



Geosyntec Consultants of NC, P.C.
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CAPE FEAR RIVER PFAS MASS LOADING ASSESSMENT – SECOND QUARTER 2023

Chemours Fayetteville Works

Prepared for

The Chemours Company FC, LLC
22828 NC Highway 87
Fayetteville, NC 28306

Prepared by

Geosyntec Consultants of NC, PC
2501 Blue Ridge Road, Suite 430
Raleigh, NC 27607



DocuSigned by:

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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
lbs	pounds
LDPE	low-density polyethylene
mg/s	milligrams per second
m ³	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 - Second 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 14th 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 2020,¹ Chemours installed multiple remedies to capture PFAS at the Site and to prevent PFAS from reaching the Cape Fear River. These remedies include two treatment systems, four on-site seeps interim flow-through cells (FTC), the groundwater extraction and barrier wall remedy, and the barrier wall. The start date of operation of each remedy are as follows:

- Outfall 003 treatment system² (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) (June 30, 2021)³
- Barrier wall (June 11, 2023)
- Groundwater Extraction (March 14, 2023)

¹ 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.

² Previously referred to as Old Outfall 002 treatment system

³ Diversion sumps in 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).

- Seep Ex-situ Capture System (April 20, 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 second quarter 2023 (Q2 2023; April through June 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 PFAS loadings from the different PFAS transport pathways to the Cape Fear River, as identified in the conceptual site model (Figure 5) (Geosyntec 2019). The estimated PFAS loadings were modeled for this current reporting period using the Q2 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)⁴, Total Table 3+ (20 compounds), and Total Attachment C (Geosyntec 2020b). 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.

⁴ 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)”

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 Q2 2023 mass load assessment.

2 SAMPLING ACTIVITIES AND LABORATORY ANALYSIS

The field work associated with collecting data for this Q2 2023 mass load assessment was completed by Parsons of NC (Parsons) and Geosyntec from April 1 through June 30, 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.

2.1 Sampling Activities

In Q2 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 (Bladen Bluffs, Tar Heel, and Kings Bluff). 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 29 primary composite samples and 3 field duplicate composite samples were collected from this location from April 3, through June 29, 2023. The duplicate samples were collected on April 17, May 8, and June 12, 2023. The samples collected, field parameters, and associated flow measurements are provided in Table 2.

During interruptions to the composite sampling program, the sampler was temporarily removed and grab samples were collected to continue a record of river concentrations over time. The sampled dates during these interruptions and the reasonings are listed below:

- April 10 to 13; due to high water river stage event that was predicted to flood the autosampler platform (i.e., the river gage height at W.O. Huske Dam was predicted to exceed 10 feet).
- June 6; due to equipment malfunction from vandalism (sample tubing and piping were removed from the river).

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 May 11, 2023, and one from Kings Bluff (sample location CFR-KINGS) on May 16, 2023 (Table 2). The grab sample from Kings Bluff was collected five 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 Outfall 003 stream; Seeps A, B, C, and D; and Outfall 002, samples and flow measurements were collected at the influent and effluent stilling basins and at the Outfall 003 treatment system. The sampling methods for the Seeps are not part of the scope of the mass loading assessment but are provided in *CFR Long-Term Remedy Performance Monitoring Report #2* (Geosyntec 2023a).

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 Q2 2023 are presented in Tables 3 and 4. The analytical results for the Seeps influent and effluent (to estimate remedies) are provided in *CFR Long-Term Remedy Performance Monitoring Report #2* (Geosyntec 2023a). 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-EVE⁵.

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.

There were no detections of PFAS above the associated reporting limits in the equipment blanks associated with the surface water and groundwater sampling.

PFAS results for the primary and duplicate samples had relative percent differences less than 30% for the reported compounds, except for PFO2HxA in the field duplicate collected June 12, 2023, at CFR-TARHEEL (CFR-TARHEEL-24-061223-D) which has been J qualified.

⁵ 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.

3.3 Analytical Results

The Q2 2023 analytical results from the samples collected at Tar Heel are presented in Table 3. The Total Table 3+ (17 compounds) concentrations in Q2 2023 ranged from non-detect below the associated reporting limits to 44 nanograms per liter (ng/L). This range in concentrations is within the observed range in previous quarterly sampling events that occurred after the remedies were in operation.

The Q2 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 past the sampling point within the sampling time interval (milligrams [mg], kilograms [kg], or pounds [lbs]); 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 Mass Load in the Cape Fear River

In Q2 2023, the in-river Total Table 3+ (17 compounds) mass load measured at Tar Heel was 11.4 kg (25 lbs) and is based on the 56 mass loading estimation intervals (Table 6A).

PFAS mass load prevented from discharging to the Cape Fear River was estimated using analytical results measured from samples collected at the influent and effluent of the remedies and their respective flows. Due to the implementation of the groundwater extraction and barrier wall remedy, the flows at the Seep FTCs are much lower than previous quarters, and at times no flow is observed at the FTCs. As a result, the total PFAS mass load captured by the Seep FTCs are less than previous quarters prior to the operation of the groundwater extraction system. During the Q2 2023 reporting period, the remedies at Outfall 003, the Seeps, and the SWTS prevented the following Total Table 3+ PFAS mass loads:

- For the Outfall 003 treatment system, a total of 5.6 kg (12 lbs) of PFAS was captured and prevented from reaching the Cape Fear River with a total treated flow of 160,000 cubic meters (m³) (Table 6B).
- For the Seep A FTC, a total of 2.6 kg (5.7 lbs) was captured and prevented from reaching the Cape Fear River with a total measured flow of about 28,167 m³ (Table 6C).
- For the Seep B FTC, a total of 2.4 kg (5.3 lbs) was captured and prevented from reaching the Cape Fear River with a total measured flow of about 16,184 m³ (Table 6D).
- For the Seep C FTC, a total of 0.7 kg (1.6 lbs) was captured and prevented from reaching the Cape Fear River with a total measured flow of about 13,462 m³ (Table 6E).

- For the Seep D FTC, a total of 1.6 kg (3.5 lbs) was captured and prevented from reaching the Cape Fear River with a total measured flow of about 21,131 m³ (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 April 11 to June 30, 2023, was 0.95 kg (2.1 lbs). This estimate was based on mass loading estimates for 28 days when flow was recorded at the SWTS in Q2 2023, with a total treated flow of about 13,518 m³ (Table 6G). This captured total mass likely underestimates the mass of PFAS captured by the SWTS during Q2 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.

In addition to the remedies discussed above, the groundwater extraction and barrier wall remedy captured about 260,000 m³ of groundwater and removed a mass load of 39 kg (86 lbs). This estimate was based on the mass loading estimates of flow rate data and PFAS concentration data collected between April through June 2023 (Geosyntec, 2023a).

4.2 PFAS Mass Discharge in the Cape Fear River

Mass discharge was calculated from 33 samples collected at CFR-TARHEEL and recorded flows at W.O. Huske Dam during Q2 2023. The Total Table 3+ (17 compounds) mass discharge among samples with detected Total Table 3+ (17 compounds) concentrations ranged from 0.5 to 9.0 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 June 30, 2023; Figure 6) and within the last 12 months (from July 1, 2022, to June 30, 2023; Figure 7).

During this quarter, the mass discharges were highest from April 10 to 13, although the Total Table 3+ (17 compounds) concentrations were within the observed range in previous quarterly sampling events and were also lower than the other samples from this quarter. The mass discharges were higher because the flows measured during this period coincided with a rainfall event resulting in higher river flows. The highest mass discharge value, 9.0 mg/s corresponded to a Cape Fear River flooding event flows of 16,700 cfs and concentrations of 19 ng/L. After April 13, 2023, calculated mass discharge values returned to and remained at levels typical of the past 12 months as shown in Figure 7.

The mass discharge this quarter continued to remain lower than the mass discharges before Q3 2021, which corresponds to the time when the Outfall 003 treatment system, the Seep FTCs, and the SWTP were installed and operating. While this suggests additional mass removal from the installation of the groundwater extraction and barrier wall remedy implemented this year,

additional sampling events are required to continue evaluating and quantifying the reduction from the groundwater extraction and barrier wall remedy.

4.3 PFAS Mass Discharge at the Downstream River Locations

The Total Table 3+ (17 compounds) concentrations and mass discharge values from the Q2 2023 event are shown in the table below. Total Table 3+ (17 compounds) concentrations at the three downstream river locations ranged from 7.4 nanograms per liter (ng/L) (CFR-BLADEN) to 8.0 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 five 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 period (May 11 to 16, 2023).

The Total Table 3+ (17 compounds) mass discharge ranged from 0.36 mg/s (CFR-KINGS) to 0.47 mg/s (CFR-TARHEEL). The mass discharge across the three downstream river locations in Q2 2023 was relatively lower than previous quarters. Specifically, the mass discharges from Q4 2021 to Q1 2023 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	5/11/2023	2,070	7.4	0.43
CFR-TARHEEL	Grab	5/11/2023	2,080	8.0	0.47
CFR-KINGS	Grab	5/16/2023	1,590	7.9	0.36

4.4 Calculated Mass Discharge from the Mass Loading Model Assessment

This section presents the estimation of mass discharge from the identified PFAS transport pathways using the mass loading model and an assessment of the contributions by pathway. The

results of the mass loading model assessment for Q2 2023 are briefly described below. Details on the mass loading model results and calculations are provided in Appendix A.

The table below summarizes the Total Table 3+ (17 compounds) mass discharge prior to the remedies (i.e., before the water passes through the remedies) by pathway from Q2 2020 to Q4 2022. The pathways with remedies (Seeps, Outfall 003 stream, Outfall 002, and onsite groundwater) have substantially lower mass discharges than the before remedies mass discharges.

Model Transport Pathway with Remedies	Before Remedies Total Table 3+ (17 Compounds) Mass Discharge (mg/s) ¹			Q2 2023 Total Table 3+ (17 Compounds) Mass Discharge (mg/s)
	Min	Median	Max	
Seeps	3.0	5.4	8.4	0.001 ^{Note 3}
Onsite Groundwater	1.5	3.6	9.6	0.06
Outfall 002	0.006	0.10	0.68	0.03
Outfall 003 stream	0.63	2.5	4.7	0.02
Total²	6.7	14	24	0.66

1 – Before remedies mass discharge values taken from mass loading model data sets from between dates and dates which excludes measurements after the installation of the groundwater extraction and barrier wall remedy which significantly altered the hydrologic conditions at site.

2 – Total values for before remedies mass discharge come from individual mass loading model assessments and therefore do not equal the sum of the values above.

3 – Seeps B and C effluents were not sampled this quarter because there was no effluent flow observed at the time of sampling.

5 SUMMARY AND CONCLUSIONS

This Q2 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 April 1, 2023, through June 30, 2023. Over this period, the in-river Total Table 3+ (17 compounds) mass load measured at Tar Heel was 11.4 kg (25 lb). The remedies that have been installed at SWTS, Outfall 003 and at Seeps A, B, C, and D prevented a mass load of 13.9 kg (30 lbs) of Total Table 3+ (17 compounds). In addition to these remedies, the groundwater extraction and barrier wall remedy have removed a mass load of 39 kg (86 lbs) of Total Table 3+ (17 compounds) this quarter (Geosyntec, 2023a). Due to the implementation of the groundwater extraction and barrier wall remedy, the flows at the Seep FTCs are much lower than previous quarters, and at times no flow is observed at the FTCs. Additional sampling events from future reporting quarters are required to continue evaluating and quantifying the reduction from the groundwater extraction and barrier wall remedy.

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 Q2 2023 and have been consistently lower since Q4 2021, which may in part reflect the reduced mass discharge from the Site due to implemented remedies.

In May 2023, samples were collected from the PFAS transport pathways and were used to estimate the mass discharge and the contribution per transport pathway to the Cape Fear River. The model-estimated Total Table 3+ (17 compounds) mass discharge from the potential transport pathways during Q2 2023 is 0.66 mg/s. The implementation of remedies (Outfall 003 treatment system, Seeps FTCs, and the groundwater extraction and barrier wall remedy) show a significant mass discharge decreases in Q2 2023 compared to historical, pre-remediation ranges. The pathways with remedies have substantially lower mass discharges than the before remedies mass discharges, and the remaining PFAS transport pathways (i.e., Willis Creek and Georgia Branch Creek) have mass discharges that are within the range of previous values.

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	PFAS Grouping ¹			Chemical Name	CASN	Chemical Formula
	Attachment C	Table 3+ (17 compounds)	Table 3+ (20 compounds)			
HFPO-DA	✓	✓	✓	Hexafluoropropylene oxide dimer acid	13252-13-6	C6HF11O3
PEPA	✓	✓	✓	Perfluoro-2-ethoxypropionic acid	267239-61-2	C5HF9O3
PFECA-G	✓	✓	✓	Perfluoro-4-isopropoxybutanoic acid	801212-59-9	C12H9F9O3S
PFMOAA	✓	✓	✓	Perfluoro-2-methoxyacetic acid	674-13-5	C3HF5O3
PFO2HxA	✓	✓	✓	Perfluoro-3,5-dioxahexanoic acid	39492-88-1	C4HF7O4
PFO3OA	✓	✓	✓	Perfluoro-3,5,7-trioxaoctanoic acid	39492-89-2	C5HF9O5
PFO4DA	✓	✓	✓	Perfluoro-3,5,7,9-tetraoxadecanoic acid	39492-90-5	C6HF11O6
PMPA	✓	✓	✓	Perfluoro-2-methoxypropionic acid	13140-29-9	C4HF7O3
Hydro-EVE Acid	--	✓	✓	2,2,3,3-tetrafluoro-3-({1,1,1,2,3,3-hexafluoro-3-[(1,2,2-tetrafluoroethyl)oxy]propan-2-yl}oxy)propionic acid	773804-62-9	C8H2F14O4
EVE Acid	--	✓	✓	2,2,3,3-tetrafluoro-3-({1,1,1,2,3,3-hexafluoro-3-[(1,2,2-trifluoroethenyl)oxy]propan-2-yl}oxy)propionic acid	69087-46-3	C8HF13O4
PFECA B	--	✓	✓	Perfluoro-3,6-dioxaheptanoic acid	151772-58-6	C5HF9O4
R-EVE	--	--	✓	Pentanoic acid, 4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-	2416366-22-6	C8H2F12O5
PFO5DA	✓	✓	✓	Perfluoro-3,5,7,9,11-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-trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-	29311-67-9	C7HF13O5S
Hydro-PS Acid	✓	✓	✓	Ethanesulfonic acid, 2-[1-[difluoro(1,2,2,2-tetrafluoroethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoro-	749836-20-2	C7H2F14O5S
PFHpA ³	✓	--	--	Perfluoroheptanoic acid	375-85-9	C7HF13O2

Notes:

1 - 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)".

EPA - Environmental Protection Agency

PFAS - Per- and Polyfluoroalkyl substances

SOP - Standard Operating Procedure

TABLE 2
RIVER SAMPLES AT TAR HEEL AND DOWNSTREAM LOCATIONS - Q2 2023
Chemours Fayetteville Works, North Carolina

Location ID	Sample ID	QA/QC	Date and Time	Sample Collection								Flow Measurement		
				Method	Hours Composited ¹	pH (S.U.)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Specific Conductivity (µS/cm)	Temperature (°C)	Method	Total Volume (ft ³) ²	Instantaneous Flow Rate (ft ³ /s) ³
CFR-TARHEEL ⁴	CFR-TARHEEL-24-040323		4/3/23 23:01	Composite	24	NM	NM	NM	NM	NM	NM	USGS Data ⁷	233,514,000	--
	CFR-TARHEEL-24-040623		4/6/23 23:01	Composite	24	8.12	7.83	126.63	16.40	244.19	24.04	USGS Data ⁷	210,591,000	--
	CFR-TARHEEL-18-040823		4/8/23 17:01	Composite	18	NM	NM	NM	NM	NM	NM	USGS Data ⁷	315,549,000	--
	CFR-TARHEEL-041023		4/10/23 12:45	Grab	0	7.96	5.98	-9.90	120.98	705.95	17.88	USGS Data ⁸	--	8,000
	CFR-TARHEEL-041123		4/11/23 16:25	Grab	0	6.14	8.76	128.40	81.76	79.64	17.85	USGS Data ⁸	--	25,000
	CFR-TARHEEL-041323		4/13/23 12:47	Grab	0	7.89	11.59	-4.20	217.00	253.72	19.60	USGS Data ⁸	--	22,000
	CFR-TARHEEL-24-041723		4/17/23 23:01	Composite	24	9.23	9.28	4.20	139.00	188.74	19.28	USGS Data ⁷	1,247,399,000	--
	CFR-TARHEEL-24-041723-D	Field Duplicate	4/17/23 23:01	Composite	24	9.23	9.28	4.20	139.00	188.74	19.28	USGS Data ⁷	1,247,399,000	--
	CFR-TARHEEL-24-042023		4/20/23 23:01	Composite	24	8.56	8.52	8.30	50.80	199.08	23.99	USGS Data ⁷	800,738,000	--
	CFR-TARHEEL-24-042423		4/24/23 23:01	Composite	24	7.83	8.33	-1.90	72.80	223.73	14.22	USGS Data ⁷	626,589,000	--
	CFR-TARHEEL-24-042723		4/27/23 23:01	Composite	24	8.02	4.97	14.30	31.10	444.00	21.04	USGS Data ⁷	339,939,000	--
	CFR-TARHEEL-24-050123		5/1/23 23:01	Composite	24	7.85	7.63	9.20	118.00	259.81	22.15	USGS Data ⁷	674,622,000	--
	CFR-TARHEEL-24-050423		5/4/23 23:01	Composite	24	7.52	9.31	50.00	90.30	254.48	17.39	USGS Data ⁷	891,575,000	--
	CFR-TARHEEL-24-050823		5/8/23 23:01	Composite	24	8.12	9.35	29.10	33.20	592.74	24.73	USGS Data ⁷	411,678,000	--
	CFR-TARHEEL-24-050823-D	Field Duplicate	5/8/23 23:01	Composite	24	8.12	9.35	29.10	33.20	592.74	24.73	USGS Data ⁷	411,678,000	--
	CAP2Q23-CFR-TARHEEL-051123		5/11/23 17:11	Grab	0	7.19	6.89	126.20	16.00	123.40	25.01	USGS Data ⁸	--	2,080
	CFR-TARHEEL-24-051123		5/11/23 23:01	Composite	24	7.73	7.64	44.00	17.80	326.62	27.29	USGS Data ⁷	188,037,000	--
	CAP2Q23-CFR-TARHEEL-24-051223		5/12/23 23:01	Composite	24	7.28	6.42	116.70	25.90	480.16	24.08	USGS Data ⁷	157,185,000	--
	CFR-TARHEEL-24-051523		5/15/23 23:01	Composite	24	7.46	6.73	55.10	12.80	154.68	26.17	USGS Data ⁷	132,660,000	--
	CFR-TARHEEL-24-051823		5/18/23 23:01	Composite	24	8.09	6.68	126.40	11.80	303.83	20.21	USGS Data ⁷	154,017,000	--
	CFR-TARHEEL-24-052223		5/22/23 23:01	Composite	24	7.95	5.81	24.70	13.80	232.78	26.99	USGS Data ⁷	158,787,000	--
	CFR-TARHEEL-24-052523		5/25/23 23:01	Composite	24	7.89	5.96	28.90	12.10	304.27	19.94	USGS Data ⁷	104,049,000	--
	CFR-TARHEEL-24-052923		5/29/23 23:01	Composite	24	7.83	7.48	0.90	22.80	372.97	21.58	USGS Data ⁷	128,583,000	--
	CFR-TARHEEL-24-060223		6/2/23 23:01	Composite	24	NM	NM	NM	NM	NM	NM	USGS Data ⁷	170,667,000	--
	CFR-TARHEEL-060623		6/6/23 13:48	Grab	0	7.48	7.64	132.60	11.50	130.57	27.03	USGS Data ⁸	--	1,000
	CFR-TARHEEL-24-060923		6/9/23 23:01	Composite	24	NM	NM	NM	NM	NM	NM	USGS Data ⁷	104,898,000	--
	CFR-TARHEEL-24-061223		6/12/23 23:01	Composite	24	8.47	7.86	-20.30	8.73	248.06	22.62	USGS Data ⁷	104,898,000	--
	CFR-TARHEEL-24-061223-D	Field Duplicate	6/12/23 23:01	Composite	24	8.47	7.86	-20.30	8.73	248.06	22.62	USGS Data ⁷	85,601,000	--
	CFR-TARHEEL-24-061523		6/15/23 23:01	Composite	24	8.30	7.31	-48.60	8.64	614.81	23.82	USGS Data ⁷	77,687,000	--
	CFR-TARHEEL-24-061923		6/19/23 23:01	Composite	24	8.44	6.54	-31.20	21.80	714.65	24.47	USGS Data ⁷	70,834,000	--
CFR-TARHEEL-24-062223		6/22/23 23:01	Composite	24	8.09	5.70	-15.30	19.60	450.91	24.58	USGS Data ⁷	183,141,000	--	
CFR-TARHEEL-24-062623		6/26/23 23:01	Composite	24	7.80	0.01	13.40	91.10	795.33	29.18	USGS Data ⁷	545,382,000	--	
CFR-TARHEEL-24-062923		6/29/23 23:01	Composite	24	7.51	7.18	3.00	42.60	456.11	27.84	USGS Data ⁷	803,240,000	--	
CFR-BLADEN ⁵	CAP2Q23-CFRBLADEN-51123		5/11/23 17:00	Grab	0	7.08	7.02	109.60	12.40	131.32	24.81	USGS Data ⁹	--	2,070
CFR-KINGS ⁶	CAP2Q23-CFRKINGS-051623		5/16/23 14:05	Grab	0	7.13	5.63	38.80	10.60	137.65	28.37	USGS Data ¹⁰	--	1,590

Notes

-- not applicable

°C - degrees Celsius

ft³ - cubic feetft³/s - cubic feet per second

mg/L - milligrams per liter

mV - millivolts

NM - not measured; field parameters were not collected.

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 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 Bluffs 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 - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-040323	CFR-TARHEEL-24-040623	CFR-TARHEEL-18-040823	CFR-TARHEEL-041023	CFR-TARHEEL-041123
Sample Date	04/03/2023	04/06/2023	04/08/2023	04/10/2023	04/11/2023
Sample Type	Composite	Composite	Composite	Grab	Grab
Sample Start Date and Time	04/03/23 12:00 AM	04/06/23 12:00 AM	04/08/23 12:00 AM	04/10/23 1:00 PM	04/10/23 2:00 PM
Sample Stop Date and Time	04/03/23 11:00 PM	04/06/23 11:00 PM	04/08/23 11:00 PM	--	--
Composite Duration (hours) ¹	24	24	18	0	0
QA/QC					
Sample Delivery Group (SDG)	320-98715-1	320-98715-1	320-98947-1	320-98947-1	320-98947-1
Lab Sample ID	320-98715-2	320-98715-3	320-98947-1	320-98947-2	320-98947-3
Table 3+ SOP (ng/L)					
HFPO-DA	2.8	3.3	7.6	4.1	5.2
PFMOAA	<2.0	<2.0	<2.0	<2.0	<2.0
PFO2HxA	3.8	3.8	4.2	<2.0	<2.0
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	2.6	2.7	2.2
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	<2.0	<2.0
EVE Acid	<2.0	<2.0	2.3	2.5	2.3
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	3.0	3.1	3.0	<2.0	<2.0
Total Attachment C^{2,3}	6.6	7.1	14	6.8	7.4
Total Table 3+ (17 compounds)^{3,4}	6.6	7.1	17	9.3	9.7
Total Table 3+ (20 compounds)³	6.6	7.1	17	9.3	9.7

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-041323	CFR-TARHEEL-24-041723	CFR-TARHEEL-24-041723-D	CFR-TARHEEL-24-042023	CFR-TARHEEL-24-042423
Sample Date	04/13/2023	04/17/2023	04/17/2023	04/20/2023	04/24/2023
Sample Type	Grab	Composite	Field Duplicate	Composite	Composite
Sample Start Date and Time	04/10/23 1:35 PM	04/17/23 12:00 AM	04/17/23 12:00 AM	04/20/23 12:00 AM	04/24/23 12:00 AM
Sample Stop Date and Time	--	04/17/23 11:00 PM	04/17/23 11:00 PM	04/20/23 11:00 PM	04/24/23 11:00 PM
Composite Duration (hours) ¹	0	24	24	24	24
QA/QC					
Sample Delivery Group (SDG)	320-98947-1	320-99181-1	320-99181-1	320-99660-1	320-99660-1
Lab Sample ID	320-98947-4	320-99181-1	320-99181-2	320-99660-1	320-99660-2
Table 3+ SOP (ng/L)					
HFPO-DA	9.7	<2.0	<2.0	<2.0	<2.0
PFMOAA	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PFO2HxA	2.3	<2.0	<2.0	2.2	3.4
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	2.8	<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	<2.0	<2.0
EVE Acid	3.9	<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	2.5	3.4	3.6	3.9	3.7
Total Attachment C^{2,3}	15	ND	ND	2.2	3.4
Total Table 3+ (17 compounds)^{3,4}	19	ND	ND	2.2	3.4
Total Table 3+ (20 compounds)³	19	ND	ND	2.2	3.4

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-042723	CFR-TARHEEL-24-050123	CFR-TARHEEL-24-050423	CFR-TARHEEL-24-050823	CFR-TARHEEL-24-050823-D
Sample Date	04/27/2023	05/01/2023	05/04/2023	05/08/2023	05/08/2023
Sample Type	Composite	Composite	Composite	Composite	Composite
Sample Start Date and Time	04/27/23 12:00 AM	05/01/23 12:00 AM	05/04/23 12:00 AM	05/08/23 12:00 AM	05/08/23 12:00 AM
Sample Stop Date and Time	04/27/23 11:00 PM	05/01/23 11:00 PM	05/04/23 11:00 PM	05/08/23 11:00 PM	05/08/23 11:00 PM
Composite Duration (hours) ¹	24	24	24	24	24
QA/QC					Field Duplicate
Sample Delivery Group (SDG)	320-99885-1	320-99885-1	320-100275-1	320-100275-1	320-100275-1
Lab Sample ID	320-99885-1	320-99885-2	320-100275-1	320-100275-2	320-100275-3
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	2.6	2.4	4.0	3.0	4.3
PFMOAA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0
PFO2HxA	4.1	3.1	<2.0	2.2	2.0
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	<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 UJ	<2.0
NVHOS	<2.0	<2.0	<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 UJ	<2.0
Perfluoroheptanoic Acid	2.5	2.9	2.8	4.0	3.9
Total Attachment C ^{2,3}	6.7	5.5	4.0	5.2	6.3
Total Table 3+ (17 compounds) ^{3,4}	6.7	5.5	4.0	5.2	6.3
Total Table 3+ (20 compounds) ³	6.7	5.5	4.0	5.2	6.3

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023			Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-051123	CAP2Q23-CFR-TARHEEL-051123	CAP2Q23-CFR-TARHEEL-24-051223	CFR-TARHEEL-24-051523	CFR-TARHEEL-24-051823
Sample Date	05/11/2023	05/11/2023	05/12/2023	05/15/2023	05/18/2023
Sample Type	Composite	Grab	Composite	Composite	Composite
Sample Start Date and Time	05/11/23 12:00 AM	05/11/23 5:20 PM	05/11/23 4:30 PM	05/15/23 12:00 AM	05/18/23 12:00 AM
Sample Stop Date and Time	05/11/23 11:00 PM	--	05/12/23 3:30 PM	05/15/23 11:00 PM	05/18/23 11:00 PM
Composite Duration (hours) ¹	24	0	24	24	24
QA/QC					
Sample Delivery Group (SDG)	320-100608-1	320-100312-1	320-100446-1	320-100608-1	320-100783-1
Lab Sample ID	320-100608-1	320-100312-1	320-100446-4	320-100608-2	320-100783-1
Table 3+ SOP (ng/L)					
HFPO-DA	4.0 J	4.1	5.3 J	4.2	4.4
PFMOAA	5.9 J	<2.0	7.3 J	8.5	6.0
PFO2HxA	3.1 J	3.9	4.1 J	3.7	3.9
PFO3OA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PFO4DA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PFO5DA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PMPA	<10 UJ	<10	<10 UJ	<10	<10
PEPA	<20 UJ	<20	<20 UJ	<20	<20
PS Acid	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
Hydro-PS Acid	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
R-PSDA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
Hydrolyzed PSDA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
R-PSDCA	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
NVHOS	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
EVE Acid	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
Hydro-EVE Acid	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
R-EVE	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PES	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PFECA B	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
PFECA-G	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0
Perfluoroheptanoic Acid	2.1 J	3.8	3.8	<2.0	<2.0
Total Attachment C^{2,3}	13	8.0	17	16	14
Total Table 3+ (17 compounds)^{3,4}	13	8.0	17	16	14
Total Table 3+ (20 compounds)³	13	8.0	17	16	14

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-052223	CFR-TARHEEL-24-052523	CFR-TARHEEL-24-052923	CFR-TARHEEL-24-060223	CFR-TARHEEL-060623
Sample Date	05/22/2023	05/25/2023	05/29/2023	06/02/2023	06/06/2023
Sample Type	Composite	Composite	Composite	Composite	Grab
Sample Start Date and Time	05/22/23 12:00 AM	05/25/23 12:00 AM	05/29/23 12:00 AM	06/02/23 12:00 AM	06/06/23 11:05 AM
Sample Stop Date and Time	05/22/23 11:00 PM	05/25/23 11:00 PM	05/29/23 11:00 PM	06/02/23 11:00 PM	--
Composite Duration (hours) ¹	24	24	24	24	0
QA/QC					
Sample Delivery Group (SDG)	320-100783-1	320-100993-1	320-100993-1	320-101275-1	320-101275-1
Lab Sample ID	320-100783-2	320-100993-1	320-100993-2	320-101275-1	320-101275-2
Table 3+ SOP (ng/L)					
HFPO-DA	4.6	4.1 J	10 J	4.5	4.8
PFMOAA	6.6	9.1 J	14 J	<2.0	<2.0
PFO2HxA	3.7	4.8 J	8.2 J	4.1	5.5
PFO3OA	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PFO4DA	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PFO5DA	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PMPA	<10	<10 UJ	11 J	12	15
PEPA	<20	<20 UJ	<20 UJ	<20	<20
PS Acid	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
R-PSDA	<2.0	<2.0 UJ	2.0 J	4.0 J	5.4 J
Hydrolyzed PSDA	<2.0	<2.0 UJ	<2.0 UJ	<2.0	2.4 J
R-PSDCA	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
NVHOS	<2.0	<2.0 UJ	<2.0 UJ	3.3	2.9
EVE Acid	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
R-EVE	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PES	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PFECA B	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
PFECA-G	<2.0	<2.0 UJ	<2.0 UJ	<2.0	<2.0
Perfluoroheptanoic Acid	<2.0	3.2 J	3.3 J	3.5	3.5
Total Attachment C^{2,3}	15	18	43	21	25
Total Table 3+ (17 compounds)^{3,4}	15	18	43	24	28
Total Table 3+ (20 compounds)³	15	18	45	28	36

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-060923	CFR-TARHEEL-24-061223	CFR-TARHEEL-24-061223-D	CFR-TARHEEL-24-061523	CFR-TARHEEL-24-061923
Sample Date	06/09/2023	06/12/2023	06/12/2023	06/15/2023	06/19/2023
Sample Type	Composite	Composite	Composite	Composite	Composite
Sample Start Date and Time	06/09/23 12:00 AM	06/12/23 12:00 AM	06/12/23 12:00 AM	06/15/23 12:00 AM	06/19/23 12:00 AM
Sample Stop Date and Time	06/09/23 11:00 PM	06/12/23 11:00 PM	06/12/23 11:00 PM	06/15/23 11:00 PM	06/19/23 11:00 PM
Composite Duration (hours) ¹	24	24	24	24	24
QA/QC			Field Duplicate		
Sample Delivery Group (SDG)	320-101516-1	320-101516-1	320-101516-1	320-101796-1	320-101796-1
Lab Sample ID	320-101516-1	320-101516-2	320-101516-3	320-101796-1	320-101796-2
<i>Table 3+ SOP (ng/L)</i>					
HFPO-DA	7.6	6.1	6.6	5.1	5.2
PFMOAA	13	13	10	14	14
PFO2HxA	8.5	8.4 J	5.9 J	6.6	7.1
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	2.1 J	<2.0	<2.0	<2.0	2.6 J
Hydrolyzed PSDA	<2.0	2.1 J	<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	<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	4.2	3.1	3.0	3.3	4.4
Total Attachment C^{2,3}	31	28	23	26	26
Total Table 3+ (17 compounds)^{3,4}	31	28	23	26	26
Total Table 3+ (20 compounds)³	33	30	23	26	29

TABLE 3
CAPE FEAR RIVER TAR HEEL ANALYTICAL RESULTS - Q2 2023
Chemours Fayetteville Works, North Carolina

Sampling Event	Q2 2023	Q2 2023	Q2 2023
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-TARHEEL
Field Sample ID	CFR-TARHEEL-24-062223	CFR-TARHEEL-24-062623	CFR-TARHEEL-24-062923
Sample Date	06/22/2023	06/26/2023	06/29/2023
Sample Type	Composite	Composite	Composite
Sample Start Date and Time	06/22/23 12:00 AM	06/26/23 12:00 AM	06/29/23 12:00 AM
Sample Stop Date and Time	06/22/23 11:00 PM	06/26/23 11:00 PM	06/29/23 11:00 PM
Composite Duration (hours) ¹	24	24	24
QA/QC			
Sample Delivery Group (SDG)	320-102143-1	320-102143-1	320-102369-1
Lab Sample ID	320-102143-1	320-102143-2	320-102369-1
<i>Table 3+ SOP (ng/L)</i>			
HFPO-DA	11	3.3	2.6
PFMOAA	10	<2.0	3.5
PFO2HxA	7.5	2.7	2.6
PFO3OA	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0
PMPA	15	<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	4.3	5.2	6.3
Total Attachment C^{2,3}	44	6.0	8.7
Total Table 3+ (17 compounds)^{3,4}	44	6.0	8.7
Total Table 3+ (20 compounds)³	44	6.0	8.7

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	CFR-TARHEEL	EB	EB	EB
Field Sample ID	CAP2Q23-CFR-BLADEN-051123	CAP2Q23-CFR-KINGS-051623	CAP2Q23-CFR-TARHEEL-051123	CAP2Q23-CFR-TARHEEL-24-051223	CAP2Q23-EBLK-PP-051623	CAP2Q23-EQBLK-DV-051723	CAP2Q23-EQBLK-IS-051723
Sample Date and Time	05/11/2023	05/16/2023	05/11/2023	05/12/2023	05/16/2023	05/17/2023	05/17/2023
QA/QC						Equipment Blank	Equipment Blank
Sample Delivery Group (SDG)	320-100312-1	320-100446-1	320-100312-1	320-100446-1	320-100446-1	320-100611-1	320-100611-1
Lab Sample ID	320-100312-2	320-100446-3	320-100312-1	320-100446-4	320-100446-5	320-100611-9	320-100611-6
Table 3+ SOP (ng/L)							
HFPO-DA	3.8	3.3	4.1	5.3 J	<2.0 UJ	<2.0 UJ	<2.0
PFMOAA	<2.0	<2.0 UJ	<2.0	7.3 J	<2.0	<2.0	<2.0
PFO2HxA	3.6	4.6	3.9	4.1 J	<2.0	<2.0	<2.0
PFO3OA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PMPA	<10	<10 UJ	<10	<10 UJ	<10	<10	<10
PEPA	<20	<20	<20	<20 UJ	<20	<20	<20
PS Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
R-PSDA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
Hydrolyzed PSDA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
R-PSDCA	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
NVHOS	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
EVE Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
R-EVE	<2.0	2.0 J	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PES	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0 UJ	<2.0	<2.0 UJ	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	4.0	3.5	3.8	3.8	<2.0	<2.0 UJ	<2.0 UJ
Total Attachment C^{1,3}	7.4	7.9	8.0	17	ND	ND	ND
Total Table 3+ (17 compounds)^{2,3}	7.4	7.9	8.0	17	ND	ND	ND
Total Table 3+ (20 compounds)³	7.4	9.9	8.0	17	ND	ND	ND

Notes:

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.

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.

B - analyte detected in an associated blank

Bold - Analyte detected above associated reporting limit

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

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

< - Analyte not detected above associated reporting limit.

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

Reporting Period ^{1,2,3}	River volume (m ³)	Total Attachment C ⁴			Total Table 3+ (17 Compounds) ⁵			Total Table 3+ (20 Compounds)		
		Projected Load (kg) ⁶	Measured Load in Cape Fear River (kg) ⁷	Remedy Reduction Load (kg) ⁸	Projected Load (kg) ⁶	Measured Load in Cape Fear River (kg) ⁷	Remedy Reduction Load (kg) ⁸	Projected Load (kg) ⁶	Measured Load in Cape Fear River (kg) ⁷	Remedy Reduction Load (kg) ⁸
2020 Q2	1,741,608,819	121	121	--	122	122	--	156	156	--
2020 Q3	1,018,288,698	76	76	--	77	77	--	98	98	--
2020 Q4	2,454,725,700	106	81	26	108	82	26	132	106	27
2021 Q1	2,824,921,888	122	93	28	123	94	29	146	117	29
2021 Q2	700,215,783	118	75	43	121	77	44	152	106	47
2021 Q3	590,545,842	97	39	58	99	41	59	112	49	64
2021 Q4	278,350,417	61	17	44	64	19	45	72	22	50
2022 Q1	1,439,452,916	68	31	37	71	33	38	82	40	42
2022 Q2	664,576,466	55	13	42	58	15	42	65	19	46
2022 Q3	297,718,095	53	9	44	55	11	45	61	12	49
2022 Q4	623,949,575	54	16	37	55	17	38	60	19	41
2023 Q1	1,227,333,287	49	23	26	51	23	28	59	28	30
2023 Q2	1,131,623,838	24	10	14	25	11	14	27	12	15
<i>Last Four Quarters</i>	<i>3,280,624,796</i>	<i>180</i>	<i>59</i>	<i>121</i>	<i>186</i>	<i>62</i>	<i>124</i>	<i>206</i>	<i>71</i>	<i>135</i>

Notes:

- 1 - 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.
 - 2 - The remedies at Outfall 003 Stream, Seeps A, B, C, and D, and at Outfall 002 were operational since Q3 2021.
 - 3 - The barrier wall remedy and groundwater extraction system were operational since Q1 2023.
 - 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 Outfall 003 Treatment System, Seeps A to D and the Stormwater Treatment System.
- - not calculated
kg - kilograms
m³ - cubic meters

**TABLE 6A
CAPE FEAR RIVER PFAS MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina**

Interval Details			Total River Flow (m ³)	Calculated Mass Load ² (kg)																						Total Attachment C ³	Total Table 3+ (17 Compounds) ⁴	Total Table 3+ (20 Compounds)
Interval ID	Start Time ¹	End Time ¹		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				
2023_Q2_47	6/15/23 0:01	6/15/23 23:01	2,098,219	0.01	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.1	0.1	0.1	
2023_Q2_48	6/15/23 23:01	6/19/23 0:01	6,610,673	0.03	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.2	0.2	0.2	
2023_Q2_49	6/19/23 0:01	6/19/23 23:01	1,960,930	0.01	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.1	0.1	0.1	
2023_Q2_50	6/19/23 23:01	6/22/23 0:01	7,417,966	0.06	0.09	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.3	0.3	0.3	
2023_Q2_51	6/22/23 0:01	6/22/23 23:01	4,966,803	0.05	0.05	0.04	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.2	0.2	0.2	
2023_Q2_52	6/22/23 23:01	6/26/23 0:01	33,027,496	0.24	0.17	0.17	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.8	0.8	0.8	
2023_Q2_53	6/26/23 0:01	6/26/23 23:01	14,705,958	0.05	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.1	0.1	0.1	
2023_Q2_54	6/26/23 23:01	6/29/23 0:01	48,606,830	0.14	0.09	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.4	0.4	0.4	
2023_Q2_55	6/29/23 0:01	6/29/23 23:01	21,575,483	0.06	0.08	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.2	0.2	0.2	
2023_Q2_56	6/29/23 23:01	7/1/23 0:01	13,934,012	0.04	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	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
m³ - cubic meter
NA - Compound not analyzed

**TABLE 6B
OUTFALL 003 CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (kg) ¹																							
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m ³)	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	Total Attachment C ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)	
OF003 2023 1 Q2	4/1/23 0:00	4/30/23 23:59	720	50,000	0.26	1.1	0.42	0.11	0.052	0.019	0.20	0	0.038	0.016	0	0.057	0	0.019	0	0	0	0	0	0	0	2.2	2.2	2.3
OF003 2023 2 Q2	5/1/23 0:00	5/31/23 23:59	744	50,000	0.26	0.82	0.29	0.078	0.038	0.023	0.14	0.046	0.030	0.014	0.013	0.042	0	0.012	0.0015	0.009	0.0064	0	0	0	1.7	1.8	1.8	
OF003 2023 3 Q2	6/1/23 0:00	6/30/23 23:59	720	50,000	0.25	0.73	0.28	0.091	0.043	0.023	0.12	0.046	0.032	0.014	0.013	0.042	0.00035	0.011	0.0014	0.0077	0.0068	0	0	0	1.6	1.6	1.7	
Total				160,000	0.77	2.6	1.0	0.28	0.13	0.066	0.46	0.091	0.10	0.044	0.026	0.14	0.00035	0.042	0.0029	0.016	0.013	0	0	0	5.6	5.6	5.8	

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 Perfluorohexanoic 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 - previously Old Outfall 002 treatment system
 kg - kilogram
 m³ - cubic meter

TABLE 6C
SEEP A FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina

Interval Details					Calculated Captured Mass Load (kg) ¹																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m ³)	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	PFCA B	PFCA-G	Total Attachment C ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)
SeepA_2023_1_Q2	4/1/23 0:00	4/9/23 6:00	198	4,169	0.071	0.15	0.08	0.025	0.011	0.0042	0.050	0.022	0.0024	0.0020	0.0046	0.020	0	0.0021	0.00063	0.0024	0.0027	0	0	0	0.42	0.42	0.5
SeepA_2023_2_Q2	4/9/23 6:01	4/28/23 6:00	456	5,640	0.084	0.15	0.11	0.031	0.014	0.0079	0.067	0.029	0.0032	0.0025	0.0047	0.018	0	0.0026	0.00079	0.0030	0.0024	0	0	0	0.50	0.50	0.5
SeepA_2023_3_Q2	4/28/23 6:01	5/15/23 6:00	408	4,943	0.064	0.16	0.10	0.028	0.013	0.0074	0.054	0.024	0.0014	0.0025	0.0054	0.032	0	0.0026	0	0.0023	0.0027	0	0	0	0.45	0.45	0.5
SeepA_2023_4_Q2	5/15/23 6:01	5/30/23 9:00	363	2,941	0.044	0.11	0.058	0.016	0.007	0.0038	0.035	0.016	0.0008	0.0014	0.0041	0.025	0.000053	0.0017	0.00014	0.0015	0.0020	0	0	0	0.29	0.29	0.3
SeepA_2023_5_Q2	5/30/23 9:01	6/14/23 18:00	369	3,858	0.057	0.13	0.088	0.030	0.013	0.0081	0.046	0.019	0.0008	0.0020	0.0054	0.035	0.000069	0.0022	0.00011	0.0019	0.0026	0	0	0	0.38	0.38	0.5
SeepA_2023_6_Q2	6/14/23 18:01	6/30/23 23:59	390	6,616	0.072	0.19	0.12	0.034	0.014	0.0079	0.060	0.025	0.0010	0.0026	0.0072	0.043	0	0.0031	0.00013	0.0026	0.0033	0	0	0	0.53	0.54	0.6
Total				28,167	0.39	0.88	0.56	0.16	0.072	0.039	0.31	0.13	0.010	0.013	0.031	0.17	0.00012	0.014	0.0018	0.014	0.016	0	0	0	2.6	2.6	2.8

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.

-- mass load not calculated

kg - kilogram

m³ - cubic meter

TABLE 6D
SEEP B FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina

Interval Details					Calculated Captured Mass Load (kg) ¹																						
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m ³)	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 ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)
SeepB_2023_1_Q2	4/1/2023 00:00	4/9/2023 00:00	192	2,348	0.12	0.035	0.032	0.0087	0.0034	0.0016	0.11	0.066	0.012	0.0083	0.022	0.12	0.00046	0.0085	0.009	0.012	0.013	0	0	0	0.39	0.41	0.57
SeepB_2023_2_Q2	4/9/2023 00:01	4/28/2023 06:00	462	3,447	0.15	0.079	0.038	0.0086	0.0045	0.0018	0.13	0.072	0.014	0.0089	0.017	0.10	0	0.010	0.011	0.016	0.012	0	0	0	0.51	0.55	0.65
SeepB_2023_3_Q2	4/28/2023 06:01	5/15/2023 06:00	408	1,017	0.039	0.10	0.027	0.0031	0.0010	0.00043	0.06	0.029	0.0023	0.0018	0.0053	0.044	0	0.0031	0.0019	0.0033	0.004	0	0	0	0.25	0.26	0.31
SeepB_2023_4_Q2	5/15/2023 06:01	5/30/2023 09:00	363	1,541	0.068	0.075	0.028	0.0046	0.0018	0.00082	0.066	0.042	0.0039	0.0034	0.010	0.062	0.00020	0.0048	0.0034	0.0060	0.007	0	0	0	0.29	0.31	0.38
SeepB_2023_5_Q2	5/30/2023 09:01	6/14/2023 18:00	369	2,754	0.080	0.076	0.044	0.0085	0.0033	0.0019	0.074	0.047	0.0039	0.0050	0.013	0.074	0.00023	0.0058	0.0030	0.0077	0.009	0	0	0	0.36	0.36	0.47
SeepB_2023_6_Q2	6/14/2023 18:01	6/30/2023 23:59	390	5,079	0.10	0.15	0.081	0.012	0.0037	0.0017	0.10	0.061	0.0027	0.0045	0.014	0.086	0.00024	0.0076	0.0021	0.0076	0.010	0	0	0	0.50	0.55	0.66
Total				16,184	0.55	0.51	0.25	0.045	0.018	0.0082	0.53	0.32	0.038	0.032	0.081	0.48	0.0011	0.039	0.030	0.053	0.054	0	0	0	2.3	2.4	3.0

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

m³ - cubic meter

TABLE 6E
SEEP C FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina

Interval Details					Calculated Captured Mass Load (kg) ¹																							
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m ³)	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 ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)	
SeepC 2023 1 Q2	4/1/23 0:00	4/9/23 6:00	198	2,121	0.027	0.067	0.034	0.010	0.0038	0.00018	0.012	0.0040	0	0.00070	0.0016	0.0015	0	0.00089	0	0.0019	0.0012	0	0	0	0	0.16	0.16	0.17
SeepC 2023 2 Q2	4/9/23 6:01	4/28/23 6:00	456	2,897	0.023	0.066	0.032	0.010	0.0035	0	0.011	0.0038	0	0.00058	0.00084	0.00078	0	0.00075	0	0.0020	0.00067	0	0	0	0	0.15	0.15	0.16
SeepC 2023 3 Q2	4/28/23 6:01	5/15/23 18:00	420	2,129	0.019	0.051	0.023	0.0070	0.0028	0	0.0085	0.0028	0	0.00045	0.0010	0.0015	0	0.00062	0	0.0013	0.00072	0	0	0	0	0.11	0.12	0.12
SeepC 2023 4 Q2	5/15/23 18:01	5/30/23 9:00	351	1,645	0.018	0.052	0.025	0.0067	0.0025	0	0.0089	0.0030	0	0.00039	0.00089	0.0012	0	0.00066	0	0.0013	0.00084	0	0	0	0	0.12	0.12	0.12
SeepC 2023 5 Q2	5/30/23 9:01	6/14/23 18:00	369	2,114	0.019	0.055	0.027	0.010	0.0036	0.00025	0.0093	0.0032	0	0.00049	0.0010	0.0012	0	0.00076	0	0.0014	0.00089	0	0	0	0	0.13	0.13	0.14
SeepC 2023 6 Q2	6/14/23 18:01	6/30/23 23:59	390	2,556	0.014	0.038	0.019	0.0059	0.0020	0	0.0066	0.0022	0	0.00031	0.00072	0.00066	0	0.00056	0	0.00082	0.00054	0	0	0	0	0.086	0.089	0.092
Total				13,462	0.12	0.33	0.16	0.050	0.018	0.00043	0.057	0.019	0	0.0029	0.0060	0.0069	0	0.0042	0	0.0087	0.0049	0	0	0	0.76	0.77	0.79	

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

m³ - cubic meter

TABLE 6F
SEEP D FLOW THROUGH CELL CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q2 2023
Chemours Fayetteville Works, North Carolina

Interval Details					Calculated Captured Mass Load (kg) ¹																							
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (m ³)	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 ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)	
SeepD 2023 1 Q2	4/1/23 0:00	4/9/23 6:00	198	1,854	0.026	0.072	0.031	0.010	0.0030	0.00030	0.011	0.0033	0	0.00054	0.0016	0.0033	0	0.0010	0	0.0017	0.0013	0	0	0	0	0.16	0.16	0.17
SeepD 2023 2 Q2	4/9/23 6:01	4/28/23 6:00	456	2,171	0.015	0.054	0.024	0.0067	0.0022	0.00020	0.0080	0.0028	0	0.00035	0.00067	0.0013	0	0.00069	0	0.0012	0.00054	0	0	0	0	0.11	0.11	0.12
SeepD 2023 3 Q2	4/28/23 6:01	5/15/23 18:00	420	6,158	0.062	0.20	0.086	0.032	0.0092	0	0.034	0.011	0	0.0013	0	0.0080	0	0.0033	0	0.0049	0	0	0	0	0	0.44	0.45	0.46
SeepD 2023 4 Q2	5/15/23 18:01	5/30/23 9:00	351	3,442	0.041	0.13	0.058	0.017	0.0052	0.00069	0.021	0.0076	0	0.0010	0.0028	0.0062	0	0.0018	0	0.0032	0.0024	0	0	0	0	0.29	0.29	0.30
SeepD 2023 5 Q2	5/30/23 9:01	6/14/23 18:00	369	3,745	0.045	0.12	0.063	0.023	0.0090	0.00090	0.021	0.0075	0	0.0012	0.0027	0.0060	0	0.0018	0	0.0034	0.0022	0	0	0	0	0.29	0.30	0.31
SeepD 2023 6 Q2	6/14/23 18:01	6/30/23 23:59	390	3,761	0.037	0.13	0.059	0.021	0.0060	0.00071	0.021	0.0071	0	0.00094	0.0025	0.0056	0	0.0017	0	0.0028	0.0021	0	0	0	0	0.28	0.29	0.30
Total				21,131	0.23	0.72	0.32	0.11	0.035	0.0028	0.12	0.039	0	0.0052	0.010	0.030	0	0.010	0	0.017	0.0086	0	0	0	1.6	1.6	1.6	

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

m³ - cubic meter

TABLE 6G
STORMWATER TREATMENT SYSTEM CAPTURED MASS LOAD
BY COMPOUND AND DATE - Q2 2023
Chemours Fayetteville Works, North Carolina

Date ¹	Total Flow (m ³) ²	Calculated Captured Mass Load (kg) ^{3,4}			
		HFPO-DA	PFMOAA	PMPA	Total of 3 Compounds ⁵
4/11/23	461	0.018	0.0083	0.0006	0.026
4/12/23	632	0.024	0.0114	0.0008	0.036
4/13/23	623	0.024	0.0112	0.0008	0.036
4/14/23	362	0.017	0.0054	0.0004	0.022
4/15/23	368	0.017	0.0055	0.0004	0.023
4/16/23	244	0.011	0.0037	0.0003	0.015
4/20/23	415	0.016	0.0087	0.0005	0.025
4/21/23	735	0.028	0.0154	0.0008	0.044
4/22/23	667	0.025	0.0140	0.0007	0.040
4/23/23	727	0.028	0.0153	0.0008	0.044
5/2/23	464	0.014	0.0088	0.0006	0.023
5/3/23	514	0.015	0.0098	0.0007	0.026
5/4/23	314	0.014	0.0119	0.0004	0.027
6/1/23	525	0.058	0.0053	0.0008	0.064
6/2/23	561	0.062	0.0056	0.0008	0.068
6/3/23	508	0.056	0.0051	0.0008	0.062
6/4/23	374	0.037	0.0037	0.0006	0.042
6/5/23	219	0.022	0.0022	0.0003	0.024
6/21/23	479	0.027	0.0044	0.0005	0.032
6/22/23	560	0.032	0.0052	0.0006	0.038
6/23/23	583	0.033	0.0054	0.0006	0.039
6/24/23	570	0.032	0.0052	0.0006	0.038
6/25/23	573	0.031	0.0051	0.0006	0.037
6/26/23	483	0.027	0.0043	0.0005	0.031
6/27/23	539	0.030	0.0048	0.0005	0.035
6/28/23	486	0.021	0.0036	0.0004	0.025
6/29/23	428	0.018	0.0032	0.0003	0.022
6/30/23	104	0.004	0.0008	0.0001	0.005
Total	13,518	0.74	0.19	0.016	0.95

Notes:

1 - Listed dates are days when flow was recorded at the Stormwater Treatment System.

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.

TABLE 7
SUMMARY OF TOTAL PFAS MASS DISCHARGE AT TAR HEEL FERRY ROAD BRIDGE - Q2 2023
Chemours Fayetteville Works, North Carolina

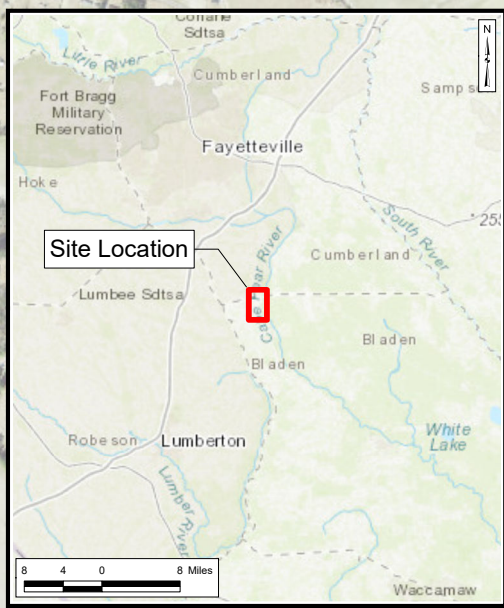
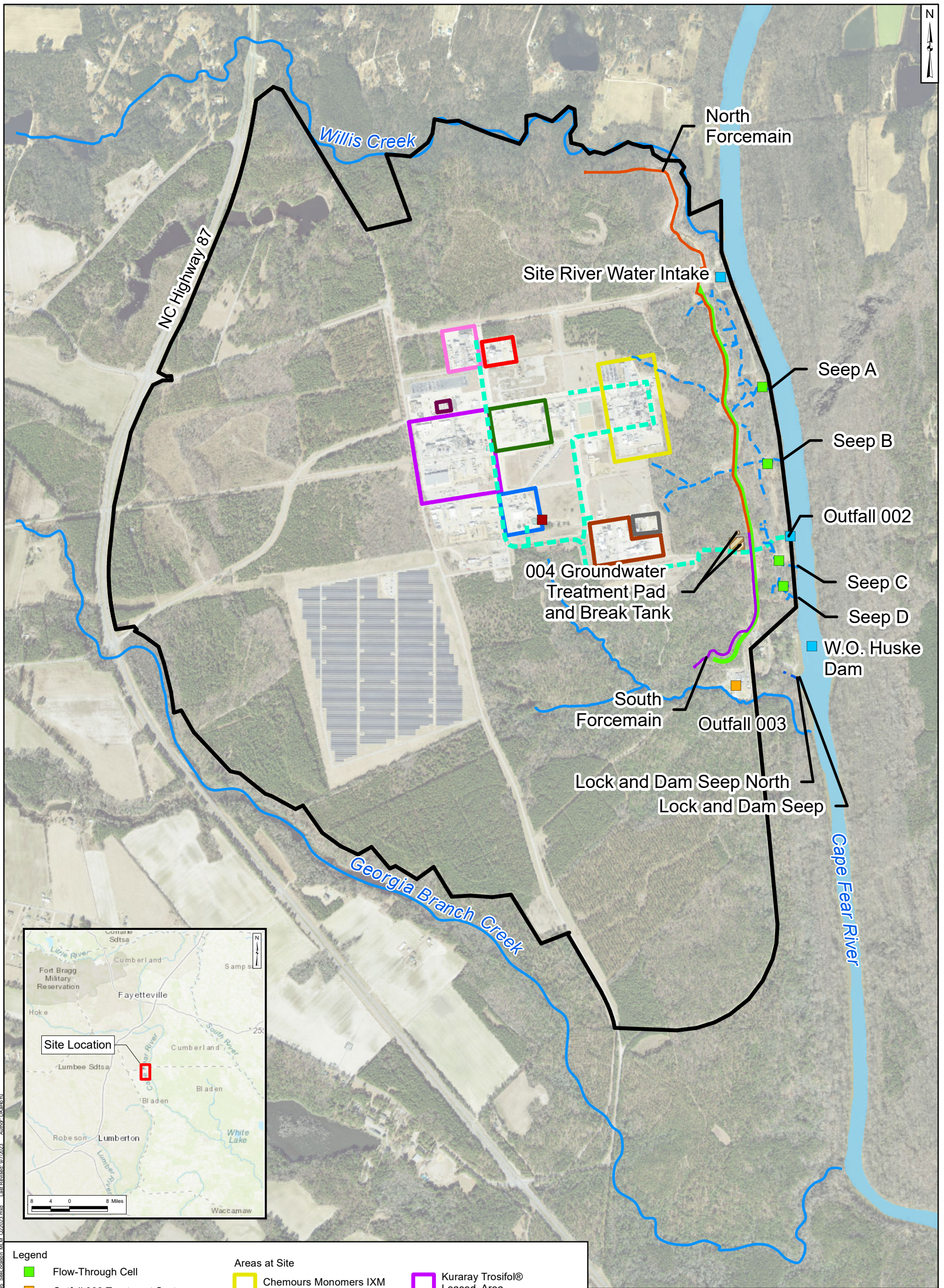
Field Sample ID	Collection Date	Hours Composited ¹	Concentrations (ng/L)			Total Volume (ft ³) ⁴	Instantaneous Flow Rate (ft ³ /s) ⁵	Mass Discharge (mg/s)		
			Total Attachment C ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)			Total Attachment C ²	Total Table 3+ (17 compounds) ³	Total Table 3+ (20 compounds)
CFR-TARHEEL-24-040323	4/3/23 23:01	24	6.6	6.6	6.6	223,000,000	--	0.5	0.5	0.5
CFR-TARHEEL-24-040623	4/6/23 23:01	24	7.1	7.1	7.1	201,500,000	--	0.5	0.5	0.5
CFR-TARHEEL-18-040823	4/8/23 17:01	18	14	17	17	307,130,000	--	2.0	2.4	2.4
CFR-TARHEEL-041023	4/10/23 12:45	0	6.8	9.3	9.3	--	25,400	4.9	6.7	6.7
CFR-TARHEEL-041123	4/11/23 16:25	0	7.4	9.7	9.7	--	22,300	4.7	6.1	6.1
CFR-TARHEEL-041323	4/13/23 12:47	0	15	19	19	--	16,700	7.0	9.0	9.0
CFR-TARHEEL-24-041723	4/17/23 23:01	24	0	0	0	1,192,200,000	--	0	0	0
CFR-TARHEEL-24-041723-D	4/17/23 23:01	24	0	0	0	1,192,200,000	--	0	0	0
CFR-TARHEEL-24-042023	4/20/23 23:01	24	2.2	2.2	2.2	763,030,000	--	0.6	0.6	0.6
CFR-TARHEEL-24-042423	4/24/23 23:01	24	3.4	3.4	3.4	600,610,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-042723	4/27/23 23:01	24	6.7	6.7	6.7	323,590,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-050123	5/1/23 23:01	24	5.5	5.5	5.5	661,910,000	--	1.2	1.2	1.2
CFR-TARHEEL-24-050423	5/4/23 23:01	24	4	4	4	851,070,000	--	1.2	1.2	1.2
CFR-TARHEEL-24-050823	5/8/23 23:01	24	5.2	5.2	5.2	391,600,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-050823-D	5/8/23 23:01	24	6.3	6.3	6.3	391,600,000	--	0.8	0.8	0.8
CAP2Q23-CFR-TARHEEL-051123	5/11/23 17:11	0	15	15	15	--	2,160	0.9	0.9	0.9
CFR-TARHEEL-24-051123	5/11/23 23:01	24	13	13	13	178,550,000	--	0.8	0.8	0.8
CAP2Q23-CFR-TARHEEL-24-051223	5/12/23 23:01	24	23	23	23	149,570,000	--	1.2	1.2	1.2
CFR-TARHEEL-24-051523	5/15/23 23:01	24	16	16	16	130,320,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-051823	5/18/23 23:01	24	14	14	14	147,600,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-052223	5/22/23 23:01	24	15	15	15	151,750,000	--	0.8	0.8	0.8
CFR-TARHEEL-24-052523	5/25/23 23:01	24	18	18	18	97,713,000	--	0.6	0.6	0.6
CFR-TARHEEL-24-052923	5/29/23 23:01	24	43	43	45	124,480,000	--	1.8	1.8	1.9
CFR-TARHEEL-24-060223	6/2/23 23:01	24	21	24	28	163,150,000	--	1.1	1.3	1.6
CFR-TARHEEL-060623	6/6/23 13:48	0	25	28	36	--	1,090	0.8	0.9	1.1
CFR-TARHEEL-24-061223	6/12/23 23:01	24	28	28	30	101,570,000	--	1.0	1.0	1.0
CFR-TARHEEL-24-061223-D	6/12/23 23:01	24	23	23	23	101,570,000	--	0.8	0.8	0.8
CFR-TARHEEL-24-060923	6/9/23 23:01	24	31	31	33	81,975,000	--	0.9	0.9	0.9
CFR-TARHEEL-24-061523	6/15/23 23:01	24	26	26	26	74,098,000	--	0.7	0.7	0.7
CFR-TARHEEL-24-061923	6/19/23 23:01	24	26	26	29	69,249,000	--	0.6	0.6	0.7
CFR-TARHEEL-24-062223	6/22/23 23:01	24	44	44	44	175,400,000	--	2.6	2.6	2.6
CFR-TARHEEL-24-062623	6/26/23 23:01	24	6	6	6	519,340,000	--	1.1	1.1	1.1
CFR-TARHEEL-24-062923	6/29/23 23:01	24	8.7	8.7	8.7	761,930,000	--	2.3	2.3	2.3

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
ft³ - cubic feet
ft³/s - cubic feet per second
mg/s - milligrams per second
ng/L - nanograms per liter

Figures



Legend		Areas at Site	
■	Flow-Through Cell	 	Chemours Monomers IXM
■	Outfall 003 Treatment System	 	Chemours Polymer Processing Aid Area
■	Stormwater Treatment System	 	DuPont Polyvinyl Fluoride Leased Area
■	Site Features	 	Former DuPont PMDF Area
	Site Boundary	 	Kuraray Laboratory
—	Nearby Tributary	 	Kuraray SentryGlas® Leased Area
- - -	Observed Seep (Natural Drainage)	 	
- - -	Site Conveyance Network		
—	North Forcemain		
—	South Forcemain		
—	Barrier Wall		
 	Groundwater Treatment Pad		

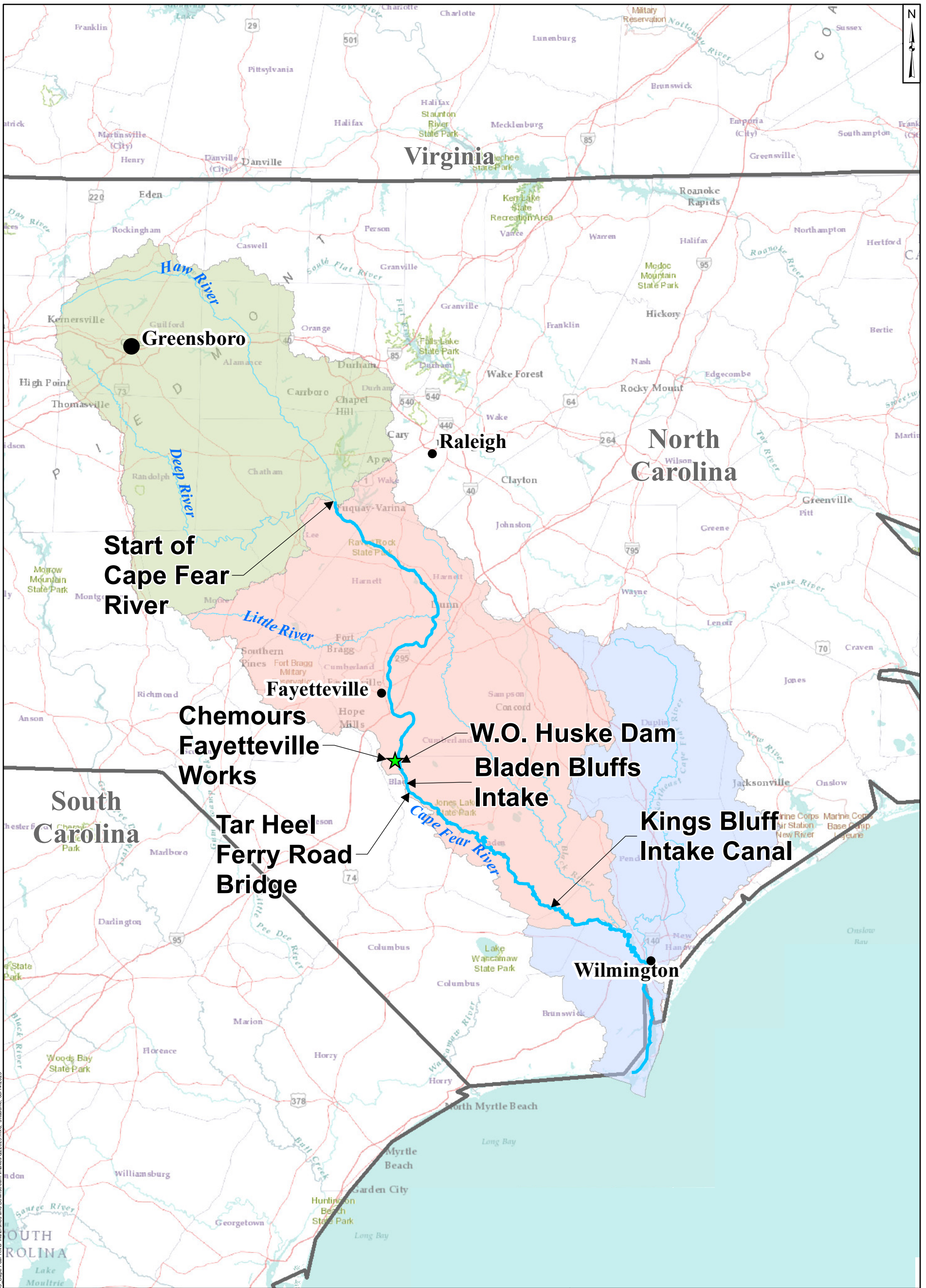
Notes:
 1. The outline of Cape Fear River is approximate and is based on open data from ArcGIS Online and North Carolina Department of Environmental Quality Online GIS (MajorHydro shapefile).
 2. Basemap sources: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

1,000 500 0 1,000 Feet

Site Location Map
 Chemours Fayetteville Works, North Carolina

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

Figure
1



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.

20 10 0 20 Miles

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

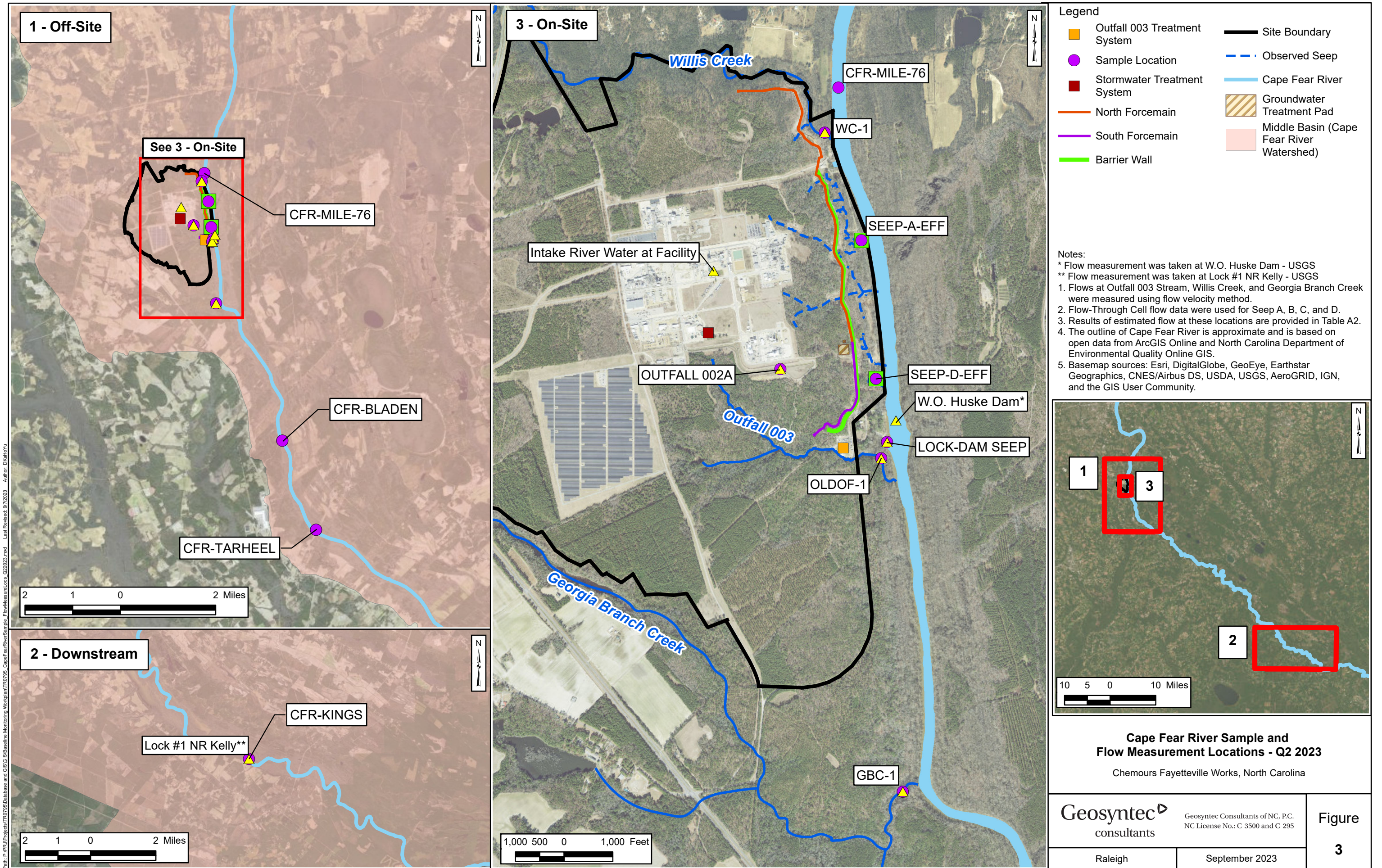
<p>Geosyntec consultants</p>	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295
Raleigh	September 2023

Figure

2

Path: P:\P\Projects\T007\980\Database and GIS\GIS Baseline Monitoring\Workplan\T007095_Cape Fear River Watershed and Downstream Intakes Q22023.mxd; JK:mu: 08/14/2023

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



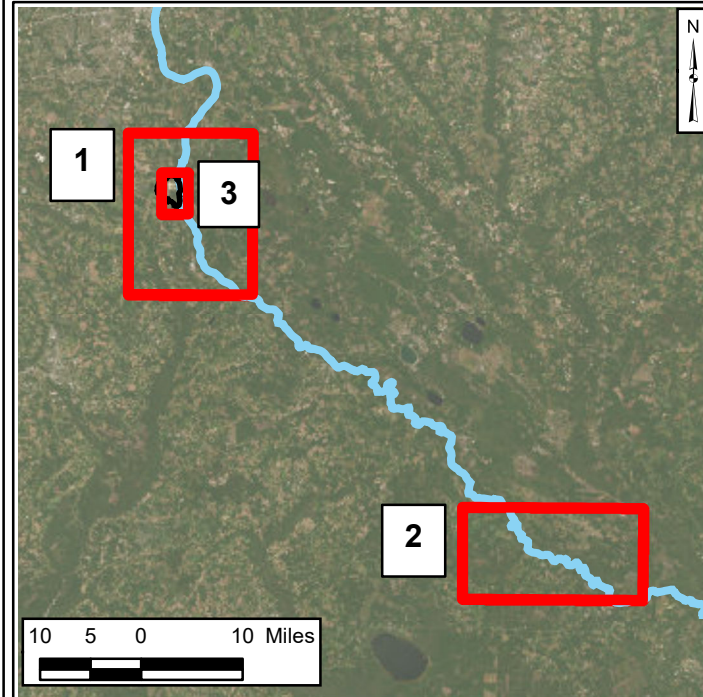
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 Author: Dkrdhoyu
 Last Revised: 9/7/2023

Legend

- Outfall 003 Treatment System
- Sample Location
- Stormwater Treatment System
- North Forcemain
- South Forcemain
- Barrier Wall
- Site Boundary
- Observed Seep
- Cape Fear River
- Groundwater Treatment Pad
- Middle Basin (Cape Fear River Watershed)

Notes:

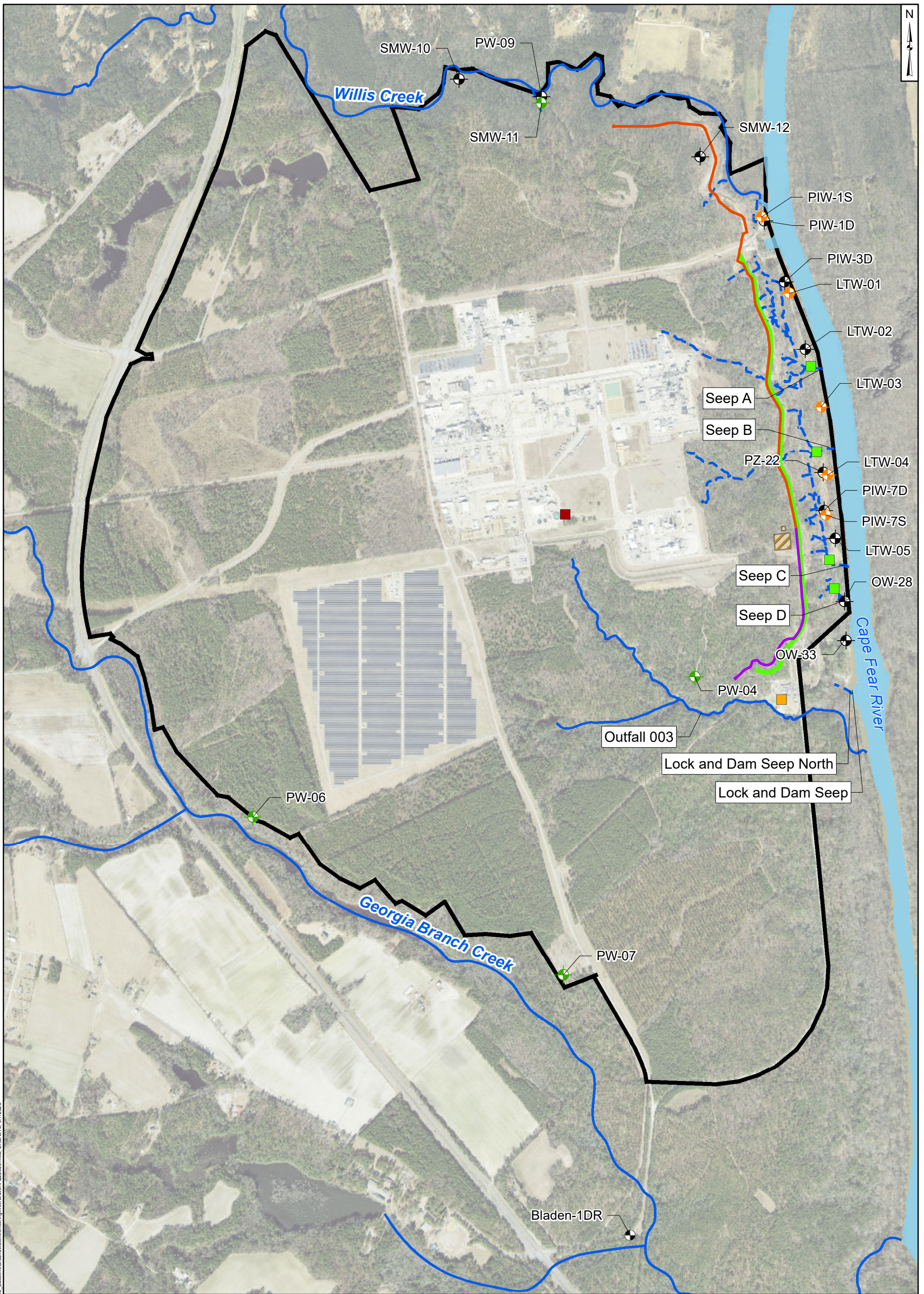
- * Flow measurement was taken at W.O. Huske Dam - USGS
- ** Flow measurement was taken at Lock #1 NR Kelly - USGS
- 1. Flows at Outfall 003 Stream, Willis Creek, and Georgia Branch Creek were measured using flow velocity method.
- 2. Flow-Through Cell flow data were used for Seep A, B, C, and D.
- 3. 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 - Q2 2023
Chemours Fayetteville Works, North Carolina

	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295	Figure 3
Raleigh	September 2023	

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



Legend			
	Surficial Aquifer Monitoring Well		Flow-Through Cell
	Floodplain Deposits Monitoring Well		Outfall 003 Treatment System
	Black Creek Aquifer Monitoring Well		Stormwater Treatment System
	Observed Seep		Nearby Tributary
	Site Boundary		North Forcemain
	South Forcemain		Barrier Wall
	Groundwater Treatment Pad and Break Tank		

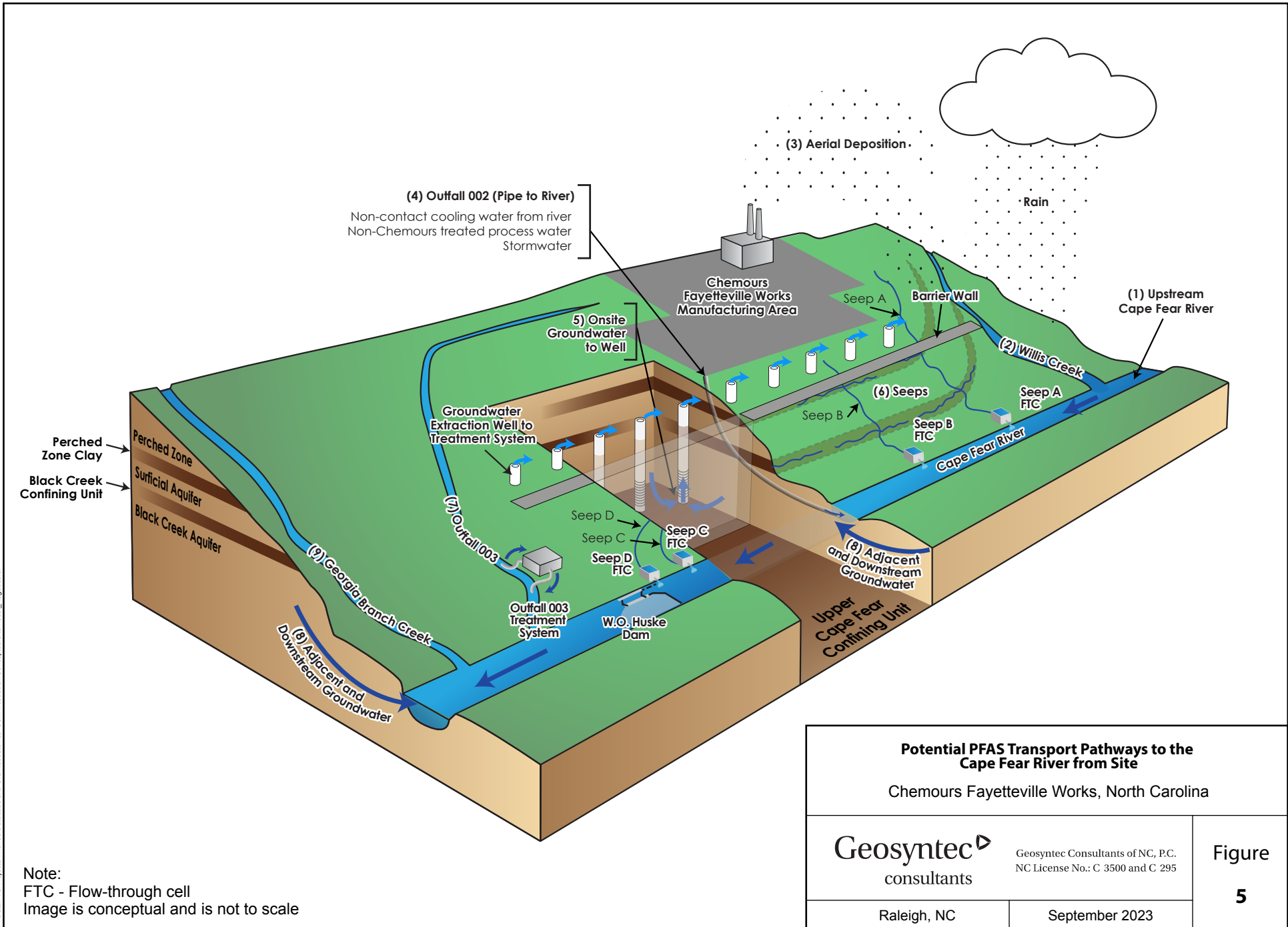
Notes:

- 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

<p>Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295</p>	<p>Figure 4</p>
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Note:
FTC - Flow-through cell
Image is conceptual and is not to scale

Potential PFAS Transport Pathways to the Cape Fear River from Site

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Figure

5

Raleigh, NC

September 2023

