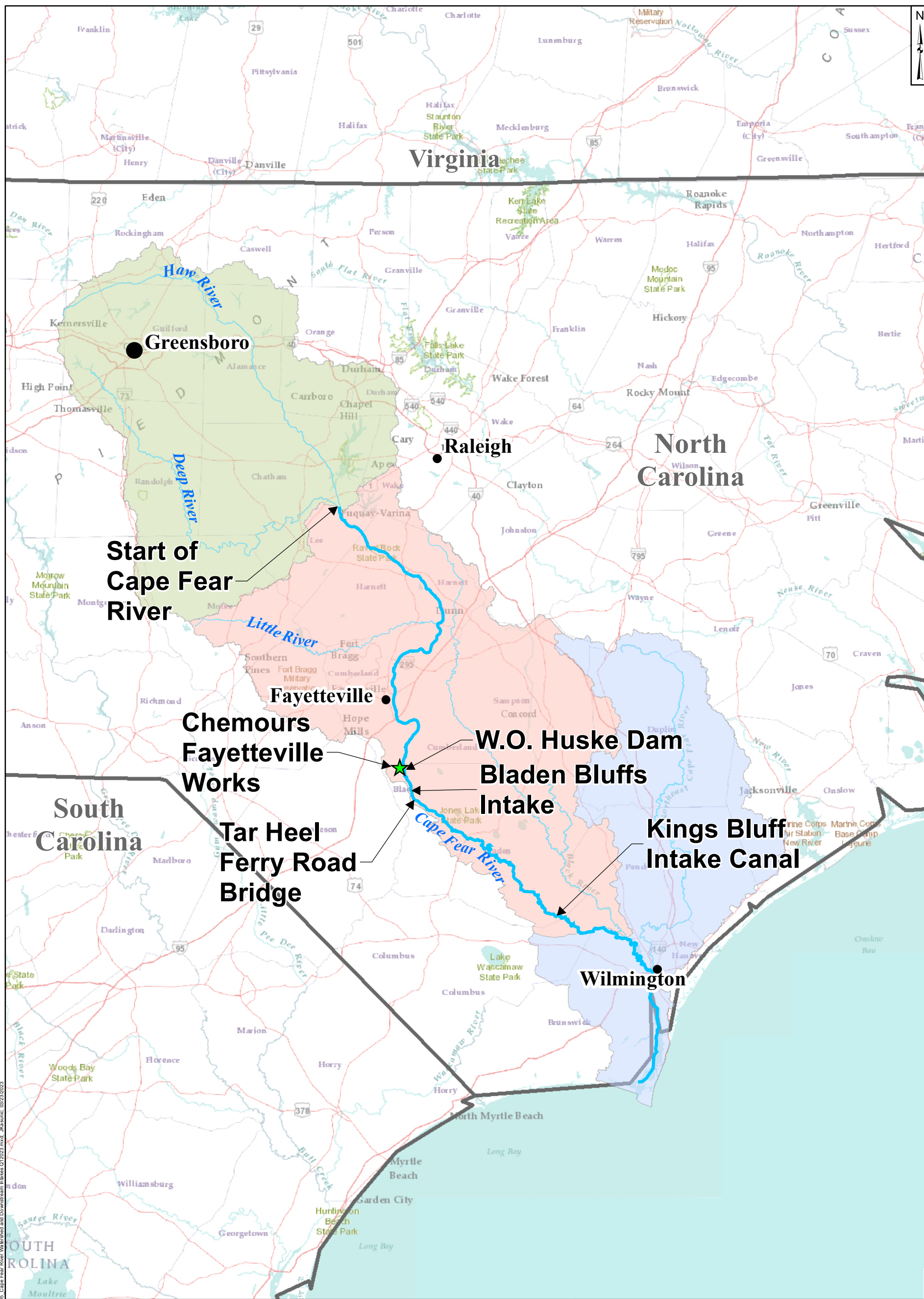
1,000 500 0 1,000 Feet

**Site Location Map**  
Chemours Fayetteville Works, North Carolina

	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295
Raleigh	June 2023

**Figure**  
**1**

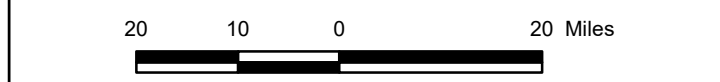
Projection: NAD 1983 StatePlane North Carolina FIPS 3200 Feet; Units in Foot US



**Legend**

- ★ Chemours Fayetteville Works
- Upper Basin
- Middle Basin
- Lower Basin

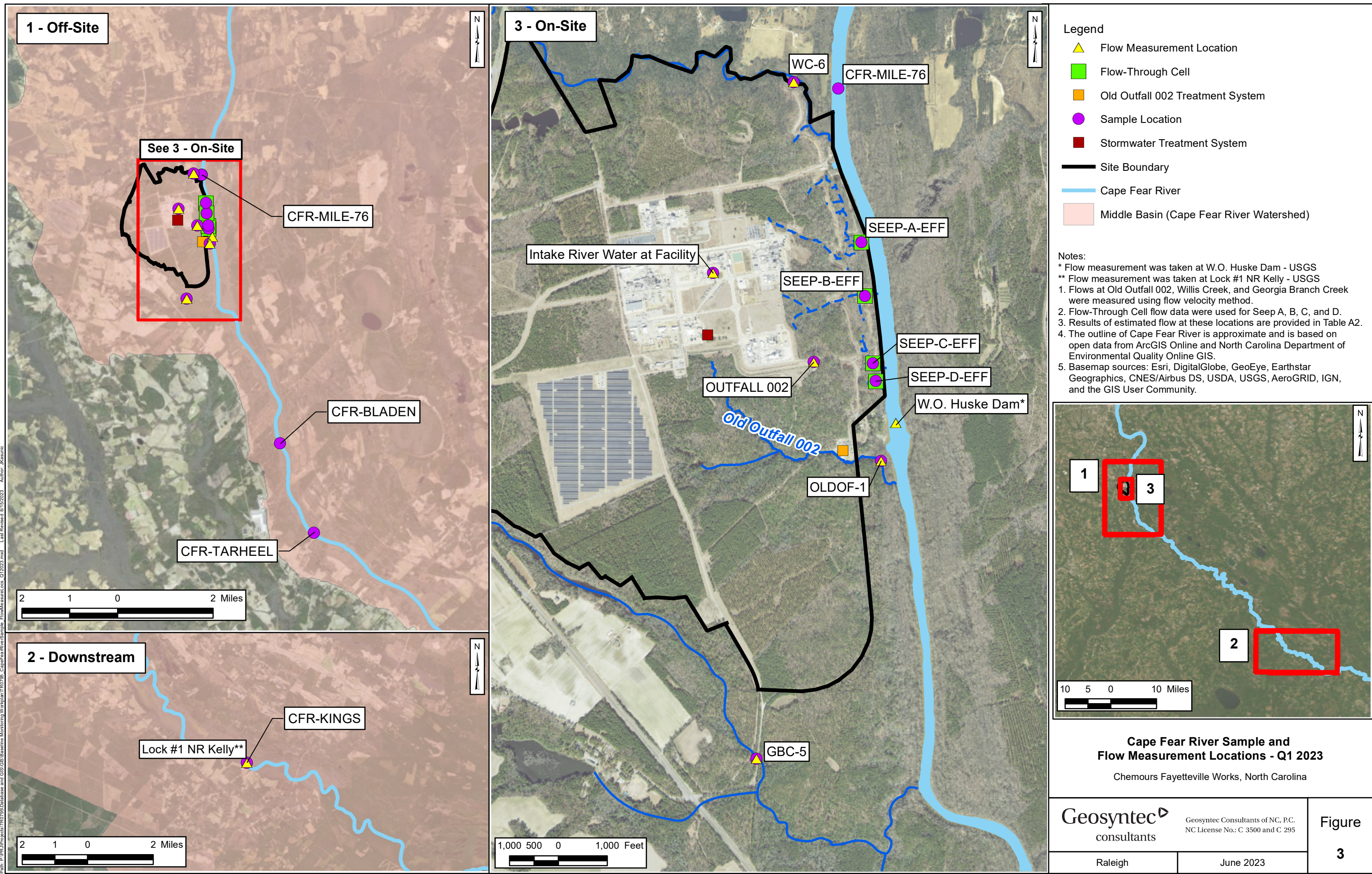
**Note:**  
 Basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



**Cape Fear River Watershed and Downstream Drinking Water Intakes**  
 Chemours Fayetteville Works, North Carolina

<p><b>Geosyntec</b>          consultants</p>	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295	<p><b>Figure</b></p>
	<p>Raleigh</p>	<p>June 2023</p>

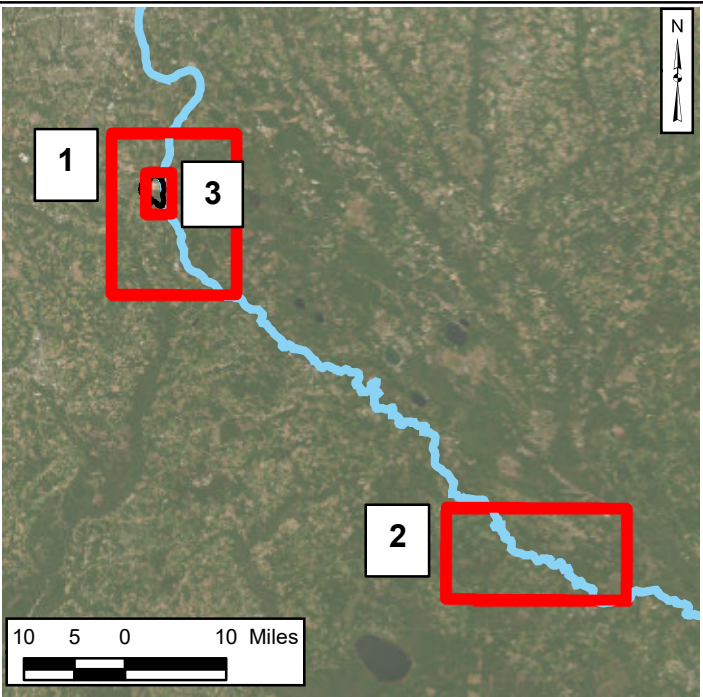
Projection: NAD 1983 StatePlane North Carolina FIPS 3200 Feet. Units in Foot US



- Legend**
- ▲ Flow Measurement Location
  - Flow-Through Cell
  - Old Outfall 002 Treatment System
  - Sample Location
  - Stormwater Treatment System
  - Site Boundary
  - Cape Fear River
  - Middle Basin (Cape Fear River Watershed)

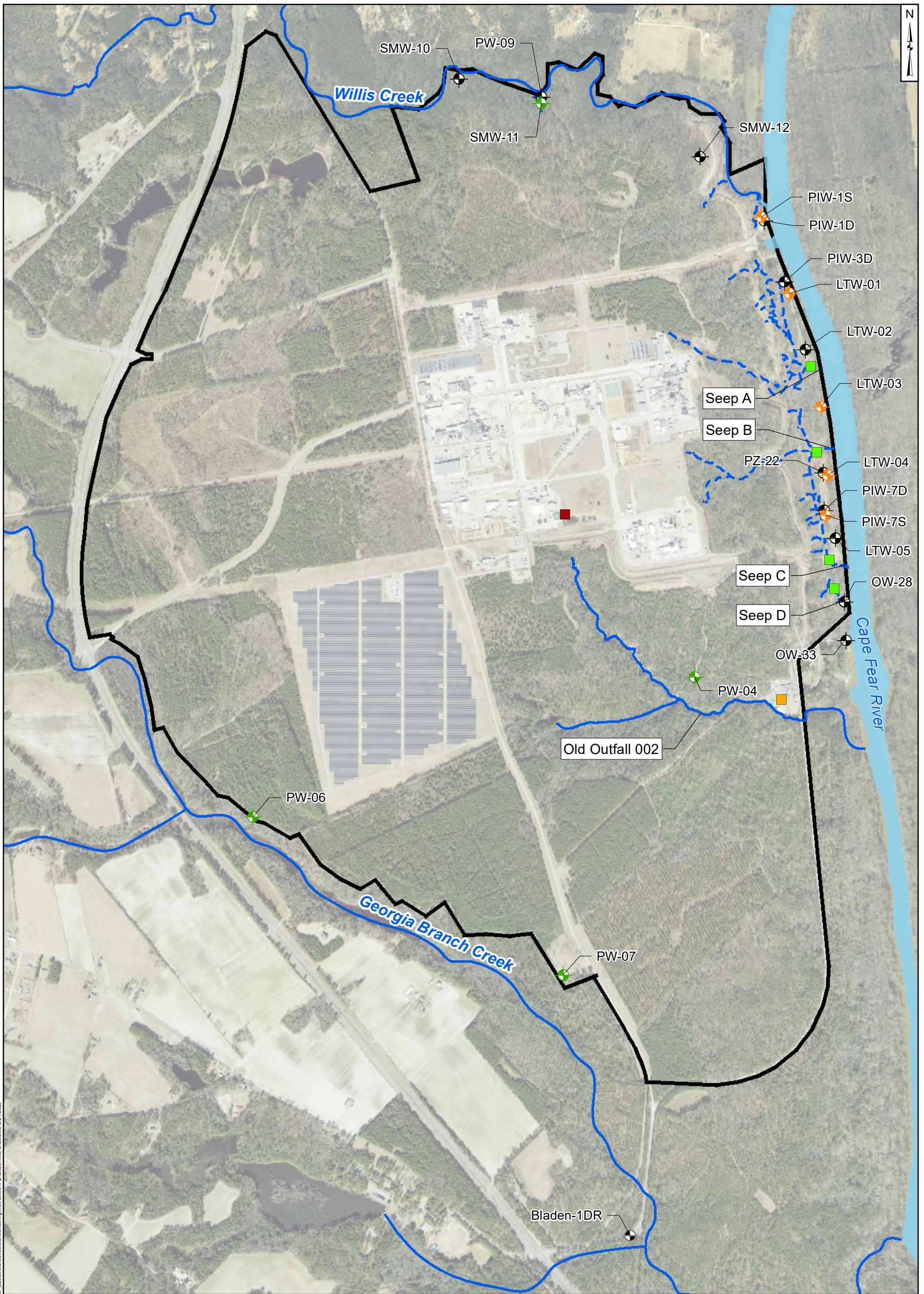
**Notes:**

- \* Flow measurement was taken at W.O. Huske Dam - USGS
- \*\* Flow measurement was taken at Lock #1 NR Kelly - USGS
- 1. Flows at Old Outfall 002, Willis Creek, and Georgia Branch Creek were measured using flow velocity method.
- 2. Flow-Through Cell flow data were used for Seep A, B, C, and D.
- 3. Results of estimated flow at these locations are provided in Table A2.
- 4. The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS.
- 5. Basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



**Cape Fear River Sample and Flow Measurement Locations - Q1 2023**  
Chemours Fayetteville Works, North Carolina

Path: P:\P\Projects\TR0795\Baseline Monitoring\Map\Map1\TR0795\_CapeFearRiverSample\_FlowMeasLocs\_C12023.mxd Last Revised: 6/15/2023 Author: Mearns  
 Projection: NAD 1983 StatePlane North Carolina FIPS 3200 Feet Units in Foot US



Path: P:\P\Projects\T\02\GIS\Baseline Monitoring\Workplan\TROPS\_BaselineGroundwaterMonitoringWellNetwork\_Q12023.mxd\_Krautic\_3/24/2023  
 Projection: NAD 1983 StatePlane North Carolina FIPS 3200 Feet, Units in Foot US

**Legend**

- |  |                     |  |                                  |  |                  |
|--|---------------------|--|----------------------------------|--|------------------|
|  | Surficial Aquifer   |  | Flow-Through Cell                |  | Observed Seep    |
|  | Floodplain Deposits |  | Old Outfall 002 Treatment System |  | Nearby Tributary |
|  | Black Creek Aquifer |  | Stormwater Treatment System      |  | Site Boundary    |

**Notes:**

- Bladen-1D has been abandoned and replaced with Bladen-1DR during Q1 2023.
- Due to the scale of the map, pairs of wells that are in close proximity have been offset for visibility. Therefore, the placement of these wells on this map do not reflect their true geographic coordinates.
- The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS.
- Basemap source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

1,000 500 0 1,000 Feet

**Groundwater Wells for Mass Loading Assessment**

Chemours Fayetteville Works, North Carolina

**Geosyntec**  
consultants

Geosyntec Consultants of NC, P.C.  
NC License No.: C 3500 and C 295

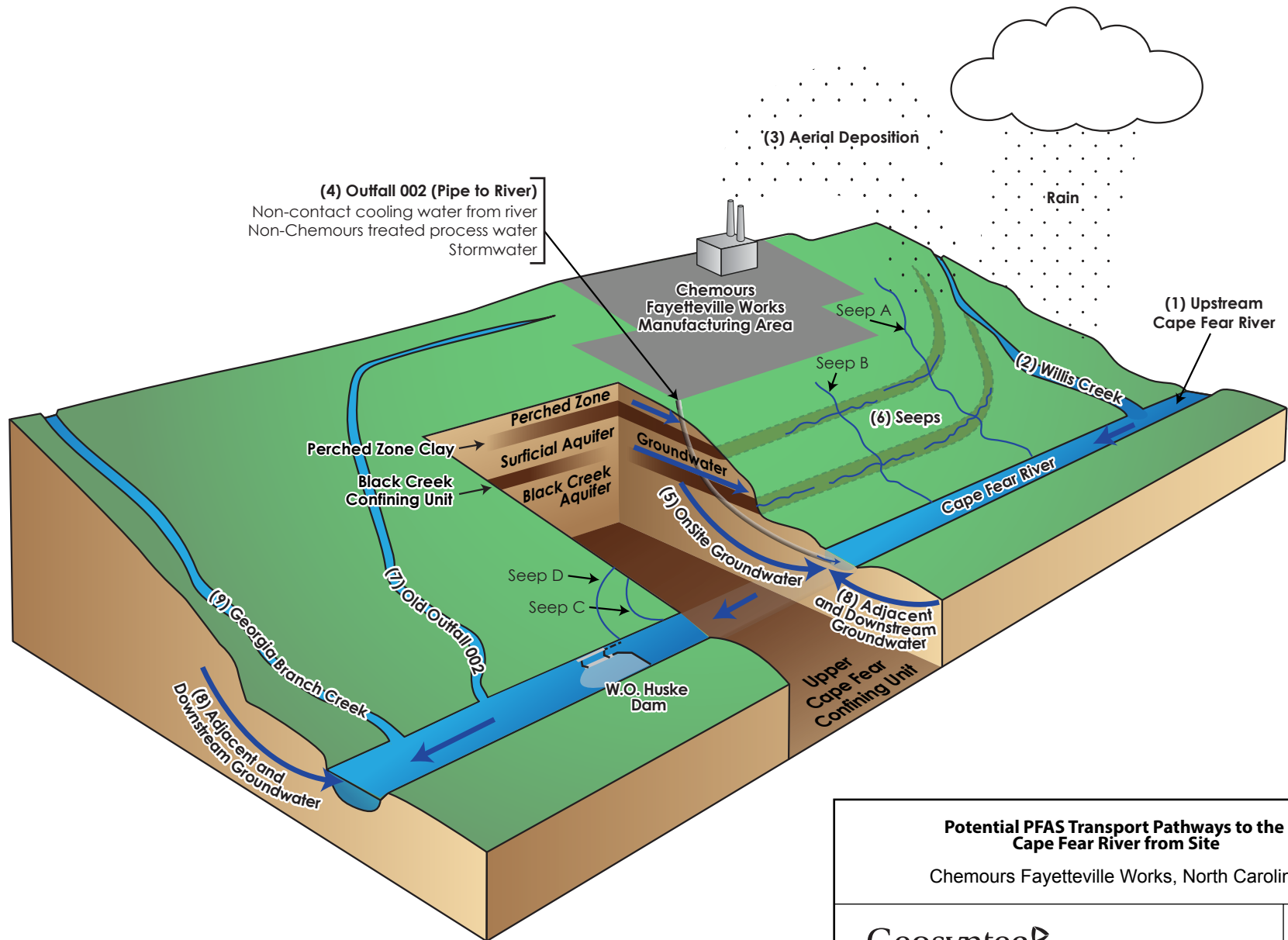
**Figure**

Raleigh

June 2023

**4**





Data:PRJ/Project/F30795/Database and GIS/Illustrator/3D CSM Illustration/ConceptualSiteModel\_Dec2021.ai

Note: Image is conceptual and is not to scale

<b>Potential PFAS Transport Pathways to the Cape Fear River from Site</b> Chemours Fayetteville Works, North Carolina	
<b>Geosyntec</b> consultants	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295
Raleigh, NC	June 2023
<b>Figure 5</b>	

