

Appendix A

Cape Fear River PFAS Mass Loading Model

1 INTRODUCTION AND OBJECTIVE

The objective of this appendix is to estimate the mass discharge from the identified PFAS transport pathways using a Cape Fear River mass loading model developed and described in the *Cape Fear River Mass Loading Calculation Protocol Version 2* (Geosyntec, 2020a) and to assess contributions by pathway. The following sections describe the transport pathways, the results from the mass loading model, and the limitations of the mass loading model. Supporting tables for the Mass Loading Model are provided in Attachment ATT1.

The one-year period of monthly sampling of the mass loading model pathways per Consent Order (CO) Paragraph 1(b) was completed in December 2021. Quarterly sample collection was initiated in January 2022 and will continue for a period of 4 years (through Q4 2025) (Geosyntec, 2020a).

1.1 Mass Loading Model Transport Pathways

The nine potential pathways representing compartments to the mass loading model were identified as potential contributors of PFAS to river PFAS concentrations (Geosyntec, 2020a). Remedies have been implemented to capture PFAS and prevent PFAS from reaching the Cape Fear River at five of the nine pathways. In addition, these remedies have had a positive effect on reducing PFAS from the remaining pathways without remedies in place (e.g., the Thermal Oxidizer reduces aerial deposition [Transport Pathway 3] which also reduces deposition on Willis Creek [Transport Pathway 2]). The pathways are described below:

- **Transport Pathway 1:** Upstream Cape Fear River and Groundwater – This pathway is comprised of contributions from non-Chemours related PFAS sources on the Cape Fear River and tributaries upstream of the Site, and upstream offsite groundwater with PFAS present from aerial deposition.
- **Transport Pathway 2:** Willis Creek – Groundwater and stormwater discharge and aerial deposition to Willis Creek and then to the Cape Fear River.
- **Transport Pathway 3 (Remedy: Thermal Oxidizer and Carbon Bed Air Emission Treatment):** Direct aerial deposition of PFAS on the Cape Fear River (see Attachment ATT2 for further details).
- **Transport Pathway 4 (Remedy: Stormwater Capture and Treatment in the Monomers IXM Manufacturing Area):** Outfall 002 – Comprised of (i) water drawn from the Cape Fear River and used as non-contact cooling water, (ii) treated non-Chemours process water, (iii) Site stormwater, (iv) steam condensate, and (v) power neutralization discharge, which are then discharged through Outfall 002.
- **Transport Pathway 5 (Remedy: Barrier Wall and Groundwater Extraction Treatment):** Onsite Groundwater – Direct upwelling of onsite groundwater to the Cape Fear River from the Black Creek Aquifer. Prior to Q2 2023, the hydraulic gradients were derived from potentiometric maps. Since Q2 2023, hydraulic gradients were estimated

between well pairs downgradient of the remedy because the prior method is considered not appropriate for these new conditions since barrier wall results in a discontinuous potentiometric surface. Additional details are provided in Attachment ATT3.

- **Transport Pathway 6 (Remedy: Seep Flow-Through Cells):** Seeps – Onsite groundwater seeps A, B, C and D and the offsite Lock and Dam Seep originating above the Cape Fear River water level on the bluff face from the facility that then discharge into the Cape Fear River.
- **Transport Pathway 7 (Remedy: Outfall 003 Stream Capture and Treatment System):** Outfall 003 Stream (previously referred to as Old Outfall 002) – Groundwater discharge and stormwater runoff to the Outfall 003 Stream that flows into the Cape Fear River.
- **Transport Pathway 8:** Adjacent and Downstream Offsite Groundwater – Offsite groundwater adjacent and downstream of the Site upwelling to the Cape Fear River.
- **Transport Pathway 9:** Georgia Branch Creek – Groundwater, stormwater discharge and aerial deposition to Georgia Branch Creek and then to the Cape Fear River.

For the Q4 2023 mass loading model assessments, data sources used as model inputs for each potential pathway are described in Table A1.

2 SAMPLING ACTIVITIES AND LABORATORY ANALYSIS

The mass loading model sampling program for this reporting period consisted of collecting concentration and flow data from the various PFAS transport pathways during the reporting period (November 2023). As per Paragraph 1(b) of the CO Addendum, this sampling event was conducted during a wet weather event (i.e., rain event: >0.5 inches of rainfall), and the river stages and flows measured at W.O. Huske were much higher than previous dry weather events¹. A total of 34 water samples were collected, which includes surface water (seep, creeks, Outfall 003 Stream, Outfall 002, and Cape Fear River) and groundwater. The sample collection and flow measurement methods of each pathway are outlined in Table A2. The field forms are provided in Appendix C. Details of the sampling methods and flow measurement methods can be found in *Cape Fear River Mass Loading Calculation Protocol Version 2* (Geosyntec, 2020a).

2.1 Flow Measurements

The flow rates measured for the seep and surface water events are reported in Table A2. Details on the flow calculations for each model transport pathway along with measurement methods at each flow gauging location are provided in Attachment Tables ATT1-1 to ATT1-10.

2.2 Surface Water Sample Collection

The seep water, surface water, and river water samples were collected from November 22 to 23, 2023. The sampling event occurred during a wet event (1.67 inches of rainfall), where the river stage reached 2.55 feet and 2,970 feet per second (ft³/s or cfs). The three downstream samples along the Cape Fear River (Bladen Bluffs, Tar Heel, and Kings Bluff) were sampled after the wet weather event, from December 6 to 14, 2023. A total of 15 primary samples and 2 duplicate sample were collected. Below is a list of deviations from the sampling program:

- Seep A, B, and D effluents were not sampled because the seeps were dry during the sampling event.
- No equipment blank samples were collected from this event due to miscoordination with the field team.

¹ The Q4 2023 event was the second wet weather event performed in 2023. Two wet weather events were conducted in 2023 because 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.

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The Lock and Dam Seep and Lock and Dam North were sampled this quarter. Photos of these sampling locations are provided below (left: Lock and Dam Seep; right: Lock and Dam North).



Field parameters recorded for these samples are provided in Table A2. Recorded field parameter data are generally consistent with expectations.

2.3 Water Levels and Groundwater Sample Collection

One synoptic water level survey of the onsite groundwater monitoring well network was completed on November 1, 2023 (Table A3). From November 2 to 16, 2023 groundwater samples were collected from 20 locations, including the 18 of the 20 monitoring wells outlined in CO Paragraph 16 (Table A4). This list of groundwater wells is derived from the Corrective Action Plan (CAP) (Geosyntec, 2019), with the following exceptions and deviations:

- PW-07 and PIW-1S were not sampled this quarter because those wells were dry.
- Bladen-1DR was not sampled during the Q4 CAP sampling event because an adjacent well was mistakenly attempted to be sampled instead and was dry. As such, Bladen-1DR was sampled on January 4, 2024, and this sample was incorporated to this quarter's event.

The groundwater field parameters are provided in Table A4.

2.4 Laboratory Analyses

All samples were sent to Eurofins Scientific (West Sacramento, CA) and were analyzed for Table 3+ and other PFAS compounds using Method 537 Mod Max (56 compounds which includes PFPrA).

3 PFAS ANALYTICAL RESULTS

The analytical results from samples during the Q4 2023 surface water and groundwater sampling events are presented in Tables A5 and A6, respectively. During this sampling event, all samples were within the acceptable temperature requirements for preservation during storage and shipping (i.e., between not frozen to 6°C with a target of 4°C) as outlined in the Chemours PFAS Program QAPP (AECOM, 2018). The laboratory reports and Data Verification Module (DVM) reports are provided in Appendix D of the main report. The analytical data have been reviewed and validated. The duplicate samples have also been compared to the primary samples.

3.1 Data Validation

The method described in this subsection was used to validate the analytical data with samples described in this appendix and in the main report. Analytical data were reviewed using the Data Verification Module (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 USEPA Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (USEPA-540-R-08-005, 2009). The narrative report summarizes which samples were qualified (if any), the specific reasons for the qualification, and any potential bias in reported results. The data usability, in view of the project's data quality objectives (DQOs), was assessed, and the data were entered into the EIM system.

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

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

The secondary review of the data included instrument-related quality control results for calibration standards, blanks, and recoveries. It also included visual inspection of sample chromatograms for appropriate integration and verification that detections in field or equipment blanks have been

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applied to all applicable samples. The data review process applied the following data evaluation qualifiers to the analytical results as required:

- J: Analyte present, reported value may not be accurate or precise
- UJ: Analyte not present above the reporting limit, reporting limit may not be accurate or precise
- B: Analyte present in a blank sample, reported value may have a high bias

The data review process described above was performed for laboratory chemical analytical data generated for the sampling events. The DQOs were met for the analytical results for accuracy and precision. The data collected are believed to be complete, representative, and comparable, with the exception of R-PSDA, Hydrolyzed PSDA, and R-EVE².

3.2 Surface Water PFAS Analytical Results

For the surface and seep water samples, no equipment blanks were collected. Two field duplicates were collected at the Lock-Dam Seep location on November 22, 2023 and the WC-1 location on November 23, 2023. PFAS results for the primary (CAP4Q23-LOCK-DAM-SEEP-112223 and CAP4Q23-WC-1-112323) and duplicate samples (CAP4Q23-LOCK-DAM-SEEP-112223 and CAP4Q23-WC-1-112323-D) had relative percent differences of less than 30% for the reported compounds, except for PFO3OA and PFO4DA in the WC-1 samples.

Analytical results for the seep, surface, and river water samples are summarized in Table A5 (Table 3+) and Attachment Table ATT1-11 (Mod 537). Figure A1 shows the Total Table 3+ (17 compounds) concentrations reported for samples collected in Q4 2023 that corresponds to the mass loading model transport pathways. Figure A2 and A3 show the Total Table 3+ (17 compounds) concentrations and HFPO-DA concentrations at upstream and downstream locations along the Cape Fear River.

During this mass loading model quarterly event, the Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results for both Intake River Water at Facility and Outfall 002 were several orders of magnitude higher than past quarters. These locations were sampled during the Outfall 002 NPDES Permit Sampling program within a few days of this mass loading model sampling program (i.e., November 20 and 27, 2023) and those results were within the range of

² 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. Total Table 3+ PFAS concentrations are calculated and presented three ways in this report: (i) summing over 17 of the Table 3+ compounds “Total Table 3+ (17 compounds)”, i.e., excluding results of PFHpA, R-PSDA, Hydrolyzed PSDA, R-EVE, and PFPrA; (ii) summing over 18 of the Table 3+ compounds “Total Table 3+ (18 compounds)”, i.e., excluding results of PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE; and (iii) summing over 21 of the Table 3+ compounds “Total Table 3+ (21 compounds)”, i.e., excluding results of PFHpA.

past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the Outfall 002 NPDES Permit program collected on November 20, 2023, were used to calculate the mass discharge from this pathway.

Among the collected river samples, Total Table 3+ (17 compounds) concentrations ranged from 3.1 ng/L (upstream sample at CFR MILE 76 on November 22, 2023) to 52 ng/L (downstream sample at CFR BLADEN on December 6, 2023).

For the creeks, the Total Table 3+ (17 compounds) concentrations were 890 ng/L and 1,600 ng/L at Willis Creek and Georgia Branch, respectively. These concentrations are within the range of concentrations observed during previous events (Geosyntec: 2020b; 2020c; 2020d; 2021a; 2021b; 2021c; 2021d; 2022a; 2022b; 2022c; 2022d; 2023a; 2023b; 2023c).

Among the Seeps and Outfall 003 Stream, Seep C effluent had the lowest Total Table 3+ (17 compounds) concentrations (30 ng/L), while Lock-Dam Seep had the highest Total Table 3+ (17 compounds) concentration (51,000 ng/L). The analytical results for the Seeps influent are not included in this report but are provided in *CFR Long-Term Remedy Performance Monitoring Report #4* (Geosyntec 2024).

Figure A3 shows the HFPO-DA concentrations in the four near-site/downstream river sampling locations. HFPO-DA concentrations were below 10 ng/L ranging from non-detect below the associated reporting limits (near site CFR MILE 76 on November 22, 2023) to 7.9 ng/L (CFR-TARHEEL on November 24, 2023)

3.3 Groundwater PFAS Analytical Results

For the groundwater samples, the following observations were noted for the QA/QC samples:

- Six equipment blank samples were collected during the sampling event. No PFAS were detected above the associated reporting limits in any of the equipment blank samples, except for R-PSDCA in CAP4Q23-EQBLK-DV-110823-Z and PFMOAA, PFO2HxA, Hydrolyzed PSDA, and R-PSDCA in CAP4Q23-EQBLK-DV-110823. Samples collected using the associated double vane pump equipment were B-qualified as appropriate based on these detections.
- A field duplicated was collected at the OW-33 location on November 2, 2023. PFAS results for the primary (CAP4Q23-OW-33-110223) and duplicate sample (CAP4Q23-OW-33-110223-D) had relative percent differences of less than 30% for the reported compounds. Individual PFAS and Total PFAS concentrations for the groundwater samples collected in Q4 2023 are summarized in Tables A6 (Table 3+), Attachment Table ATT1-12 (Mod 537), and Figure A4. Total Table 3+ (17 compounds) concentrations ranged from non-detect below the associated reporting limits (PW-09) to 270,000 ng/L (LTW-05). In general, the next highest concentrations were observed in the LTW, PZ, and PIW wells near the mouths of the seeps adjacent to the river (Figure A4).

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On an aquifer basis, lower individual and Total Table 3+ (17 compounds) concentrations are observed in wells screened in the Surficial Aquifer. The results from the Q4 2023 monitoring are consistent with trends observed at these wells in previous monitoring events (Geosyntec: 2020b; 2020c; 2020d; 2021a; 2021b; 2021c; 2021d; 2022a; 2022b; 2022c; 2022d; 2023a; 2023b; 2023c).

3.4 Groundwater Elevations

Groundwater elevations were calculated for onsite and offsite wells screened in the Perched Zone, Surficial Aquifer, and Black Creek Aquifer from the synoptic water level measurement survey performed in November 2023 (Table A4). Groundwater elevations from these synoptic water levels are presented on the Perched Zone, Surficial Aquifer, and Black Creek Aquifer maps (Figures A5-1, A5-2, and A5-3, respectively).

4 MASS LOADING MODEL ASSESSMENT

The Total PFAS mass discharge per pathway to the Cape Fear River is summarized in Table A7. These mass discharge values from the mass loading model assessment are considered as a ‘snapshot’ in time. Analyte-specific mass discharges estimated from the Mass Loading Model are provided in Attachment ATT1.

4.1 Model-Estimated PFAS Mass Discharge

This quarter’s mass loading model sampling event was completed during a wet weather event, which was the first wet weather event since the implementation of the groundwater extraction system and barrier wall remedy. The model-estimated Total Table 3+ (17 compounds) mass discharge from the potential transport pathways during Q4 2023 is 1.26 mg/s (Attachment Table ATT1-13) and represents the mass discharge estimated downgradient of the remedies (i.e., after the water passes through the remedies, “after remedies”). This quarter’s estimated mass discharge was higher than the previous two quarters (0.66 mg/s in Q2 2023 and 0.9 mg/s in Q3 2023; Geosyntec: 2023c; 2023d); however, the previous two quarters were dry sampling events. In fact, this quarter’s mass discharge was significantly lower than previous wet weather events, where mass discharge ranged from 6.6 to 11.2 mg/s (Geosyntec: 2021a; 2021d; 2023b). Further, this quarter’s mass discharge value of 1.26 mg/s continues to be less than the after remedies mass discharge estimates from mass loading model events prior to the operation of the groundwater extraction system (after remedies ranged from 2.3 to 24 mg/s) (Geosyntec: 2019b; 2020b; 2020c; 2020d; 2021a; 2021b; 2021c; 2021d; 2021e; 2022b; 2022c; 2022d; 2023a).

4.2 Comparison of Before Remedies and Current PFAS Mass Discharge

This section compares Q4 2023 mass discharge values downgradient of the remedies (i.e., after the water passes through the remedies, “after remedies”) to mass discharge values from past quarters upgradient of the remedies (i.e., before the water passes through the remedies, “before remedies”, or where no remedies were implemented) (Geosyntec: 2019b; 2020b; 2020c; 2020d; 2021a; 2021b; 2021c; 2021d; 2021e; 2022b; 2022c; 2022d; 2023a). The in-text table and figure below summarize the historical before remedies Total Table 3+ (17 compounds) mass discharge from Q3 2020 to Q4 2022 and the after remedies mass discharge for this quarter, Q4 2023. The pathways with remedies (Seeps, Outfall 003 Stream, Outfall 002, and onsite groundwater) have substantially lower mass discharges, i.e., lower contributions to total mass discharge to the river, than the historical before remedies mass discharges. The remaining pathways have mass discharges that are within the range of previous values.

The in-text table and figure indicate three major findings:

1. The Q4 2023 mass discharges to the Cape Fear River are either equivalent to historical levels or significantly lower. Note that the mass discharge of 0.66 mg/s for Georgia Branch Creek was at the higher end of the range of before remedies mass discharges. However, the

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Total Table 3+ (17 compounds) concentration of 1,600 was within the range of previous events (1,300 to 3,100 ng/L), and it was the higher flow volume (9.35 MG) during this wet weather event that resulted in the higher mass discharge estimate. This mass discharge estimate is also in line with a previous wet weather event in December 2020, where the flow was 8.89 MG resulting in a mass discharge of 0.58 mg/s.

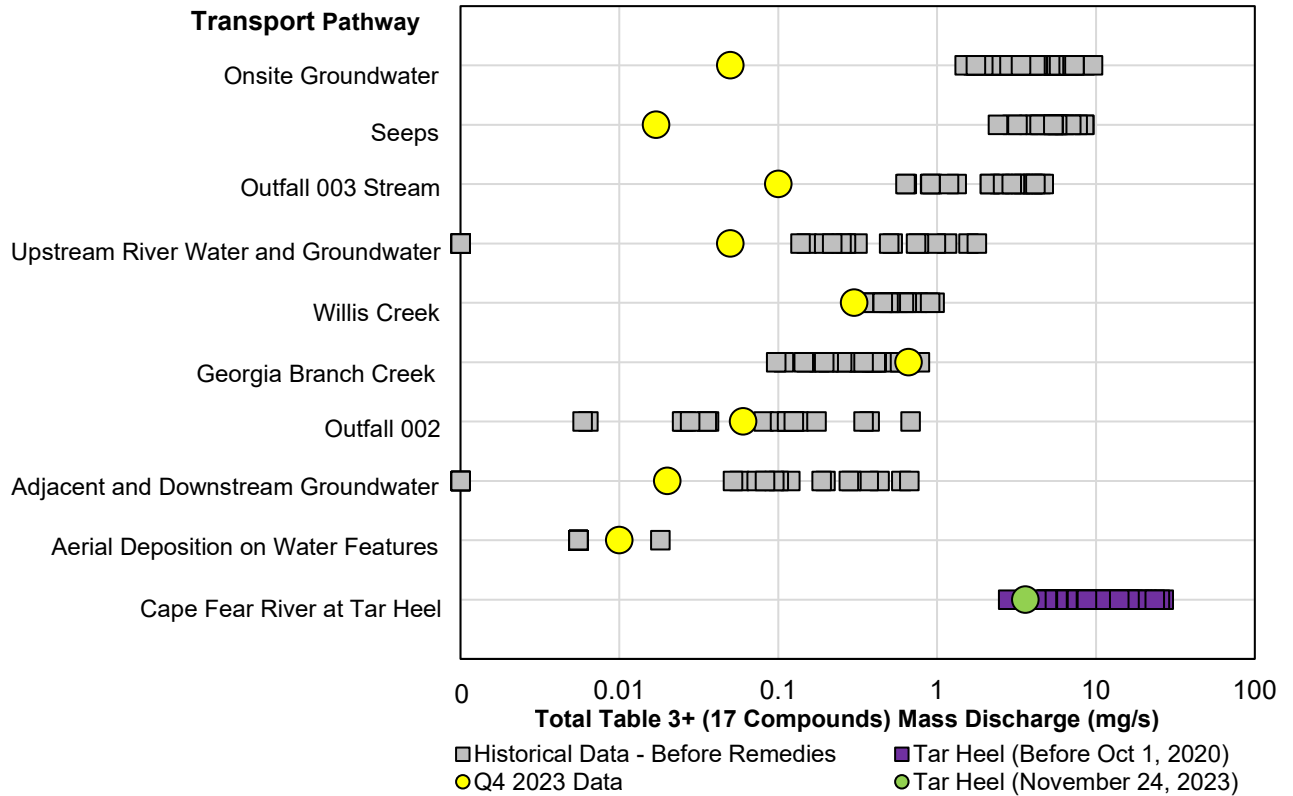
2. The pathways with remedies (Seeps, Outfall 003 Stream and Onsite Groundwater) all show a significant mass discharge decrease in Q4 2023 compared to historical, pre-remediation ranges.
3. The total mass discharge to the Cape Fear River from the Site is much lower in Q4 2023 compared to before remedies mass discharges.

Model Transport Pathway	Before Remedies Total Table 3+ (17 Compounds) Mass Discharge (mg/s) ¹			Q4 2023 Total Table 3+ (17 Compounds) Mass Discharge (mg/s)
	Min	Median	Max	
Aerial Deposition	0.01	0.01	0.02	0.01
Upstream River and Groundwater	0	0.27	4.5	0.05
Willis Creek	0.31	0.57	0.96	0.3
Seeps	3.0	5.4	8.4	0.01
Onsite Groundwater	1.5	3.6	9.6	0.05
Outfall 002 ^(note 2)	0.006	0.10	0.68	0.06
Georgia Branch Creek	0.10	0.32	0.78	0.66
Outfall 003 Stream	0.63	2.5	4.7	0.1
Offsite Groundwater	0	0.10	1.7	0.02
Total³	6.7	14	24	1.26

1 – Before remedies mass discharge values taken from mass loading model assessments conducted between April 2020 to November 2022, which pre-date the installation of the groundwater extraction and barrier wall remedy which significantly altered the hydrologic conditions at site.

2 – During this quarter, the Total Table 3+ (17 compounds) concentration of Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results were several orders of magnitude higher than past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the HFPO-DA Sampling program collected on November 20, 2023, were used to calculate the mass discharge from this pathway.

3 – 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.



4.3 Variability in Input Parameters

The mass loading model assessments provide PFAS mass discharge estimates for a ‘snapshot’ in time. While controlling for temporal variability, the model-based mass discharge estimates contain some level of uncertainty due to the inherent variability, and measurement error in the input parameters (e.g., flow and concentrations), and specifically in Q4 2023, the weather and river conditions (i.e., sapling during a wet weather event).

5 SUMMARY

The objective of the mass loading model assessments is to provide PFAS mass discharge estimates for a ‘snapshot’ in time. In Q4 2023, 34 water samples collected from the PFAS transport pathways (seeps, creeks, Outfall 003 Stream, Outfall 002, groundwater) during a wet weather event and were used to estimate the mass discharge to the Cape Fear River. The model-estimated Total Table 3+ (17 compounds) mass discharge from the potential transport pathways during Q4 2023 is 1.26 mg/s. The mass discharge continues to be less than the after remedies mass discharge estimates from mass loading model events prior to the operation of the groundwater extraction system. This quarter, the mass discharge from Georgia Branch Creek was within the higher end of the range of previous events because the flow volume was higher while the concentrations remained within the range of previous quarters. 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 Q4 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 pathways have mass discharges that are within the range of previous values. Additional sampling events from future reporting quarters are required to continue evaluating mass discharge across the model transport pathways.

Quarterly sample collection and evaluation will continue through Q4 2025. The data will continue to be incorporated into the mass loading model to estimate mass discharge to the Cape Fear River, and sensitivity assessments on the model will continue to be evaluated annually.

REFERENCES

- Geosyntec. 2019. On and Offsite Assessment. Chemours Fayetteville Works. September 30, 2019.
- Geosyntec, 2020a. Cape Fear River Mass Loading Calculation Protocol Version 2, Chemours Fayetteville Works. November 18, 2020.
- Geosyntec. 2020b. Matrix Interference During Analysis of Table 3+ Compounds. Chemours Fayetteville Works. June 30, 2020.
- Geosyntec. 2020c. Cape Fear River Table 3+ PFAS Mass Loading Assessment – First Quarter 2020 Report, Chemours Fayetteville Works. July 31, 2020.
- Geosyntec. 2020d. Cape Fear River PFAS Mass Loading Assessment – Second Quarter 2020 Report, Chemours Fayetteville Works. September 30, 2020.
- Geosyntec. 2020e. Cape Fear River PFAS Mass Loading Assessment – Third Quarter 2020 Report, Chemours Fayetteville Works. December 23, 2020.
- Geosyntec, 2021a. Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2020 Report, Chemours Fayetteville Works. March 31, 2021.
- Geosyntec, 2021b. Cape Fear River PFAS Mass Loading Assessment – First Quarter 2021 Report, Chemours Fayetteville Works. June 30, 2021.
- Geosyntec 2021c. Cape Fear River PFAS Mass Loading Assessment – Second Quarter 2021 Report, Chemours Fayetteville Works. September 30, 2021.
- Geosyntec 2021d. Cape Fear River PFAS Mass Loading Assessment – Third Quarter 2021 Report, Chemours Fayetteville Works. December 23, 2021.
- Geosyntec 2022a. Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2021 Report, Chemours Fayetteville Works. March 31, 2022.
- Geosyntec 2022b. Cape Fear River PFAS Mass Loading Assessment – First Quarter 2022 Report, Chemours Fayetteville Works. June 30, 2022.
- Geosyntec 2022c. Cape Fear River PFAS Mass Loading Assessment – Second Quarter 2022 Report, Chemours Fayetteville Works. September 30, 2022.
- Geosyntec 2022d. Cape Fear River PFAS Mass Loading Assessment – Third Quarter 2022 Report, Chemours Fayetteville Works. December 28, 2022.
- Geosyntec 2023a. Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2022 Report, Chemours Fayetteville Works. March 31, 2023.
- Geosyntec 2023b. Cape Fear River PFAS Mass Loading Assessment – First Quarter 2023 Report, Chemours Fayetteville Works. June 29, 2023.

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Geosyntec 2023c. Cape Fear River PFAS Mass Loading Assessment – Second Quarter 2023 Report, Chemours Fayetteville Works. September 29, 2023.

Geosyntec 2023d. Cape Fear River PFAS Mass Loading Assessment – Third Quarter 2023 Report, Chemours Fayetteville Works. December 22, 2023.

Geosyntec 2024. CFR Long-Term Remedy Performance Monitoring Report #4. Chemours Fayetteville Works. March 28, 2024.

List of Attachments:

ATT1: Supplemental Tables to the Mass Loading Model

ATT2: Supporting Calculations – Direct Aerial Deposition on Cape Fear River

ATT3: Supporting Calculations – Onsite Groundwater Pathway

TABLE A1
PFAS MASS LOADING MODEL POTENTIAL PATHWAYS
Chemours Fayetteville Works, North Carolina

Transport Pathway Number	Potential PFAS Transport Pathway	Analytical Data Source for Mass Loading Model ¹	Flow Data Source for Mass Loading Model ¹
1	Upstream River and Groundwater	Measured from Cape Fear River Mile 76 samples collected in November 2023 as reported in Table A5.	Measured flow rates from USGS gauging station at W.O. Huske Dam during November 2023 volumetrically adjusted for flow pathways between River Mile 76 and W.O. Huske Dam. ²
2	Willis Creek	Measured from Willis Creek samples collected in November 2023 as reported in Table A5.	Measured flow rates through Marsh-McBirney method during November 2023 as reported in Attachment ATT1.
3	Aerial Deposition on River	Estimated from air deposition modeling ³ .	Estimated from air deposition modeling ³ .
4	Outfall 002	Measured from Outfall 002 samples collected in November 2023 as reported in Table A5.	Measured daily Outfall 002 flow rates recorded in Facility discharge monitoring reports, summarized in Attachment ATT1.
5	Onsite Groundwater	Measured from monitoring well samples collected in November 2023 as reported in Table A6.	Estimated as the sum of the mass flux from the Black Creek Aquifer calculated from a transect along the Cape Fear River. Further details and supporting calculations provided in Attachment ATT2.
6	Seeps	Measured from Seep C, Lock and Dam Seep and Lock and Dam North samples collected in November 2023 as reported in Table A5.	Measured flow rates through bucket and time for Lock and Dam Seep, and Lock and Dam North during November 2023 as reported in Appendix C. Flow-Through Cell flow data for Seep C were used as the flumes were decommissioned following Q2 2022 CAP sampling event. No flow was observed at Seeps A, B, and D.
7	Outfall 003 Stream	Measured from Outfall 003 Stream samples collected in November 2023 as reported in Table A5.	Measured flow rates through Marsh-McBirney method during November 2023 as reported in Attachment ATT1.
8	Adjacent and Downstream Groundwater	Estimated using a scaling factor applied to upstream mass discharge. Refer to <i>Cape Fear River PFAS Mass Loading Calculation Protocol Version 2</i> (Geosyntec, 2020a) for details.	Estimated using a scaling factor applied to upstream mass discharge. Refer to <i>Cape Fear River PFAS Mass Loading Calculation Protocol Version 2</i> (Geosyntec, 2020a) for details.
9	Georgia Branch Creek	Measured from Georgia Branch Creek samples collected in November 2023 as reported in Table A5.	Measured flow rates through Marsh-McBirney method during November 2023 as reported in Attachment ATT1.

Notes:

- 1 - Flow and concentration data are multiplied together to estimate the PFAS mass discharge in the Cape Fear River originating from each pathway.
- 2 - Cape Fear River flow rates measured at USGS gauging station #02105500 located at William O Huske Lock & Dam accessed from <https://waterdata.usgs.gov>.
- 3 - ERM, 2018. Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

**TABLE A2
SURFACE WATER SAMPLE SUMMARY, FIELD PARAMETERS, AND FLOW MEASUREMENTS - Q4 2023
Chemours Fayetteville Works, North Carolina**

Pathway / Location	Location ID	Location Description	Sample ID	QA/QC	Sample Collection and Field Parameters									Flow Measurement Method ¹	
					Sample Date and Time	Sample Collection Method	Hours Composit ²	pH (S.U.)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Specific Conductivity (µS/cm)	Temperature (°C)	Flow Measurement Method	Instantaneous Flow Rate (ft ³ /s) ³
Upstream River Water and Groundwater	CFR-RM-76	Cape Fear River Mile 76	CAP4Q23-CFR-RM-76-112223	--	11/22/2023 9:10	Grab	0	7.96	8.3	-34.6	11.1	374.93	15.71	USGS Data ⁴	1,100
Willis Creek	WC-1	Mouth of Willis Creek	CAP4Q23-WC-1-24-112323	--	11/23/2023 7:00	Composite	24	6.14	8.02	109.7	78.7	171.91	19.64	Marsh-McBirney Flow	15.5
			CAP4Q23-WC-1-112323-D	Field Duplicate	11/23/2023 7:00	Composite	24	6.14	8.02	109.7	78.7	171.91	19.64	Marsh-McBirney Flow	15.5
Intake River Water at Facility	INTAKE AT FACILITY	Water Drawn Through the Intake Sampled at the Power Area at the Site	RIVER-WATER-INTAKE2-24-112323	--	11/23/2023 7:00	Composite	24	7.11	8.34	316.6	11	169.24	17.31	Facility DMRs	20
Outfall 002	OUTFALL-002	Upstream of Outfall 002 in open channel	CAP4Q23-OUTFALL 002-24-112323	--	11/23/2023 9:12	Composite	24	7.57	8.64	70	21.2	144.76	20.53	Facility DMRs	20
Stormwater Treatment System ³	STS Discharge	Monomers/IXM Stormwater Treatment System Effluent	--	--	--	--	--	--	--	--	--	--	--	--	--
Seep A	SEEP-A	Effluent Basin of Seep A FTC	--	--	--	--	--	--	--	--	--	--	--	--	--
Seep B	SEEP-B	Effluent Basin of Seep B FTC	--	--	--	--	--	--	--	--	--	--	--	--	--
Seep C	SEEP-C	Effluent Basin of Seep C FTC	CAP4Q23-SEEP-C-24-112323	--	11/23/2023 9:30	Composite	24	9.06	7.28	69.1	279	201.85	20.69	FTC ⁵	0.23
Seep D	SEEP-D	Effluent Basin of Seep D FTC	--	--	--	--	--	--	--	--	--	--	--	--	--
Lock and Dam Seep	LOCK-DAM-SEEP	Southside of the boat ramp at the Lock and Dam Seep	CAP4Q1123-LOCK-DAM-SEEP-112223	--	11/22/2023 11:35	Grab	0	7.66	3.05	17.9	213.34	636.24	17.93	Bottle and Stopwatch	0.011
			CAP4Q23-LOCK-DAM-SEEP-112223-D	Field Duplicate	11/22/2023 11:35	Grab	0	7.66	3.05	17.9	213.34	636.24	17.93	Bottle and Stopwatch	0.011
Lock and Dam North	LOCK-DAM-NORTH	Northside of the boat ramp at the Lock and Dam Seep	CAP4Q1123-LOCK-DAM-NORTH -112223	--	11/22/2023 11:45	Grab	0	7.06	3.72	70.5	218.45	419.15	19	Bottle and Stopwatch	0.0016
Outfall 003 Stream	OLDOF-1	Mouth of Outfall 003 stream	CAP4Q23-OLDOF-1-24-112323	--	11/23/2023 10:44	Grab	0	6.56	7.77	81.4	18	141.79	20.49	Facility DMRs	1.4
Georgia Branch Creek	GBC-1	Mouth of Georgia Branch Creek	CAP4Q23-GBC-1-112223	--	11/22/2023 14:25	Grab	0	5.09	9.41	122.4	41.75	92.16	16.36	Marsh-McBirney Flow	14
Tar Heel Ferry Road Bridge	CFR-TARHEEL	Cape Fear River at Tar Heel Ferry Road Bridge	CAP4Q23-CFR-TARHEEL-120623	--	12/6/2023 16:38	Grab	0	6.42	10.79	180.9	8.51	209.07	12.91	USGS Data ⁶	793
			CAP4Q23-CFR-TARHEEL-24-112423	--	11/24/2023 4:36	Composite	24	5.09	9.45	122.4	41.75	92.16	16.36	USGS Data ⁶	2,754
Bladen Bluffs	CFR-BLADEN	Cape Fear River at Bladen Bluffs	CAP4Q23-CFR-BLADEN-120623	--	12/6/2023 11:25	Grab	0	6.54	11.29	180.6	4.93	156.76	11.86	USGS Data ⁷	793
Kings Bluffs	CFR-KINGS	Cape Fear River at Kings Bluff Raw Water	CAP4Q23-CFR-KINGS-121423	--	12/14/2023 12:15	Grab	0	7.27	9.46	43.1	7.96	204.66	11.84	USGS Data ⁸	3,960

Notes:

- 1 - Flow measurement methods are described in Table A1. Supplemented flow measurement data are included in Attachment ATT1.
- 2 - Samples with a compositing duration of zero (0) hours are grab samples.
- 3 - The Stormwater Treatment System (SWTS) samples are collected over the typical daily operation period. During the November 2023 sampling event there was no stormwater flow to the stormwater treatment system.
- 4 - The volumetric flow rate for upstream river water and groundwater was estimated by subtracting inflows from Willis Creek, upwelling groundwater, seeps to the river, and Outfall 002 and by adding the river water intake from Chemours to the flow rate measurement from the W.O. Huske Dam.
- 5 - FTCs were used as the flumes installed at the Seeps A, B, C, and D were decommissioned following Q2 2022 sampling event.
- 6 - 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.
- 7 - 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.
- 8 - 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.

-- - not measured/not sampled

DMRs - Discharge Monitoring Reports

FTC - Flow-through cell

USGS - United States Geological Survey

°C - degrees Celsius

mg/L - milligrams per liter

µS/cm - microsiemens per centimeter

mV- millivolts

NTU - Nephelometric Turbidity Units

ORP - oxidation reduction potential

S.U. - Standard Units

TABLE A3
GROUNDWATER ELEVATIONS - Q4 2023
Chemours Fayetteville Works, North Carolina

Area ¹	Water Bearing Unit ²	Well ID	Gauging Date	Northing (ft, SPCS NAD83) ³	Easting (ft, SPCS NAD83) ³	Screened Interval (ft)	TOC Elevation (ft, NAVD 88) ⁴	Depth to Water (ft from TOC)	Water Level (ft, NAVD88) ⁴
Onsite	Black Creek Aquifer	BCA-01	11/01/23	399779.96	2050662.48	91-101	146.25	66.46	79.79
Onsite	Black Creek Aquifer	BCA-02	11/01/23	396242.02	2051062.07	92-102	148.37	78.02	70.35
Onsite	Black Creek Aquifer	BCA-03R	11/01/23	398582.23	2049522.22	88-98	150.82	56.05	94.77
Onsite	Black Creek Aquifer	BCA-04	11/01/23	395877.67	2047823.03	94-104	150.31	34.07	116.24
Offsite	Black Creek Aquifer	BLADEN-1DR	11/01/23	387522.25	2050247.40	NM	76.96	19.81	56.73
Offsite	Surficial Aquifer	BLADEN-1S	11/01/23	387518.97	2050233.35	5-10	76.74	10.15	66.59
Offsite	Black Creek Aquifer	BLADEN-2D	11/01/23	368827.09	2042878.34	70-75	138.27	20.85	117.42
Offsite	Surficial Aquifer	BLADEN-2S	11/01/23	368821.46	2042882.92	10-20	138.04	8.05	129.99
Offsite	Black Creek Aquifer	BLADEN-3D	11/01/23	396856.98	2059006.56	33.75-43.75	75.52	10.26	65.26
Offsite	Surficial Aquifer	BLADEN-3S	11/01/23	396862.31	2059012.93	5-15	74.27	9.35	64.92
Offsite	Black Creek Aquifer	BLADEN-4D	11/01/23	363255.12	2087636.87	46.75-51.75	59.66	2.45	57.21
Offsite	Surficial Aquifer	BLADEN-4S	11/01/23	363263.19	2087637.46	4.75-14.75	59.68	6.62	53.06
Offsite	Black Creek Aquifer	CUMBERLAND-1D	11/01/23	431459.95	2011071.39	40-50	174.60	7.15	167.45
Offsite	Surficial Aquifer	CUMBERLAND-1S	11/01/23	431459.95	2011071.39	15-25	174.73	6.96	167.77
Offsite	Black Creek Aquifer	CUMBERLAND-2D	11/01/23	449987.54	2074019.14	47-57	129.23	4.72	124.51
Offsite	Surficial Aquifer	CUMBERLAND-2S	11/01/23	449979.10	2074020.86	7-17	129.06	5.05	124.01
Offsite	Black Creek Aquifer	CUMBERLAND-3D	11/01/23	423248.12	2060409.16	22-27	78.79	8.51	70.28
Offsite	Surficial Aquifer	CUMBERLAND-3S	11/01/23	423254.64	2060413.30	9-14	79.06	9.11	69.95
Offsite	Black Creek Aquifer	CUMBERLAND-4D	11/01/23	413095.77	2078249.95	57-67	119.22	15.17	104.05
Offsite	Surficial Aquifer	CUMBERLAND-4S	11/01/23	413086.63	2078255.53	10-20	119.36	8.51	110.85
Offsite	Black Creek Aquifer	CUMBERLAND-5DR	11/01/23	405619.17	2138238.59	NM	106.67	10.06	96.69
Offsite	Surficial Aquifer	CUMBERLAND-5S	11/01/23	405623.27	2138233.37	14-24	106.65	7.13	99.52
Onsite	Black Creek Aquifer	EW-1	NM	399934.65	2051297.51	40-60	91.33	NM	NM
Onsite	Black Creek Aquifer	EW-2	NM	396164.48	2052232.61	40-65	77.25	NM	NM
Onsite	Black Creek Aquifer	EW-3	NM	395059.78	2052214.66	37-67	76.48	NM	NM
Onsite	Black Creek Aquifer	EW-4	NM	398581.51	2051805.58	53-73	80.64	NM	NM
Onsite	Black Creek Aquifer	EW-5	NM	397200.16	2052052.65	37-67	78.50	NM	NM
Onsite	Perched Zone	FTA-01	11/01/23	397906.09	2049370.01	12.0-22.0	149.60	17.31	132.29
Onsite	Perched Zone	FTA-02	11/01/23	397784.99	2049203.29	11.5-22.0	149.30	17.90	131.40
Onsite	Perched Zone	FTA-03	11/01/23	397766.23	2049310.46	12.0-22.0	150.10	18.10	132.00
Onsite	Surficial Aquifer	INSITU-01	11/01/23	401657.39	2046078.99	7.0-17.0	89.12	7.44	81.68
Onsite	Surficial Aquifer	INSITU-02	NM	401863.46	2049136.62	7.0-17.0	113.12	NM	NM
Onsite	Floodplain Deposits	LTW-01	11/01/23	399565.01	2052150.62	11.0-26.0	52.71	19.10	33.61
Onsite	Black Creek Aquifer	LTW-02	11/01/23	398847.57	2052355.48	28.0-38.0	51.39	13.63	37.76
Onsite	Floodplain Deposits	LTW-03	11/01/23	398114.45	2052558.35	15.0-30.0	51.75	16.20	35.55
Onsite	Floodplain Deposits	LTW-04	11/01/23	397279.61	2052584.95	12.0-27.0	50.66	13.45	37.21
Onsite	Black Creek Aquifer	LTW-05	11/01/23	396430.31	2052740.40	29.0-44.0	50.94	13.82	37.12
Onsite	Perched Zone	MW-11	11/01/23	396544.40	2049051.06	11.5-21.5	148.53	23.44	125.09
Onsite	Perched Zone	MW-12S	11/01/23	397262.90	2049269.37	17.5-22.5	151.08	20.44	130.64
Onsite	Surficial Aquifer	MW-13D	11/01/23	397119.02	2049821.12	57-67	148.65	48.87	99.78
Onsite	Surficial Aquifer	MW-14D	11/01/23	396974.49	2049074.56	62-72	149.73	45.20	104.53
Onsite	Surficial Aquifer	MW-15DRR	11/01/23	398580.71	2049511.75	52.5-62.5	150.92	53.45	97.47
Onsite	Surficial Aquifer	MW-16D	11/01/23	398493.70	2048402.84	72-82	148.41	41.40	107.01
Onsite	Surficial Aquifer	MW-17D	11/01/23	398401.74	2047366.50	57-67	146.12	35.17	110.95
Onsite	Surficial Aquifer	MW-18D	11/01/23	400947.30	2046574.35	50-60	108.10	24.36	83.74
Onsite	Surficial Aquifer	MW-19D	11/01/23	401151.43	2048272.93	46-56	139.36	56.54	82.82
Onsite	Perched Zone	MW-1S	11/01/23	397080.69	2049117.99	21.0-24.0	148.88	19.21	129.67
Onsite	Surficial Aquifer	MW-20D	11/01/23	400791.01	2048733.71	65-75	137.20	53.20	84.00
Onsite	Surficial Aquifer	MW-21D	11/01/23	399501.88	2047074.92	72-82	151.42	50.63	100.79
Onsite	Surficial Aquifer	MW-22D	11/01/23	398518.40	2048362.48	52-72	149.09	41.32	107.77
Onsite	Perched Zone	MW-23	11/01/23	396237.61	2051063.25	9.5-14.5	148.34	14.72	133.62
Onsite	Perched Zone	MW-24	11/01/23	397303.94	2048767.69	18.8-23.8	150.31	21.78	128.53
Onsite	Perched Zone	MW-25	11/01/23	396753.37	2050989.82	12-17	147.59	14.32	133.27
Onsite	Perched Zone	MW-26	11/01/23	396265.18	2051484.67	5-10	147.70	DRY	DRY
Onsite	Perched Zone	MW-27	11/01/23	396010.33	2051472.00	10-15	146.83	15.31	131.52
Onsite	Perched Zone	MW-28	11/01/23	395719.79	2051165.93	9-14	144.70	14.58	130.12
Onsite	Perched Zone	MW-30	11/01/23	397340.79	2050776.09	10-15	147.67	14.61	133.06
Onsite	Perched Zone	MW-31	NM	396390.70	2049622.88	17-22	147.70	NM	NM
Onsite	Perched Zone	MW-32	NM	396359.58	2049651.79	13-18.5	147.11	NM	NM
Onsite	Perched Zone	MW-33	NM	396337.51	2049678.56	12-17	146.82	NM	NM
Onsite	Perched Zone	MW-34	NM	396352.90	2049619.09	17-22	147.97	NM	NM
Onsite	Perched Zone	MW-35	NM	396332.94	2049631.16	14-19	147.54	NM	NM
Onsite	Perched Zone	MW-36	NM	396320.09	2049651.17	12-17	147.89	NM	NM
Onsite	Perched Zone	MW-7S	11/01/23	397444.52	2049809.73	NM	147.47	11.32	136.15
Onsite	Perched Zone	MW-8S	NM	397096.48	2049867.77	NM	146.48	NM	NM
Onsite	Perched Zone	MW-9S	11/01/23	396760.16	2049734.30	17.5-22.5	154.39	21.62	132.77
Onsite	Perched Zone	NAF-01	11/01/23	398348.58	2050339.68	5.0-15.0	148.65	9.96	138.69
Onsite	Perched Zone	NAF-02	11/01/23	398660.16	2050634.55	5.0-15.0	149.28	10.55	138.73
Onsite	Perched Zone	NAF-03	11/01/23	398578.63	2050743.04	5.0-15.0	149.41	12.43	136.98
Onsite	Perched Zone	NAF-04	11/01/23	398445.89	2050713.13	5.0-15.0	146.77	7.68	139.09
Onsite	Perched Zone	NAF-06	11/01/23	398808.81	2050913.93	2.75-12.75	145.43	11.93	133.50
Onsite	Perched Zone	NAF-07	11/01/23	398898.69	2050618.12	5.5-15.5	149.03	10.51	138.52
Onsite	Perched Zone	NAF-08A	11/01/23	398098.22	2050886.93	5.0-15.0	147.74	9.67	138.07
Onsite	Surficial Aquifer	NAF-08B	11/01/23	398095.97	2050880.18	43.5-53.5	147.83	56.30	91.53
Onsite	Perched Zone	NAF-09	11/01/23	397708.78	2050807.44	7.0-17.0	148.62	12.74	135.88
Onsite	Perched Zone	NAF-10	11/01/23	397611.81	2050425.20	8.25-18.25	149.25	13.25	136.00
Onsite	Perched Zone	NAF-11A	11/01/23	398907.08	2050999.77	2.5-7.5	139.74	8.49	131.25
Onsite	Surficial Aquifer	NAF-11B	11/01/23	398911.13	2050995.88	33.5-43.5	140.74	DRY	DRY
Onsite	Perched Zone	NAF-12	11/01/23	398270.56	2050777.49	18-23	145.79	7.15	138.64
Onsite	Black Creek Aquifer	OW-1	11/01/23	399930.53	2051287.87	40-50	95.01	37.90	57.11
Onsite	Black Creek Aquifer	OW-10	11/01/23	399948.17	2051291.21	40-50	94.39	37.29	57.10
Onsite	Black Creek Aquifer	OW-11	11/01/23	401683.39	2049913.61	74-84	94.92	49.34	45.58
Onsite	Black Creek Aquifer	OW-12	11/01/23	401731.33	2050721.09	50-60	83.65	54.55	29.10
Onsite	Black Creek Aquifer	OW-13	11/01/23	400769.33	2051210.62	50-60	85.12	53.90	31.22
Onsite	Black Creek Aquifer	OW-14	11/01/23	400311.42	2051608.03	46-56	80.67	49.19	31.48
Onsite	Black Creek Aquifer	OW-15	11/01/23	399719.91	2051608.62	34-44	87.86	30.62	57.24
Onsite	Black Creek Aquifer	OW-16	11/01/23	399828.66	2051993.25	15-25	52.94	19.52	33.42
Onsite	Black Creek Aquifer	OW-17	11/01/23	399433.03	2051661.47	58-68	89.67	56.89	32.78
Onsite	Black Creek Aquifer	OW-18	11/01/23	398846.69	2051836.19	45-55	90.88	44.40	46.48
Onsite	Black Creek Aquifer	OW-19	11/01/23	398067.23	2051976.50	70-80	86.68	57.50	29.18

TABLE A3
GROUNDWATER ELEVATIONS - Q4 2023
Chemours Fayetteville Works, North Carolina

Area ¹	Water Bearing Unit ²	Well ID	Gauging Date	Northing (ft, SPCS NAD83) ³	Easting (ft, SPCS NAD83) ³	Screened Interval (ft)	TOC Elevation (ft, NAVD 88) ⁴	Depth to Water (ft from TOC)	Water Level (ft, NAVD88) ⁴
Onsite	Black Creek Aquifer	OW-2	11/01/23	398572.28	2051801.62	63-73	84.37	50.00	34.37
Onsite	Black Creek Aquifer	OW-20	11/01/23	398229.85	2052080.86	48-58	69.59	31.65	37.94
Onsite	Black Creek Aquifer	OW-21	11/01/23	397521.83	2051950.75	57-67	80.85	51.05	29.80
Onsite	Black Creek Aquifer	OW-22	11/01/23	397325.34	2052218.74	43-53	66.63	28.58	38.05
Onsite	Black Creek Aquifer	OW-23	11/01/23	396776.73	2052355.66	45-55	67.83	30.02	37.81
Onsite	Black Creek Aquifer	OW-24	11/01/23	396677.42	2052158.17	50-60	78.67	50.45	28.22
Onsite	Black Creek Aquifer	OW-25	11/01/23	396182.38	2052428.46	45-55	70.91	33.40	37.51
Onsite	Black Creek Aquifer	OW-26	11/01/23	395503.74	2052268.81	50-60	80.85	38.64	42.21
Onsite	Black Creek Aquifer	OW-27	11/01/23	395555.17	2052622.16	33-43	55.60	17.05	38.55
Onsite	Black Creek Aquifer	OW-28	11/01/23	395570.57	2052838.21	20-30	48.49	10.21	38.28
Onsite	Black Creek Aquifer	OW-29	11/01/23	395193.45	2052143.81	42-52	85.67	41.18	44.49
Onsite	Black Creek Aquifer	OW-3	11/01/23	398601.08	2051812.32	63-73	84.64	50.59	34.05
Onsite ⁵	Black Creek Aquifer	OW-30	11/01/23	394988.72	2052537.53	49-59	70.92	32.38	38.54
Onsite	Black Creek Aquifer	OW-31	11/01/23	394812.07	2051595.90	85-95	106.10	66.00	40.10
Onsite ⁵	Black Creek Aquifer	OW-33	11/01/23	395116.90	2052806.54	19-29	48.59	9.71	38.88
Onsite	Surficial Aquifer	OW-34	11/01/23	398593.54	2051813.31	23-33	83.76	16.00	67.76
Onsite	Surficial Aquifer	OW-35	11/01/23	398060.78	2051977.75	20-30	87.45	19.10	68.35
Onsite	Surficial Aquifer	OW-36	11/01/23	397257.46	2051997.45	11-21	80.61	18.59	62.02
Onsite	Black Creek Aquifer	OW-38	11/01/23	394885.22	2051883.97	60-70	123.70	52.03	71.67
Onsite	Black Creek Aquifer	OW-4	11/01/23	395049.16	2052210.81	47-57	80.85	39.85	41.00
Onsite ⁵	Black Creek Aquifer	OW-40	11/01/23	394588.05	2052521.39	49-59	72.88	32.93	39.95
Onsite	Black Creek Aquifer	OW-41	11/01/23	401683.74	2050119.92	82-92	93.66	48.25	45.41
Onsite	Black Creek Aquifer	OW-42	11/01/23	401696.05	2050448.24	58-68	87.37	42.46	44.91
Onsite	Black Creek Aquifer	OW-43	11/01/23	400937.73	2051116.17	40-50	76.94	44.40	32.54
Onsite	Black Creek Aquifer	OW-44	11/01/23	399741.48	2051736.45	34-44	73.18	39.44	33.74
Onsite	Black Creek Aquifer	OW-45	11/01/23	398836.07	2051955.99	50-60	77.10	39.18	37.92
Onsite	Black Creek Aquifer	OW-46	11/01/23	398164.94	2052050.69	59-69	72.05	34.14	37.91
Onsite	Black Creek Aquifer	OW-47	11/01/23	397243.89	2052136.32	49-59	71.47	33.66	37.81
Onsite	Black Creek Aquifer	OW-48	11/01/23	396698.39	2052275.93	42-52	69.54	31.89	37.65
Onsite	Black Creek Aquifer	OW-49	11/01/23	396180.56	2052348.51	53-63	79.56	42.02	37.54
Onsite	Black Creek Aquifer	OW-5	NM	395070.03	2052196.97	54-64	81.61	NM	NM
Onsite	Black Creek Aquifer	OW-55	11/01/23	401761.92	2050875.02	43-58	75.45	47.37	28.08
Onsite	Black Creek Aquifer	OW-57	11/01/23	401781.20	2050174.65	33-43	68.87	25.12	43.75
Onsite	Black Creek Aquifer	OW-6	NM	396168.41	2052223.54	50-60	80.53	NM	NM
Onsite	Black Creek Aquifer	OW-7	11/01/23	397180.06	2052052.69	57-67	81.45	52.11	29.34
Onsite	Black Creek Aquifer	OW-8	11/01/23	397202.33	2052041.98	57-67	82.30	53.73	28.57
Onsite	Black Creek Aquifer	OW-9	NM	395075.14	2052211.07	54-64	79.78	NM	NM
Onsite	Black Creek Aquifer	PIW-10DR	11/01/23	395093.99	2052297.30	53-58	75.91	35.10	40.81
Onsite	Surficial Aquifer	PIW-10S	11/01/23	395104.95	2052296.98	7-17	76.32	19.82	56.50
Onsite	Black Creek Aquifer	PIW-11	11/01/23	401911.03	2050416.29	47-57	67.02	24.56	42.46
Onsite	Black Creek Aquifer	PIW-12	11/01/23	401703.10	2051025.77	64-74	83.78	57.20	26.58
Onsite	Black Creek Aquifer	PIW-13	11/01/23	401464.29	2051122.60	54-64	83.18	56.74	26.44
Onsite	Black Creek Aquifer	PIW-14	11/01/23	401163.98	2051186.57	56-66	87.43	57.50	29.93
Onsite	Black Creek Aquifer	PIW-15	11/01/23	400706.51	2051532.80	34-44	67.85	37.08	30.77
Onsite	Black Creek Aquifer	PIW-16D	11/01/23	396257.96	2046587.07	90-100	150.06	26.36	123.70
Onsite	Surficial Aquifer	PIW-16S	11/01/23	396267.84	2046586.09	35-45	149.74	22.61	127.13
Onsite	Black Creek Aquifer	PIW-1D	11/01/23	400548.00	2051801.28	24.5-29.5	52.16	21.23	30.93
Onsite	Floodplain Deposits	PIW-1S	11/01/23	400541.03	2051792.39	7.8-17.8	54.04	21.69	32.35
Onsite	Black Creek Aquifer	PIW-2D	11/01/23	399925.40	2051315.80	40-50	96.19	39.10	57.09
Onsite	Black Creek Aquifer	PIW-3D	11/01/23	399711.25	2052086.94	19-24	53.42	19.94	33.48
Onsite	Black Creek Aquifer	PIW-4D	11/01/23	398816.52	2052101.94	32.3-37.3	52.85	15.16	37.69
Onsite	Surficial Aquifer	PIW-5SR	11/01/23	398545.10	2051977.53	9.8-19.8	79.02	DRY	DRY
Onsite	Floodplain Deposits	PIW-6D	11/01/23	398117.93	2052539.79	18-28	53.40	17.75	35.65
Onsite	Black Creek Aquifer	PIW-7D	11/01/23	396787.77	2052595.65	29-34	48.93	11.10	37.83
Onsite	Floodplain Deposits	PIW-7S	11/01/23	396786.97	2052589.10	7-17	47.97	10.84	37.13
Onsite	Black Creek Aquifer	PIW-8D	11/01/23	396403.37	2052682.10	35.5-40	48.66	11.51	37.15
Onsite	Black Creek Aquifer	PIW-9D	NM	396155.84	2052250.84	40-45	79.64	NM	NM
Onsite	Surficial Aquifer	PIW-9S	NM	396148.52	2052251.03	24.8-29.8	79.64	NM	NM
Onsite	Perched Zone	PW-01	11/01/23	399064.80	2049654.30	11-21	149.55	16.09	133.46
Onsite	Surficial Aquifer	PW-02	11/01/23	399779.06	2050649.47	50-60	146.43	63.11	83.32
Onsite	Surficial Aquifer	PW-03	11/01/23	397339.81	2050765.32	35-45	147.97	43.93	104.04
Onsite	Surficial Aquifer	PW-04	11/01/23	394659.55	2050940.66	17-27	97.75	27.70	70.05
Onsite	Surficial Aquifer	PW-05	11/01/23	395873.10	2047812.93	65-75	150.34	35.34	115.00
Onsite	Surficial Aquifer	PW-06	11/01/23	392868.00	2045288.77	19-29	147.69	21.25	126.44
Onsite	Surficial Aquifer	PW-07	11/01/23	390847.71	2049258.26	28-38	148.16	40.97	107.19
Onsite	Black Creek Aquifer	PW-09	11/01/23	402000.08	2048979.11	44-54	72.93	25.70	47.23
Onsite	Black Creek Aquifer	PW-10RR	11/01/23	398532.45	2051965.91	57-67	80.47	42.09	41.28
Onsite	Black Creek Aquifer	PW-11	11/01/23	394354.36	2052226.72	53-63	73.26	32.81	40.45
Onsite	Black Creek Aquifer	PW-12	11/01/23	399500.45	2047063.51	109-119	150.61	62.71	87.90
Onsite	Black Creek Aquifer	PW-13	11/01/23	397584.26	2048029.18	120-130	149.36	38.78	110.58
Onsite	Black Creek Aquifer	PW-14	11/01/23	397325.65	2050766.36	136-146	147.97	66.52	81.45
Onsite	Black Creek Aquifer	PW-15R	11/01/23	398900.88	2051011.75	110-120	136.14	67.29	68.85
Onsite	Surficial Aquifer	PZ-1	NM	394928.45	2051910.97	28-38	126.65	NM	NM
Onsite	Perched Zone	PZ-11	11/01/23	398646.25	2049820.94	15-20	151.03	11.58	139.45
Onsite	Perched Zone	PZ-12	11/01/23	399091.19	2048978.89	15.1-20.1	149.89	19.67	130.22
Onsite	Perched Zone	PZ-13	11/01/23	397707.82	2050985.25	7.1-12.1	148.14	12.08	136.06
Onsite	Perched Zone	PZ-14	11/01/23	397589.92	2050618.27	9.0-14.0	148.38	11.79	136.59
Onsite	Perched Zone	PZ-15	11/01/23	396806.39	2050107.50	10.2-15.2	147.76	13.72	134.04
Onsite	Perched Zone	PZ-17	NM	396614.82	2048872.69	21.1-26.1	150.08	NM	NM
Onsite	Perched Zone	PZ-19R	11/01/23	397998.66	2049919.52	16-21	150.05	14.27	135.78
Onsite	Surficial Aquifer	PZ-2	NM	396631.77	2052167.77	15-25	78.05	NM	NM
Onsite	Perched Zone	PZ-20R	11/01/23	398185.81	2049784.60	15-20	151.29	15.57	135.72
Onsite	Perched Zone	PZ-21R	11/01/23	398445.16	2049883.13	17-22	150.67	14.27	136.40
Onsite	Black Creek Aquifer	PZ-22	11/01/23	397271.94	2052585.34	42.5-47.5	50.70	12.87	37.83
Onsite	Perched Zone	PZ-24	11/01/23	396117.94	2050744.07	11-16	147.53	14.80	132.73
Onsite	Perched Zone	PZ-25R	NM	395971.54	2050748.23	NM	147.51	NM	NM
Onsite	Perched Zone	PZ-26	11/01/23	396059.78	2050382.35	11-16	147.70	13.65	134.05
Onsite	Perched Zone	PZ-27	11/01/23	395922.11	2050376.76	12-17	147.17	14.63	132.54
Onsite	Perched Zone	PZ-28	11/01/23	396304.55	2049933.79	13-18	148.64	13.85	134.79

**TABLE A3
GROUNDWATER ELEVATIONS - Q4 2023
Chemours Fayetteville Works, North Carolina**

Area ¹	Water Bearing Unit ²	Well ID	Gauging Date	Northing (ft, SPCS NAD83) ³	Easting (ft, SPCS NAD83) ³	Screened Interval (ft)	TOC Elevation (ft, NAVD 88) ⁴	Depth to Water (ft from TOC)	Water Level (ft, NAVD88) ⁴
Onsite	Perched Zone	PZ-29	NM	396377.59	2049771.59	12-18	147.74	NM	NM
Onsite	Perched Zone	PZ-31	NM	396428.73	2049594.36	14-19	148.00	NM	NM
Onsite	Perched Zone	PZ-32	NM	396418.47	2049713.79	13-18	148.47	NM	NM
Onsite	Perched Zone	PZ-33	NM	396308.92	2049707.66	12.5-17.5	146.72	NM	NM
Onsite	Perched Zone	PZ-34	NM	396292.05	2049595.04	13.5-18.5	147.70	NM	NM
Onsite	Perched Zone	PZ-35	11/01/23	398232.64	2050020.49	13-18	150.43	13.89	136.54
Onsite	Perched Zone	PZ-36	NM	396086.17	2051331.44	5-8.5	135.20	NM	NM
Onsite	Perched Zone	PZ-37	NM	396042.40	2051050.05	5-8	135.56	NM	NM
Onsite	Perched Zone	PZ-38	NM	395970.01	2050569.66	5-9	137.34	NM	NM
Onsite	Perched Zone	PZ-39	NM	395921.87	2050238.18	5-10	137.93	NM	NM
Onsite	Perched Zone	PZ-40	NM	395943.02	2050031.90	5-9	138.51	NM	NM
Onsite	Perched Zone	PZ-41	NM	395979.29	2050048.97	5-8.5	138.13	NM	NM
Onsite	Perched Zone	PZ-42	NM	395961.73	2050230.23	3-7	138.17	NM	NM
Onsite	Perched Zone	PZ-43	NM	396011.61	2050567.89	5-9	137.06	NM	NM
Onsite	Perched Zone	PZ-44	NM	396082.75	2051045.25	5-7	136.26	NM	NM
Onsite	Perched Zone	PZ-45	NM	396124.41	2051323.03	2-4	135.69	NM	NM
Onsite	Surficial Aquifer	PZ-L	11/01/23	396745.80	2048684.01	13-28	147.86	30.02	117.84
Offsite	Black Creek Aquifer	ROBESON-1D	11/01/23	381416.28	2020158.93	42.75-52.75	156.36	15.50	140.86
Offsite	Surficial Aquifer	ROBESON-1S	11/01/23	381408.19	2020156.86	17-27	156.66	13.05	143.61
Onsite	Surficial Aquifer	SMW-01	11/01/23	395297.97	2043688.29	5.0-15.0	150.58	14.14	136.44
Onsite	Perched Zone	SMW-02	11/01/23	399982.23	2050655.91	5.0-20.0	144.59	DRY	DRY
Onsite	Surficial Aquifer	SMW-02B	11/01/23	399983.75	2050654.77	43.0-53.0	147.93	54.98	92.95
Onsite	Perched Zone	SMW-03	NM	399779.32	2049445.32	10.0-20.0	151.09	NM	NM
Onsite	Black Creek Aquifer	SMW-03B	11/01/23	399785.75	2049421.54	72-82	150.43	64.64	85.79
Onsite	Perched Zone	SMW-04A	11/01/23	399668.71	2048387.57	19.5-34.5	148.09	DRY	DRY
Onsite	Surficial Aquifer	SMW-04B	11/01/23	399666.21	2048392.37	43.0-53.0	147.65	51.56	96.09
Onsite	Perched Zone	SMW-05	NM	399334.07	2048557.33	10.0-20.0	148.10	NM	NM
Onsite	Surficial Aquifer	SMW-05PR	11/01/23	399391.46	2049235.07	45.0-60.0	149.66	50.03	99.63
Onsite	Perched Zone	SMW-06	NM	399172.35	2048759.48	12.0-22.0	150.97	NM	NM
Onsite	Surficial Aquifer	SMW-06B	11/01/23	399144.74	2048764.94	58-68	150.32	53.36	96.96
Onsite	Perched Zone	SMW-07	11/01/23	398931.13	2048611.74	13.0-23.0	146.79	19.64	127.15
Onsite	Perched Zone	SMW-08	NM	399064.97	2048468.78	21.0-31.0	151.02	NM	NM
Onsite	Surficial Aquifer	SMW-08B	11/01/23	399058.33	2048478.84	58-68	148.81	46.52	102.29
Onsite	Surficial Aquifer	SMW-09	11/01/23	401076.89	2050017.41	52-62	141.43	61.88	79.55
Onsite	Black Creek Aquifer	SMW-10	11/01/23	402307.31	2047923.84	39-49	76.26	30.01	46.25
Onsite	Surficial Aquifer	SMW-11	11/01/23	401996.15	2048975.38	13-23	71.95	16.00	55.95
Onsite	Black Creek Aquifer	SMW-12	11/01/23	401314.20	2051007.22	88-98	118.22	68.72	49.50

Notes:

- 1 - Area - refers to location of well within site property boundary ("Onsite") and outside property boundary ("Offsite").
- 2 - Water Bearing Unit - refers to primary aquifer unit well screen is estimated to be screened within.
- 3 - Northing and Easting provided in North Carolina State Plane System (zone 3200), North American Datum 1983.
- 4 - Vertical datum is North American Vertical Datum of 1988.
- 5 - OW-30, OW-33, and OW-40 are within the USACE property but are labeled as onsite wells.
- DRY - Well was dry at time of monitoring event.
- ft - feet
- NAVD88 - North American Vertical Datum of 1988
- NM - Not measured, well inaccessible during monitoring event.
- SPCS NAD83 - State Plane Coordinate System North American Datum 1983
- TOC - top of casing

**TABLE A4
GROUNDWATER SAMPLE SUMMARY, FIELD PARAMETERS, AND FLOW MEASUREMENTS - Q4 2023
Chemours Fayetteville Works, North Carolina**

Area	Location ID	Water Bearing Unit ¹	Adjacent Surface Water Feature	Synoptic Water Level Date	Sample ID	QA/QC	Sample Collection and Field Parameters						
							Sample Date and Time	pH (S.U.)	Dissolved Oxygen (mg/L)	ORP (mV)	Turbidity (NTU)	Specific Conductivity (µS/cm)	Temperature (°C)
Offsite	BLADEN-1DR ²	Black Creek Aquifer	Georgia Branch Creek	11/1/2023	CAP4Q23-BLADEN-1DR-010424		1/4/2024 11:18	5.91	0.75	-15.80	14.70	67.15	14.04
Onsite	LTW-01	Floodplain Deposits	Cape Fear River	11/1/2023	CAP4Q23-LTW-01-110323		11/3/2023 11:25	3.67	3.28	279.70	4.16	111.48	16.59
Onsite	LTW-02	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-LTW-02-110323		11/3/2023 11:55	4.96	0.26	173.00	4.16	75.60	16.95
Onsite	LTW-03	Floodplain Deposits	Cape Fear River	11/1/2023	CAP4Q23-LTW-03-111323		11/13/2023 12:40	6.81	0.72	15.60	0.80	0.06	21.77
Onsite	LTW-04	Floodplain Deposits	Cape Fear River	11/1/2023	CAP4Q23-LTW-04-110223		11/2/2023 14:40	5.04	0.30	206.10	14.80	78.22	17.26
Onsite	LTW-05	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-LTW-05-110223		11/2/2023 10:50	4.25	0.11	239.60	16.55	101.56	15.09
Onsite	OW-28	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-OW-28-110223		11/2/2023 12:15	4.51	0.01	-72.80	1.21	41.16	17.33
Onsite	OW-33	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-OW-33-110223		11/2/2023 10:25	4.54	0.08	113.20	2.21	57.25	17.15
					CAP4Q23-OW-33-110223-D	Field Duplicate	11/2/2023 10:25	4.54	0.08	113.20	2.21	57.25	17.15
					CAP4Q23-PIW-1D-110723		11/7/2023 13:10	3.59	0.24	341.50	74.80	172.33	24.40
Onsite	PIW-1D	Black Creek Aquifer	Cape Fear River / Willis Creek	11/1/2023	CAP4Q23-PIW-1D-110723		11/7/2023 13:10	3.59	0.24	341.50	74.80	172.33	24.40
Onsite	PIW-1S ³	Floodplain Deposits	Cape Fear River / Willis Creek	11/1/2023	--	--	--	--	--	--	--	--	--
Onsite	PIW-3D	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-PIW-3D-110323		11/3/2023 10:00	5.34	0.01	-55.00	2.38	88.96	17.64
Onsite	PIW-7D	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-PIW-7D-110223		11/2/2023 14:00	5.45	0.01	-90.80	18.80	69.20	16.78
Onsite	PIW-7S	Floodplain Deposits	Cape Fear River	11/1/2023									
Onsite	PW-04	Surficial Aquifer	Outfall 003	11/1/2023	CAP4Q23-PW-04-110923		11/6/2023 9:20	3.40	2.51	195.70	1000.00	424.01	19.99
					CAP4Q23-PW-04-110923-Z	Field Filtered	11/6/2023 9:20	3.40	2.51	195.70	1000.00	424.01	19.99
Onsite	PW-06	Surficial Aquifer	Georgia Branch Creek	11/1/2023	CAP4Q23-PW-06-110623		11/6/2023 12:50	4.33	4.40	298.10	0.54	24.63	19.16
Onsite	PW-07 ³	Surficial Aquifer	Georgia Branch Creek	11/1/2023	--	--	--	--	--	--	--	--	--
Onsite	PW-09	Black Creek Aquifer	Willis Creek	11/1/2023	CAP4Q23-PW-09-110823		11/8/2023 12:40	6.25	0.28	-75.10	25.10	67.31	20.11
					CAP4Q23-PW-09-110823-Z	Field Filtered	11/8/2023 12:40	6.25	0.28	-75.10	25.10	67.31	20.11
Onsite	PZ-22	Black Creek Aquifer	Cape Fear River	11/1/2023	CAP4Q23-PZ-22-110223		11/2/2023 15:25	4.70	0.14	127.40	4.94	92.78	17.03
Onsite	SMW-10	Black Creek Aquifer	Willis Creek	11/1/2023	CAP4Q23-SMW-10-111623		11/16/2023 13:29	5.23	0.08	-65.90	4.42	94.19	20.92
Onsite	SMW-11	Surficial Aquifer	Willis Creek	11/1/2023	CAP4Q23-SMW-11-110723		11/7/2023 15:35	4.45	4.28	221.40	1.83	25261.00	19.04
Onsite	SMW-12	Black Creek Aquifer	Willis Creek	11/1/2023	CAP4Q23-SMW-12-110823		11/8/2023 13:05	3.91	0.84	205.70	8.82	186.21	19.30

Notes:

- 1 - Water Bearing Unit - refers to the primary aquifer unit where the well screen is estimated to be located.
- 2 - Bladen-1DR was not sampled during the Q4 CAP sampling event because an adjacent well was mistakenly attempted to be sampled instead and was dry. As such, Bladen-1DR was sampled on January 4, 2024, and this sample was incorporated to this quarter's event.
- 3 - PIW-1S and PW-07 were dry during November 2023 sampling event and could not be sampled.
- not measured/not sampled
- °C - degrees Celsius
- mg/L - milligrams per liter
- µS/cm - microsiemens per centimeter
- mV - millivolts
- NTU - Nephelometric Turbidity Units
- ORP - oxidation reduction potential
- S.U. - Standard Units
- "-Z" in Sample ID denotes field filtration

**TABLE A5
SEEP AND SURFACE WATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	CFR-BLADEN	CFR-KINGS	CFR-MILE-76	CFR-TARHEEL
Field Sample ID	CAP4Q23-CFR-BLADEN-120623	CAP4Q23-CFR-KINGS-121423	CAP4Q23-CFR-RM-76-112223	CAP4Q23-TARHEEL-24-112423
Sample Date	12/06/2023	12/14/2023	11/22/2023	11/24/2023
QA/QC				
Sample Delivery Group (SDG)	320-107896-1	320-108081-1	320-107648-1	320-107480-1
Lab Sample ID	320-107896-1	320-108081-1	320-107648-1	320-107480-8
<i>Table 3+ (ng/L)</i>				
HFPO-DA	7.4	7.0 J	<4.0	7.9
PFMOAA	20	11 J	<2.0	11
PFO2HxA	8.9	9.8 J	<2.0	9.8
PFO3OA	2.6	3.2 J	<2.0	2.4
PFO4DA	<2.0	<2.0 UJ	<2.0	<2.0
PFO5DA	<2.0	<2.0 UJ	<2.0	<2.0
PMPA	11	13 J	3.1	12
PEPA	2.2	<2.0 UJ	<2.0	2.7
PS Acid	<2.0	<2.0 UJ	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0 UJ	<2.0	<2.0
R-PSDA	3.0 J	15 J	<2.0	2.0 J
Hydrolyzed PSDA	2.9 J	4.6 J	<2.0	<2.0
R-PSDCA	<3.0	<3.0 UJ	<3.0	<3.0
NVHOS	<3.0	<3.0 UJ	<3.0	<3.0
EVE Acid	<2.0	<2.0 UJ	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0 UJ	<2.0	<2.0
R-EVE	2.0 J	28 J	<2.0	<2.0
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0 UJ	<2.0	<2.0
PFECA B	<2.0	<2.0 UJ	<2.0	<2.0
PFECA-G	<2.0	<2.0 UJ	<2.0	<2.0
PFPrA	31	28 J	11	25
Perfluoroheptanoic Acid	4.8	3.7 J	6.3	5.2
Total Attachment C^{1,2}	52	44	3.1	46
Total Table 3+ (17 compounds)^{2,3}	52	44	3.1	46
Total Table 3+ (18 compounds)^{2,4}	83	72	14	71
Total Table 3+ (21 compounds)²	91	120	14	73

**TABLE A5
SEEP AND SURFACE WATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	CFR-TARHEEL	GBC-1	Lock-Dam North	Lock-Dam Seep
Field Sample ID	CAP4Q23-CFR-TARHEEL-120623	CAP4Q23-GBC-1-112223	CAP4Q23-LOCK-DAM-NORTH-112223	CAP4Q23-LOCK-DAM-SEEP-112223
Sample Date	12/06/2023	11/22/2023	11/22/2023	11/22/2023
QA/QC				
Sample Delivery Group (SDG)	320-107896-1	320-107648-1	320-107648-1	320-107648-1
Lab Sample ID	320-107896-2	320-107648-2	320-107648-5	320-107648-3
<i>Table 3+ (ng/L)</i>				
HFPO-DA	7.4	340	2,100	2,700
PFMOAA	18	120	4,300	32,000
PFO2HxA	9.1	360	3,000	6,600
PFO3OA	2.1	63	450	4,000
PFO4DA	<2.0	18	80	1,000
PFO5DA	<2.0	3.8	8.8	99
PMPA	11	560	3,000	3,100
PEPA	<2.0	150	1,000	920
PS Acid	<2.0	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	20	51	79
R-PSDA	3.3 J	40 J	220 J	230 J
Hydrolyzed PSDA	2.6 J	<2.0	<2.0	250 J
R-PSDCA	<3.0	<3.0	<3.0	3.9
NVHOS	<3.0	3.0	57	350
EVE Acid	<2.0	<2.0	<2.0	3.4
Hydro-EVE Acid	<2.0	<2.0	11	75
R-EVE	<2.0	20 J	140 J	95 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0	<2.0
PFPrA	32	410	3,000	5,600 J
Perfluoroheptanoic Acid	5.0	2.5	6.9	29
Total Attachment C^{1,2}	48	1,600	14,000	50,000
Total Table 3+ (17 compounds)^{2,3}	48	1,600	14,000	51,000
Total Table 3+ (18 compounds)^{2,4}	80	2,000	17,000	57,000
Total Table 3+ (21 compounds)²	86	2,100	17,000	57,000

**TABLE A5
SEEP AND SURFACE WATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	Lock-Dam Seep	OLDOF-1	OUTFALL 002 ⁵
Field Sample ID	CAP4Q23-LOCK-DAM-SEEP-112223-D	CAP4Q23-OLDOF-1-24-112323	O2431119
Sample Date	11/22/2023	11/23/2023	20-Nov-23
QA/QC	Field Duplicate		
Sample Delivery Group (SDG)	320-107648-1	320-107480-1	320-107355-1
Lab Sample ID	320-107648-4	320-107480-9	320-107355-7
Table 3+ (ng/L)			
HFPO-DA	2,600	250	23
PFMOAA	29,000	1,200	23
PFO2HxA	6,900	510	14
PFO3OA	5,100	150	5.7
PFO4DA	1,100	47	4.9
PFO5DA	80	24	3.5 J
PMPA	3,100	220	27
PEPA	900	70	<20
PS Acid	<2.0	<2.0	2.2
Hydro-PS Acid	80	12	<2.0
R-PSDA	270 J	19 J	11 J
Hydrolyzed PSDA	250 J	29 J	21 J
R-PSDCA	3.6	<3.0	<2.0
NVHOS	350	19	2.9
EVE Acid	3.4	<2.0	7.5
Hydro-EVE Acid	72	7.1	18
R-EVE	87 J	9.0 J	16 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0
PFPrA	10,000 J	1,000	--
Perfluoroheptanoic Acid	26	<2.0	5.6
Total Attachment C^{1,2}	49,000	2,500	100
Total Table 3+ (17 compounds)^{2,3}	49,000	2,500	130
Total Table 3+ (18 compounds)^{2,4}	59,000	3,500	130
Total Table 3+ (21 compounds)²	60,000	3,600	180

**TABLE A5
SEEP AND SURFACE WATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	River Water Intake 2 ⁵	SEEP-C-EFF	WC-1
Field Sample ID	2R31119	CAP4Q23-SEEP-C-112323	CAP4Q23-WC-1-112323
Sample Date	20-Nov-23	11/23/2023	11/23/2023
QA/QC			
Sample Delivery Group (SDG)	320-107355-1	320-107480-1	320-107480-1
Lab Sample ID	320-107355-8	320-107480-4	320-107480-1
Table 3+ (ng/L)			
HFPO-DA	2.9	<4.0	89 J
PFMOAA	<2.0	19	200
PFO2HxA	3.1	6.8	150
PFO3OA	<2.0	<2.0	23 J
PFO4DA	<2.0	<2.0	5.4 J
PFO5DA	<2.0	<2.0	<2.0
PMPA	21	4.0	170
PEPA	<20	<2.0	45
PS Acid	<2.0	<2.0	<2.0
Hydro-PS Acid	<2.0	<2.0	5.2
R-PSDA	<2.0	<2.0	11 J
Hydrolyzed PSDA	<2.0	<2.0	28 J
R-PSDCA	<2.0	<3.0	<3.0
NVHOS	<2.0	<3.0	3.8
EVE Acid	<2.0	<2.0	<2.0
Hydro-EVE Acid	<2.0	<2.0	<2.0
R-EVE	<2.0	<2.0	5.9 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0
PFPrA	--	14	170
Perfluoroheptanoic Acid	5.3	<2.0	<2.0
Total Attachment C^{1,2}	27	30	690
Total Table 3+ (17 compounds)^{2,3}	27	30	690
Total Table 3+ (18 compounds)^{2,4}	27	44	860
Total Table 3+ (21 compounds)²	27	44	910

**TABLE A5
SEEP AND SURFACE WATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	WC-1
Field Sample ID	CAP4Q23-WC-1-112323-D
Sample Date	11/23/2023
QA/QC	Field Duplicate
Sample Delivery Group (SDG)	320-107480-1
Lab Sample ID	320-107480-7
Table 3+ (ng/L)	
HFPO-DA	120
PFMOAA	260
PFO2HxA	170
PFO3OA	32 J
PFO4DA	8.1 J
PFO5DA	<2.0
PMPA	230
PEPA	53
PS Acid	<2.0
Hydro-PS Acid	7.0
R-PSDA	13 J
Hydrolyzed PSDA	36 J
R-PSDCA	<3.0
NVHOS	5.1
EVE Acid	<2.0
Hydro-EVE Acid	<2.0
R-EVE	6.6 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0
PFECA B	<2.0
PFECA-G	<2.0
PFPrA	210
Perfluoroheptanoic Acid	<2.0
Total Attachment C^{1,2}	880
Total Table 3+ (17 compounds)^{2,3}	890
Total Table 3+ (18 compounds)^{2,4}	1,100
Total Table 3+ (21 compounds)²	1,200

Notes:

- Bold** - Analyte detected above associated reporting limit
- J - Analyte detected. Reported value may not be accurate or precise.
- 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
- < - Analyte not detected above associated reporting limit.
- UJ – Analyte not detected. Reporting limit may not be accurate or precise.
- 1 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
- 2 - 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.
- 3 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, R-EVE, and PFPrA.
- 4 - Total Table 3+ (18 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.
- 5 - In the November 2023 sampling event, the Total Table 3+ (17 compounds) concentration of Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results were several orders of magnitude higher than past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the HFPO-DA Sampling program collected on November 20, 2023, were used to calculate the mass discharge.

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	Floodplain Deposits	Black Creek Aquifer	Floodplain Deposits
Location ID	BLADEN-1DR	LTW-01	LTW-02	LTW-03
Field Sample ID	CAP4Q23-BLADEN-1DR-010424	CAP4Q23-LTW-01-110323	CAP4Q23-LTW-02-110323	CAP4Q23-LTW-03-111323
Sample Date	01/04/2024	11/03/2023	11/03/2023	11/13/2023
QA/QC				
Sample Delivery Group (SDG)	320-108551-1	320-106773-1	320-106772-1	320-107233-1
Lab Sample ID	320-108551-1	320-106773-1	320-106772-7	320-107233-3
Table 3+ (ng/L)				
HFPO-DA	120	15,000	9,800	5,800 J
PFMOAA	21	24,000	27,000	110,000 J
PFO2HxA	73	25,000	21,000	24,000 J
PFO3OA	11	5,700	4,100	5,900
PFO4DA	<2.0	1,300	160	240
PFO5DA	<2.0	210	<100	<2.0
PMPA	260	18,000	11,000	18,000
PEPA	92	6,200	3,500	3,700
PS Acid	<2.0	<40	<40	<2.0
Hydro-PS Acid	<2.0	280	<44	26
R-PSDA	12 J	790 J	520 J	870 J
Hydrolyzed PSDA	<2.0	590 J	1,500 J	6,500 J
R-PSDCA	<3.0	<140	<140	<3.0
NVHOS	<3.0	430	410	1,400
EVE Acid	<2.0	<40	<40	<2.0
Hydro-EVE Acid	<2.0	140	42	56
R-EVE	5.0 J	530 J	410 J	180 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<29	<29	6.1
PFECA B	<2.0	<62	<62	<2.0
PFECA-G	<2.0	<29	<29	<2.0
PFPrA	130	14,000	13,000	38,000 J
Perfluoroheptanoic Acid	<2.0	47 J	<25	24
Total Attachment C^{2,3}	580	96,000	77,000	170,000
Total Table 3+ (17 compounds)^{3,4}	580	96,000	77,000	170,000
Total Table 3+ (18 compounds)^{3,5}	710	110,000	90,000	210,000
Total Table 3+ (21 compounds)³	720	110,000	92,000	210,000

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Floodplain Deposits	Black Creek Aquifer	Black Creek Aquifer	Black Creek Aquifer
Location ID	LTW-04	LTW-05	OW-28	OW-33
Field Sample ID	CAP4Q23-LTW-04-110223	CAP4Q23-LTW-05-110223	CAP4Q23-OW-28-110223	CAP4Q23-OW-33-110223
Sample Date	11/02/2023	11/02/2023	11/02/2023	11/02/2023
QA/QC				
Sample Delivery Group (SDG)	320-106772-1	320-106772-1	320-106772-1	320-106773-1
Lab Sample ID	320-106772-5	320-106772-1	320-106772-6	320-106773-3
Table 3+ (ng/L)				
HFPO-DA	17,000	18,000	4,400	4,900
PFMOAA	61,000	170,000	1,600	9,800
PFO2HxA	26,000	58,000	3,100	5,900
PFO3OA	5,300	14,000	680	1,100
PFO4DA	650	1,900	120	66
PFO5DA	<100	<100	<100	<100
PMPA	17,000	5,500	6,000	6,000
PEPA	6,100	510	2,200	2,200
PS Acid	<40	<40	<40	<40
Hydro-PS Acid	180	200	75	<44
R-PSDA	1,700 J	950 J	230 J	250 J
Hydrolyzed PSDA	3,800 J	1,900 J	<27 UJ	61 J
R-PSDCA	<140	<140	<140	<140
NVHOS	1,100	1,500	<130	140
EVE Acid	<40	<40	<40	<40
Hydro-EVE Acid	470	770	<24	<24
R-EVE	1,700 J	1,200 J	140 J	170 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<29	<29	<29
PFECA B	<62	<62	<62	<62
PFECA-G	<29	<29	<29	<29
PFPrA	30,000	68,000	3,500	6,000
Perfluoroheptanoic Acid	60	250	<25	<25
Total Attachment C^{2,3}	130,000	270,000	18,000	30,000
Total Table 3+ (17 compounds)^{3,4}	130,000	270,000	18,000	30,000
Total Table 3+ (18 compounds)^{3,5}	160,000	340,000	22,000	36,000
Total Table 3+ (21 compounds)³	170,000	340,000	22,000	37,000

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	Floodplain Deposits	Black Creek Aquifer	Black Creek Aquifer
Location ID	OW-33	PIW-1S ⁶	PIW-1D	PIW-1D
Field Sample ID	CAP4Q23-OW-33-110223-D	--	CAP4Q23-PIW-1D-110723	CAP4Q23-PIW-1D-110723-Z
Sample Date	11/02/2023	--	11/07/2023	11/07/2023
QA/QC	Field Duplicate			
Sample Delivery Group (SDG)	320-106773-1	--	320-106887-1	320-106887-1
Lab Sample ID	320-106773-4	--	320-106887-1	320-106887-2
Table 3+ (ng/L)				
HFPO-DA	4,800	--	8,800	8,900
PFMOAA	9,800	--	9,900	11,000
PFO2HxA	5,400	--	12,000	12,000
PFO3OA	1,000	--	1,700	1,700
PFO4DA	67	--	430	240
PFO5DA	<100	--	<100	<100
PMPA	5,900	--	8,600	9,400
PEPA	2,000	--	3,100	3,400
PS Acid	<40	--	<40	<40
Hydro-PS Acid	<44	--	76	<44
R-PSDA	230 J	--	320 J	190 J
Hydrolyzed PSDA	48 J	--	<27	<27
R-PSDCA	<140	--	<140	<140
NVHOS	<130	--	140	150
EVE Acid	<40	--	<40	<40
Hydro-EVE Acid	<24	--	28	<24
R-EVE	170 J	--	220 J	150 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	--	<29	<29
PFECA B	<62	--	<62	<62
PFECA-G	<29	--	<29	<29
PFPrA	5,900	--	7,500	7,700
Perfluoroheptanoic Acid	<25	--	<25	<25
Total Attachment C^{2,3}	29,000	--	45,000	47,000
Total Table 3+ (17 compounds)^{3,4}	29,000	--	45,000	47,000
Total Table 3+ (18 compounds)^{3,5}	35,000	--	52,000	54,000
Total Table 3+ (21 compounds)³	35,000	--	53,000	55,000

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	Black Creek Aquifer	Floodplain Deposits	Surficial Aquifer
Location ID	PIW-3D	PIW-7D	PIW-7S	PW-04
Field Sample ID	CAP4Q23-PIW-3D-110323	CAP4Q23-PIW-7D-110223	CAP4Q23-PIW-7S-110223	CAP4Q23-PW-04-110923
Sample Date	11/03/2023	11/02/2023	11/02/2023	11/09/2023
QA/QC				
Sample Delivery Group (SDG)	320-106773-1	320-106772-1	320-106772-1	320-107233-1
Lab Sample ID	320-106773-2	320-106772-3	320-106772-2	320-107233-1
Table 3+ (ng/L)				
HFPO-DA	12,000	13,000	12,000	670
PFMOAA	19,000	150,000	17,000	300
PFO2HxA	19,000	43,000	12,000	930
PFO3OA	4,000	6,100	4,300	340
PFO4DA	1,200	1,000	420	100
PFO5DA	200	<100	<100	<100
PMPA	13,000	5,200	9,200	950
PEPA	4,700	1,000	3,400	320
PS Acid	<40	<40	<40	<40
Hydro-PS Acid	290	110	250	<44
R-PSDA	750 J	510 J	910 J	<28
Hydrolyzed PSDA	300 J	1,100 J	60 J	<27
R-PSDCA	<140	<140	<140	<140
NVHOS	310	1,200	690	<130
EVE Acid	<40	<40	<40	<40
Hydro-EVE Acid	100	360	430	<24
R-EVE	420 J	680 J	1,200 J	66 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<29	<29	<29
PFECA B	<62	<62	<62	<62
PFECA-G	<29	<29	<29	<29
PFPrA	13,000	52,000	12,000	960
Perfluoroheptanoic Acid	49	97	61	<25
Total Attachment C^{2,3}	73,000	220,000	59,000	3,600
Total Table 3+ (17 compounds)^{3,4}	74,000	220,000	60,000	3,600
Total Table 3+ (18 compounds)^{3,5}	87,000	270,000	72,000	4,600
Total Table 3+ (21 compounds)³	88,000	280,000	74,000	4,600

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Surficial Aquifer	Surficial Aquifer	Surficial Aquifer	Black Creek Aquifer
Location ID	PW-04	PW-06	PW-07 ⁶	PW-09
Field Sample ID	CAP4Q23-PW-04-110923-Z	CAP4Q23-PW-06-110623	--	CAP4Q23-PW-09-110823
Sample Date	11/09/2023	11/06/2023	--	11/08/2023
QA/QC				
Sample Delivery Group (SDG)	320-107233-1	320-106773-1	--	320-106887-1
Lab Sample ID	320-107233-2	320-106773-5	--	320-106887-4
Table 3+ (ng/L)				
HFPO-DA	560	1,000	--	<4.0 UJ
PFMOAA	230	120	--	<2.0 UJ
PFO2HxA	840	700	--	<2.0 UJ
PFO3OA	290	130	--	<2.0 UJ
PFO4DA	86	86	--	<2.0 UJ
PFO5DA	<2.0	<100	--	<2.0 UJ
PMPA	1,200	840	--	<2.0 UJ
PEPA	300	340	--	<2.0 UJ
PS Acid	<2.0	<40	--	<2.0 UJ
Hydro-PS Acid	4.2	<44	--	<2.0 UJ
R-PSDA	140 J	<28 UJ	--	<2.0 UJ
Hydrolyzed PSDA	<2.0	<27	--	<2.0 UJ
R-PSDCA	<3.0	<140	--	<3.0 UJ
NVHOS	4.2	<130	--	<3.0 UJ
EVE Acid	<2.0	<40	--	<2.0 UJ
Hydro-EVE Acid	6.9	<24	--	<2.0 UJ
R-EVE	99 J	<31	--	<2.0 UJ
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<29	--	<2.0 UJ
PFECA B	<2.0	<62	--	<2.0 UJ
PFECA-G	<2.0	<29	--	<2.0 UJ
PFPrA	980	520	--	<5.0 UJ
Perfluoroheptanoic Acid	5.7	<25	--	<2.0 UJ
Total Attachment C^{2,3}	3,500	3,200	--	ND
Total Table 3+ (17 compounds)^{3,4}	3,500	3,200	--	ND
Total Table 3+ (18 compounds)^{3,5}	4,500	3,700	--	ND
Total Table 3+ (21 compounds)³	4,700	3,700	--	ND

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	Black Creek Aquifer	Black Creek Aquifer	Surficial Aquifer
Location ID	PW-09	PZ-22	SMW-10	SMW-11
Field Sample ID	CAP4Q23-PW-09-110823-Z	CAP4Q23-PZ-22-110223	CAP4Q23-SMW-10-111623	CAP4Q23-SMW-11-110723
Sample Date	11/08/2023	11/02/2023	11/16/2023	11/07/2023
QA/QC				
Sample Delivery Group (SDG)	320-106887-1	320-106772-1	320-107233-1	320-106887-1
Lab Sample ID	320-106887-7	320-106772-4	320-107233-5	320-106887-3
Table 3+ (ng/L)				
HFPO-DA	<4.0 UJ	11,000	6.5	5,200
PFMOAA	<2.0 UJ	170,000	160	10,000
PFO2HxA	<2.0 UJ	47,000	22 B	6,600
PFO3OA	<2.0 UJ	5,400	<2.0	980
PFO4DA	<2.0 UJ	210	<2.0	380
PFO5DA	<2.0 UJ	<100	<2.0	<100
PMPA	<2.0 UJ	6,700	28	3,400
PEPA	<2.0 UJ	1,500	<2.0	1,100
PS Acid	<2.0 UJ	<40	<2.0	<40
Hydro-PS Acid	<2.0 UJ	<44	<2.0	51
R-PSDA	<2.0 UJ	510 J	<2.0	130 J
Hydrolyzed PSDA	<2.0 UJ	1,600 J	2.5 B	74 J
R-PSDCA	<3.0 UJ	<140	<3.0	<140
NVHOS	<3.0 UJ	1,200	<3.0	180
EVE Acid	<2.0 UJ	<40	<2.0	<40
Hydro-EVE Acid	<2.0 UJ	73	<2.0	<24
R-EVE	<2.0 UJ	420 J	<2.0	100 J
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0 UJ	<29	<2.0	<29
PFECA B	<2.0 UJ	<62	<2.0	<62
PFECA-G	<2.0 UJ	<29	<2.0	<29
PFPrA	<5.0 UJ	51,000	160	3,800
Perfluoroheptanoic Acid	<2.0 UJ	31	<2.0	<25
Total Attachment C^{2,3}	ND	240,000	220	28,000
Total Table 3+ (17 compounds)^{3,4}	ND	240,000	220	28,000
Total Table 3+ (18 compounds)^{3,5}	ND	290,000	380	32,000
Total Table 3+ (21 compounds)³	ND	300,000	380	32,000

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	--	--
Location ID	SMW-12	EB	EB
Field Sample ID	CAP4Q23-SMW-12-110823	CAP4Q23-EQBLK-DV-110823	CAP4Q23-EQBLK-DV-110823-Z
Sample Date	11/08/2023	11/08/2023	11/08/2023
QA/QC		Equipment Blank	Equipment Blank
Sample Delivery Group (SDG)	320-107233-1	320-106887-1	320-106887-1
Lab Sample ID	320-107233-4	320-106887-6	320-106887-5
<i>Table 3+ (ng/L)</i>			
HFPO-DA	1,900	<4.0	<4.0
PFMOAA	8,300	10	<2.0
PFO2HxA	4,200	5.2	<2.0
PFO3OA	420	<2.0	<2.0
PFO4DA	<40	<2.0	<2.0
PFO5DA	<100	<2.0	<2.0
PMPA	1,700	<2.0	<2.0
PEPA	340	<2.0	<2.0
PS Acid	<40	<2.0	<2.0
Hydro-PS Acid	<44	<2.0	<2.0
R-PSDA	76 B	5.5 J	<2.0
Hydrolyzed PSDA	<27	36 J	4.0 J
R-PSDCA	<140	<3.0	<3.0
NVHOS	<130	<3.0	<3.0
EVE Acid	<40	<2.0	<2.0
Hydro-EVE Acid	<24	<2.0	<2.0
R-EVE	67 J	<2.0	<2.0
Perfluoro(2-ethoxyethane)sulfonic Acid	<29	<2.0	<2.0
PFECA B	<62	<2.0	<2.0
PFECA-G	<29	<2.0	<2.0
PFPrA	4,600	<5.0	<5.0
Perfluoroheptanoic Acid	<25	<2.0	<2.0
Total Attachment C^{2,3}	17,000	15	ND
Total Table 3+ (17 compounds)^{3,4}	17,000	15	ND
Total Table 3+ (18 compounds)^{3,5}	21,000	15	ND
Total Table 3+ (21 compounds)³	22,000	57	4.0

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	--	--	--
Location ID	EB	EB	EB
Field Sample ID	CAP4Q23-EQBLK-PP-110823	CAP4Q23-EQBLK-PP-110823-Z	CAP4Q23-EQBLK-BAILER-110923
Sample Date	11/08/2023	11/08/2023	11/09/2023
QA/QC	Equipment Blank	Equipment Blank	Equipment Blank
Sample Delivery Group (SDG)	320-106887-1	320-106887-1	320-107233-1
Lab Sample ID	320-106887-9	320-106887-8	320-107233-6
Table 3+ (ng/L)			
HFPO-DA	<4.0	<4.0	<4.0
PFMOAA	<2.0	<2.0	<2.0
PFO2HxA	<2.0	<2.0	<2.0
PFO3OA	<2.0	<2.0	<2.0
PFO4DA	<2.0	<2.0	<2.0
PFO5DA	<2.0	<2.0	<2.0
PMPA	<2.0	<2.0	<2.0
PEPA	<2.0	<2.0	<2.0
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	<3.0	<3.0	<3.0
NVHOS	<3.0	<3.0	<3.0
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
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0	<2.0	<2.0
PFECA B	<2.0	<2.0	<2.0
PFECA-G	<2.0	<2.0	<2.0
PFPrA	<5.0	<5.0	<5.0
Perfluoroheptanoic Acid	<2.0	<2.0	<2.0
Total Attachment C^{2,3}	ND	ND	ND
Total Table 3+ (17 compounds)^{3,4}	ND	ND	ND
Total Table 3+ (18 compounds)^{3,5}	ND	ND	ND
Total Table 3+ (21 compounds)³	ND	ND	ND

**TABLE A6
GROUNDWATER ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit¹	--
Location ID	EB
Field Sample ID	CAP4Q23-EQBLK-BAILER-110923- Z
Sample Date	11/09/2023
QA/QC	Equipment Blank
Sample Delivery Group (SDG)	320-107233-1
Lab Sample ID	320-107233-7
Table 3+ (ng/L)	
HFPO-DA	<4.0
PFMOAA	<2.0
PFO2HxA	<2.0
PFO3OA	<2.0
PFO4DA	<2.0
PFO5DA	<2.0
PMPA	<2.0
PEPA	<2.0
PS Acid	<2.0
Hydro-PS Acid	<2.0
R-PSDA	<2.0
Hydrolyzed PSDA	<2.0
R-PSDCA	<3.0
NVHOS	<3.0
EVE Acid	<2.0
Hydro-EVE Acid	<2.0
R-EVE	<2.0
Perfluoro(2-ethoxyethane)sulfonic Acid	<2.0
PFECA B	<2.0
PFECA-G	<2.0
PFPrA	<5.0
Perfluoroheptanoic Acid	<2.0
Total Attachment C^{2,3}	ND
Total Table 3+ (17 compounds)^{3,4}	ND
Total Table 3+ (18 compounds)^{3,5}	ND
Total Table 3+ (21 compounds)³	ND

Notes:

- 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
- UJ – Analyte not detected. Reporting limit may not be accurate or precise.
- "-Z" in Sample ID denotes field filtration
- < - Analyte not detected above associated reporting limit.
- - not applicable
- 1 - Refers to the primary aquifer unit that the well screen is estimated to be screened within
- 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, R-EVE, and PFPrA.
- 5 - Total Table 3+ (18 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.
- 6 - PIW-1S and PW-07 were not sampled because the wells were dry.

**TABLE A7
SUMMARY OF TOTAL PFAS MASS DISCHARGE BY PATHWAY AFTER REMEDIES
Chemours Fayetteville Works, North Carolina**

Pathway	Pathway Name	Total Flow Volume on Sample Date (MG) ¹	Total Attachment C ²		Total Table 3+ (17 compounds) ³		Total Table 3+ (18 compounds) ⁴		Total Table 3+ (21 compounds)	
			Concentration (ng/L)	Mass Discharge (mg/s)	Concentration (ng/L)	Mass Discharge (mg/s)	Concentration (ng/L)	Mass Discharge (mg/s)	Concentration (ng/L)	Mass Discharge (mg/s)
1	Upstream River Water and Groundwater ⁵	345	3.1	0.05	3.1	0.05	14	0.21	14	0.21
2	Willis Creek	10.04	690	0.30	690	0.30	860	0.38	910	0.40
3	Aerial Deposition on Water Features	--	--	0.01	--	0.01	--	0.01	--	0.01
4	Outfall 002 ⁶	14	73	0.05	103	0.06	103	0.06	153	0.10
4A	Stormwater Treatment System ⁷	--								
5	Onsite Groundwater ⁸	--	--	0.05	--	0.05	--	0.06	--	0.06
6A	Seep A ^{9,10}	--	--	--	--	--	--	--	--	--
6B	Seep B ^{9,10}	--	--	--	--	--	--	--	--	--
6C	Seep C ^{9,10}	0.15	30	2.0E-04	30	2.0E-04	44	2.9E-04	44	2.9E-04
6D	Seep D ^{9,10}	--	--	--	--	--	--	--	--	--
6E	Lock and Dam Seep	0.007	50,000	0.02	51,000	0.02	57,000	0.02	57,000	0.02
6F	Lock and Dam Seep North	1.0E-03	14,000	6.3E-04	14,000	6.3E-04	17,000	7.7E-04	17,000	7.7E-04
7	Outfall 003 Stream ¹⁰	9.3E-01	2,500	0.10	2,500	0.10	3,500	0.14	3,600	0.15
8	Offsite Adjacent and Downstream Groundwater	--	--	0.02	--	0.02	--	0.08	--	0.08
9	Georgia Branch Creek	9.35	1,600	0.66	1,600	0.66	2,000	0.82	2,100	0.86
Calculated Total Table 3+ Mass Discharge (mg/s) at Tar Heel				1.24		1.26		1.78		1.88

Notes:

1 - Total flow volume is determined based on measurements taken over 24-hour sample collection period for all locations except Willis Creek, Lock and Dam Seep, Outfall 003, and Georgia Branch Creek. At these locations, the total flow volume was estimated based on the instantaneous flow measurement.

2 - Mass discharge calculations for Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).

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

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

5 - The volumetric flow rate for upstream river water and groundwater was estimated by subtracting inflows from Willis Creek, upwelling groundwater, seeps to the river, and Outfall 002 and by adding the river water intake from Chemours to the flow rate measurement from the W.O. Huske Dam.

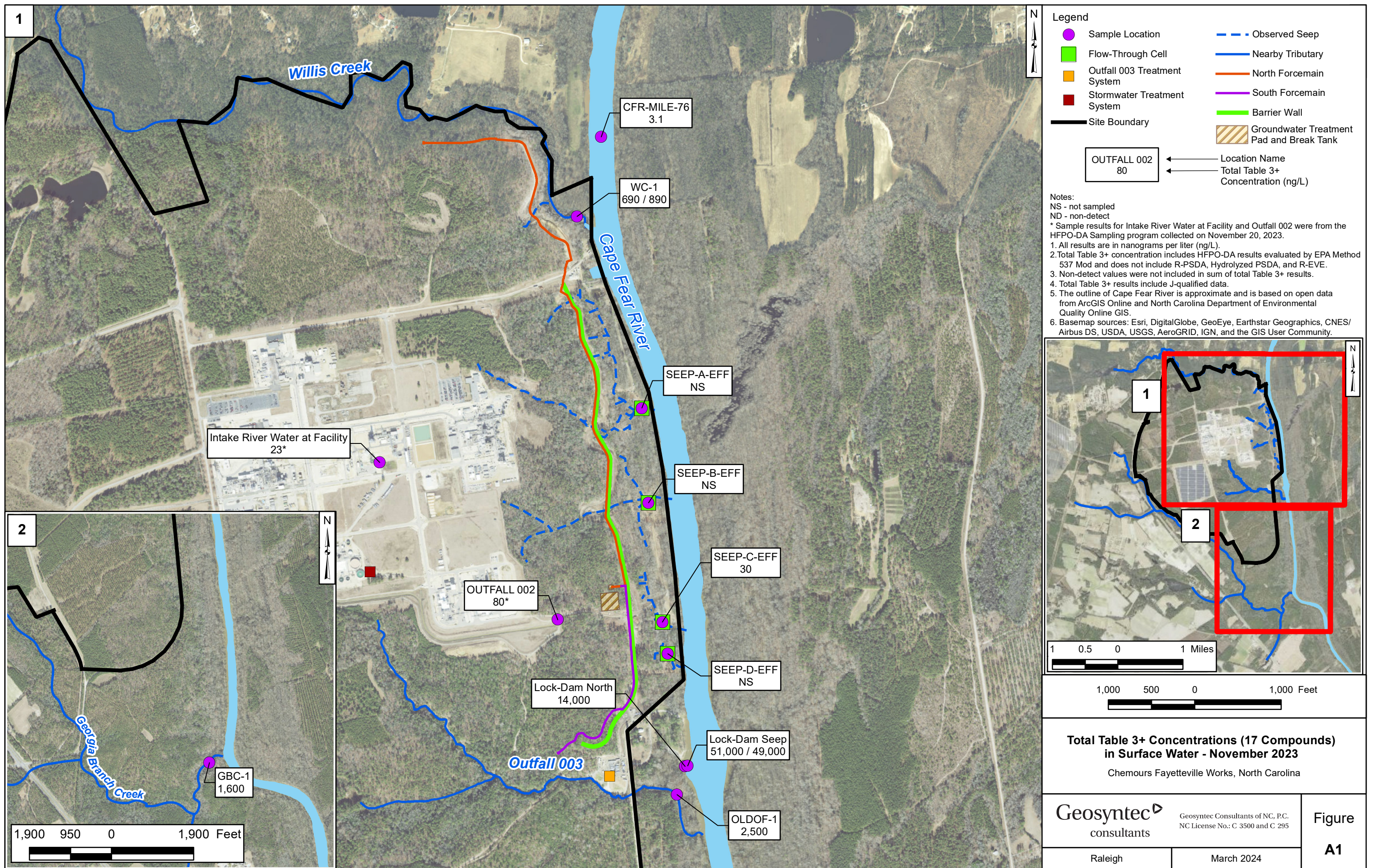
6 - Total PFAS concentrations at the Intake River Water at Facility location are subtracted from Outfall 002 concentrations to compute the mass discharge at Outfall 002. During this quarter, the Total Table 3+ (17 compounds) concentration of Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results were several orders of magnitude higher than past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the HFPO-DA Sampling program collected on November 20, 2023, were used to calculate the mass discharge from this pathway.

7 - The stormwater treatment system captures PFAS originating from Stormwater in the Monomers/IXM area that would otherwise flow to Outfall 002 during storm events. During the November sampling event there was no stormwater flow to the stormwater treatment system, so there was no mass discharge calculated for this location.

8 - Due to transient conditions as a result of the groundwater remedy installation and commissioning, gradient measurements are impacted from these activities and should be considered estimates.

9 - There was insufficient flow observed at Seeps A, B and D FTC effluent Basins at the time of sampling and therefore samples were not collected and mass discharge could not be calculated.

10 - For November 2023, the concentrations from the stream sample collected downgradient from the Outfall 003 treatment system and effluent samples collected at the effluent basins of the Seep A, B, C and D flow-through cells were used to calculate the After Remedy mass discharge for these pathways.

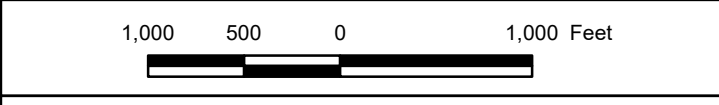
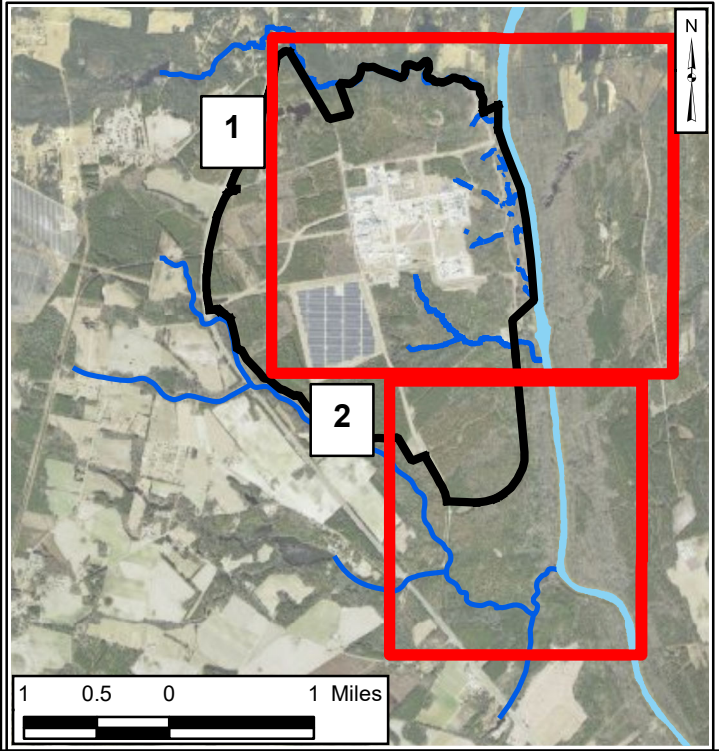


Legend

- Sample Location
- Flow-Through Cell
- Outfall 003 Treatment System
- Stormwater Treatment System
- Site Boundary
- Observed Seep
- Nearby Tributary
- North Forcemain
- South Forcemain
- Barrier Wall
- Groundwater Treatment Pad and Break Tank

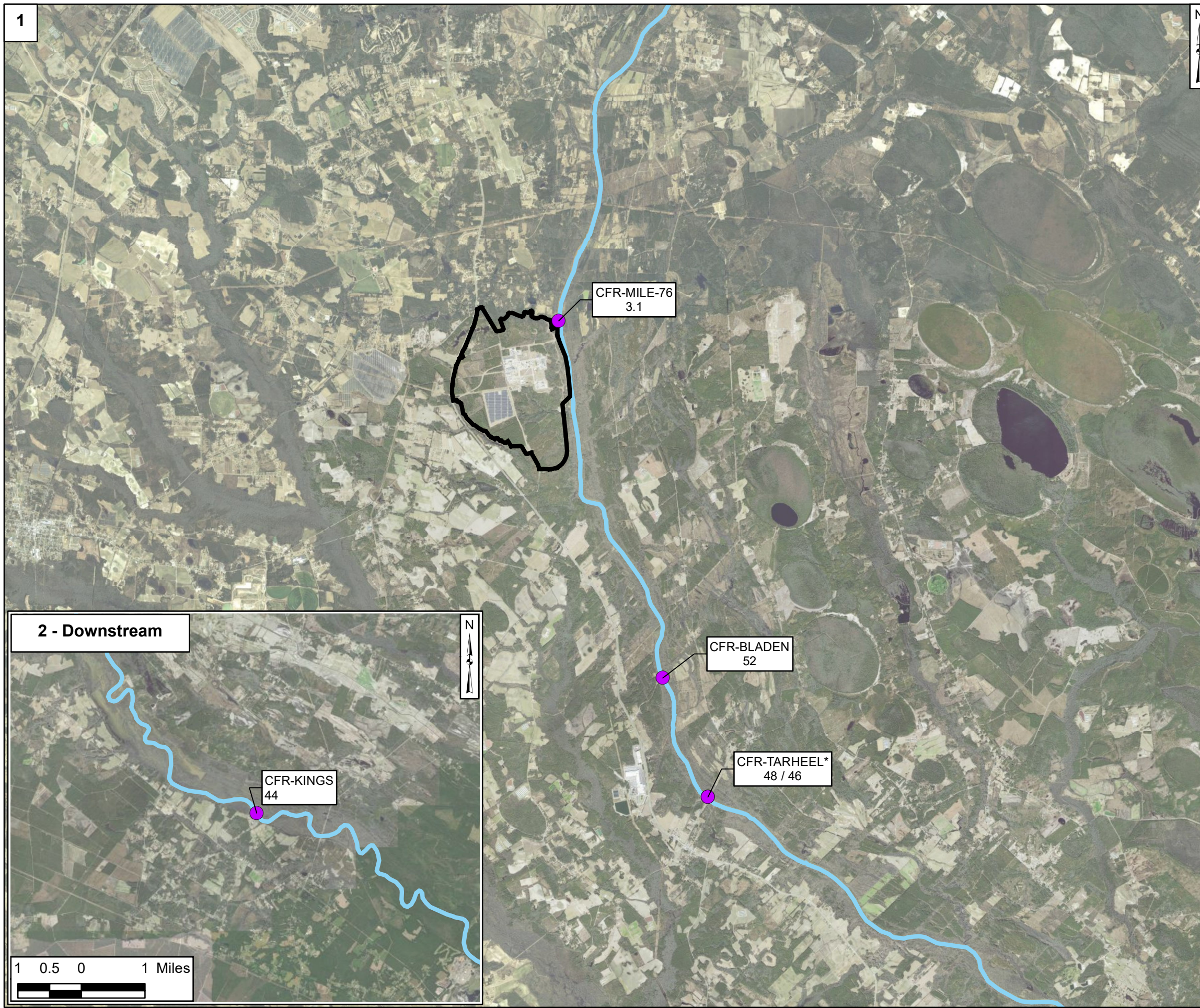
OUTFALL 002 80 ← Location Name
 ← Total Table 3+ Concentration (ng/L)

Notes:
 NS - not sampled
 ND - non-detect
 * Sample results for Intake River Water at Facility and Outfall 002 were from the HFPO-DA Sampling program collected on November 20, 2023.
 1. All results are in nanograms per liter (ng/L).
 2. Total Table 3+ concentration includes HFPO-DA results evaluated by EPA Method 537 Mod and does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.
 3. Non-detect values were not included in sum of total Table 3+ results.
 4. Total Table 3+ results include J-qualified data.
 5. 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.
 6. Basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



Total Table 3+ Concentrations (17 Compounds) in Surface Water - November 2023
 Chemours Fayetteville Works, North Carolina

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

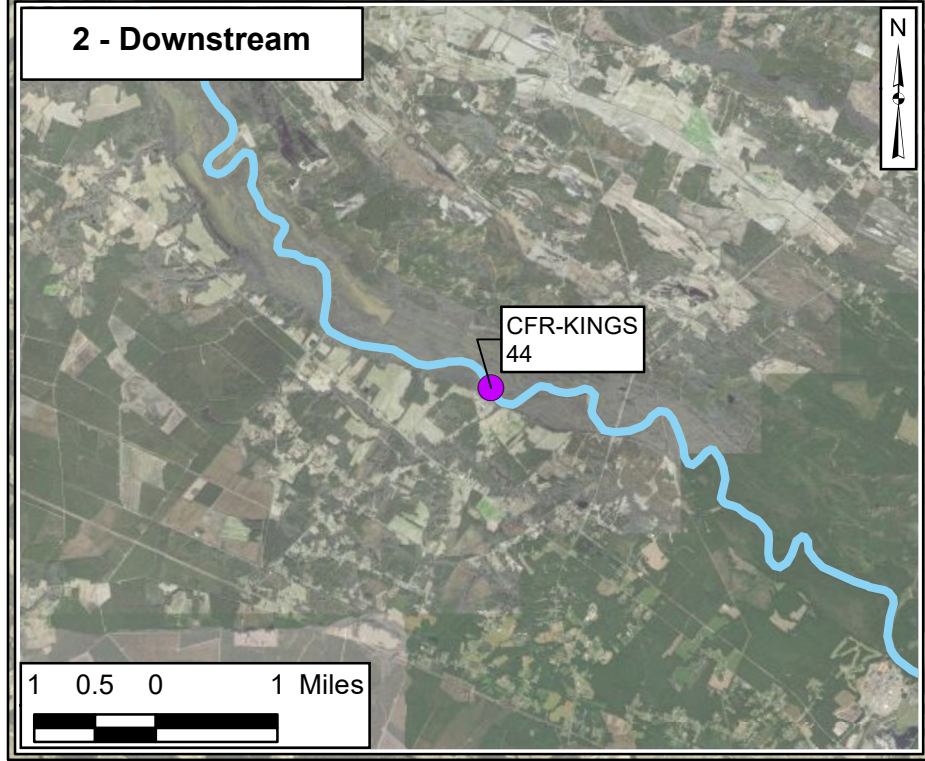
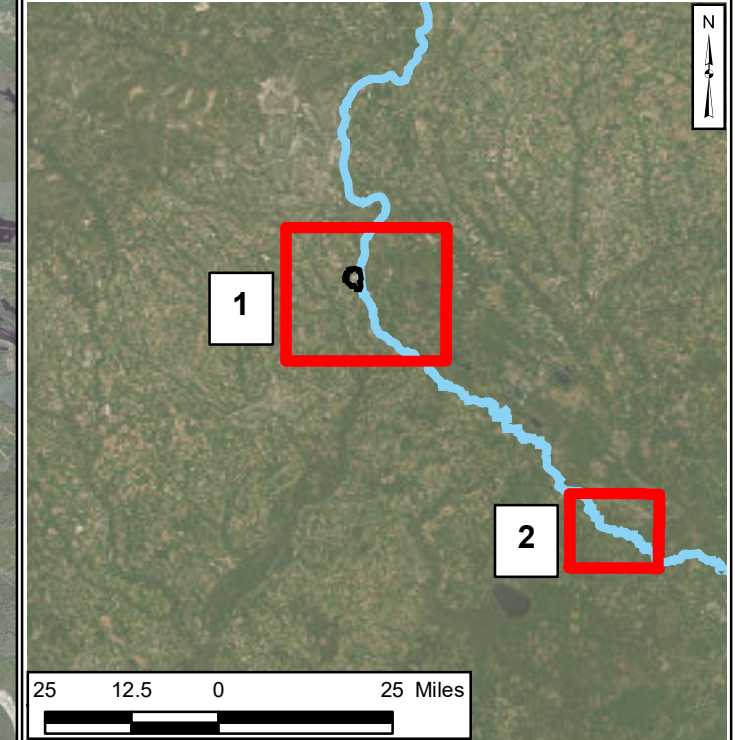


Legend

- Sample Location
- Cape Fear River
- Site Boundary

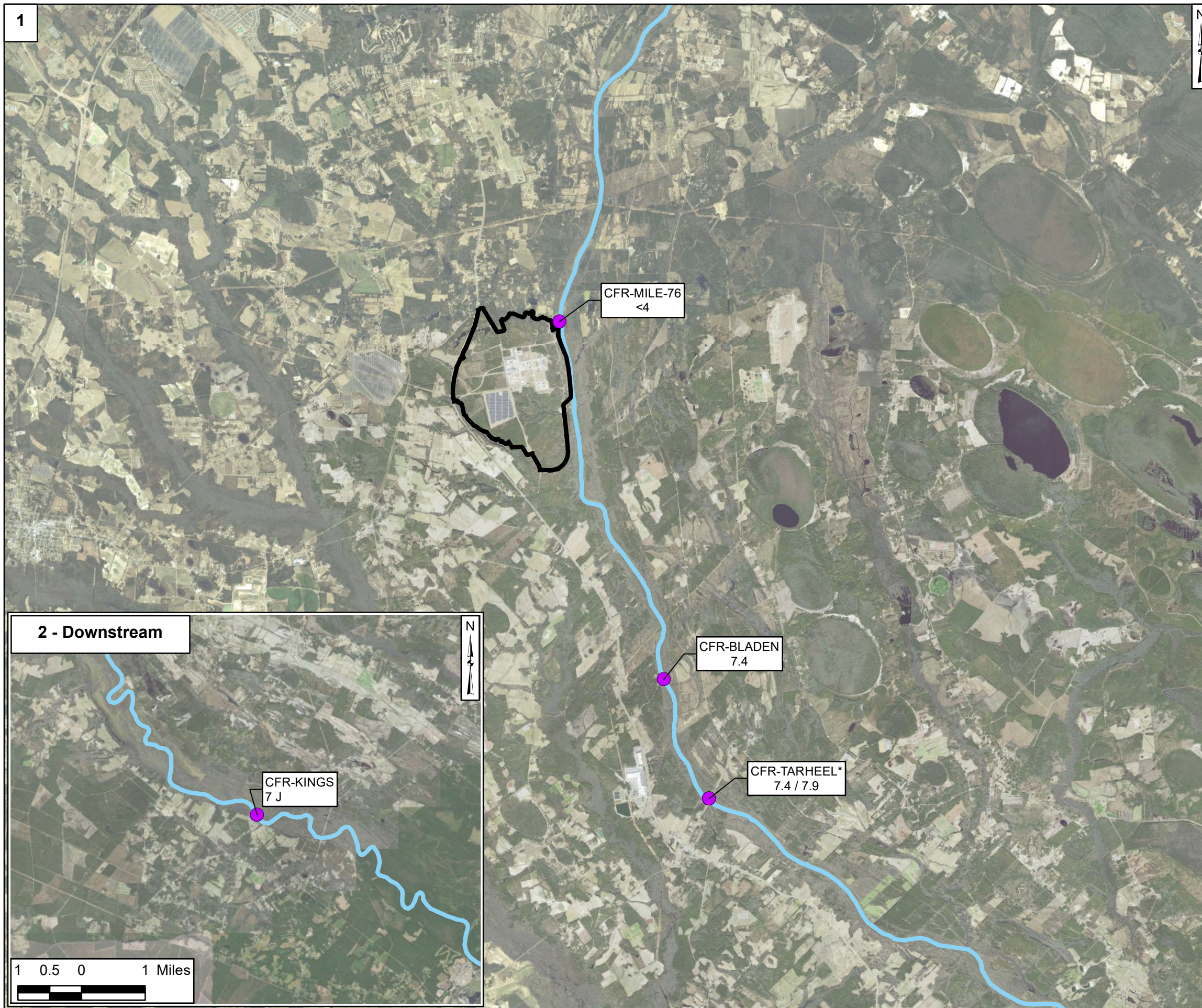
CFR-BLADEN 52	← Location Name
	← Total Table 3+ Concentration (ng/L)

Notes:
 ND - no Table 3+ analytes (17 compounds) were detected above the associated reporting limits
 * Multiple results are shown at CFR-TARHEEL for grab (December 6, 2023) and composite sample (November 24, 2023).
 1. All results are in nanograms per liter.
 2. Total Table 3+ concentration includes HFPO-DA results evaluated by EPA Method 537 Mod and does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.
 3. Non-detect values were not included in sum of total Table 3+ results.
 4. Total Table 3+ results include J-qualified data.
 5. 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.
 6. Basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.



Cape Fear River Total Table 3+ Concentrations (17 Compounds) - November and December 2023
 Chemours Fayetteville Works, North Carolina

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



Legend

- Sample Location
- Cape Fear River
- Site Boundary

CFR-BLADEN
7.4

Location Name
HFPO-DA
Concentration (ng/L)

Notes:

- * Multiple results are shown at CFR-TARHEEL for grab (December 6, 2023) and composite sample (November 24, 2023).
- < - Analyte not detected above associated reporting limit.
- J - Analyte detected. Reported value may not be accurate or precise.
- U - Analyte not detected.
- 1. All results are in nanograms per liter.
- 2. Basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.

25 12.5 0 25 Miles

2 1 0 2 Miles

**Cape Fear River HFPO-DA Concentrations
November and December 2023**

Chemours Fayetteville Works, North Carolina

Geosyntec consultants

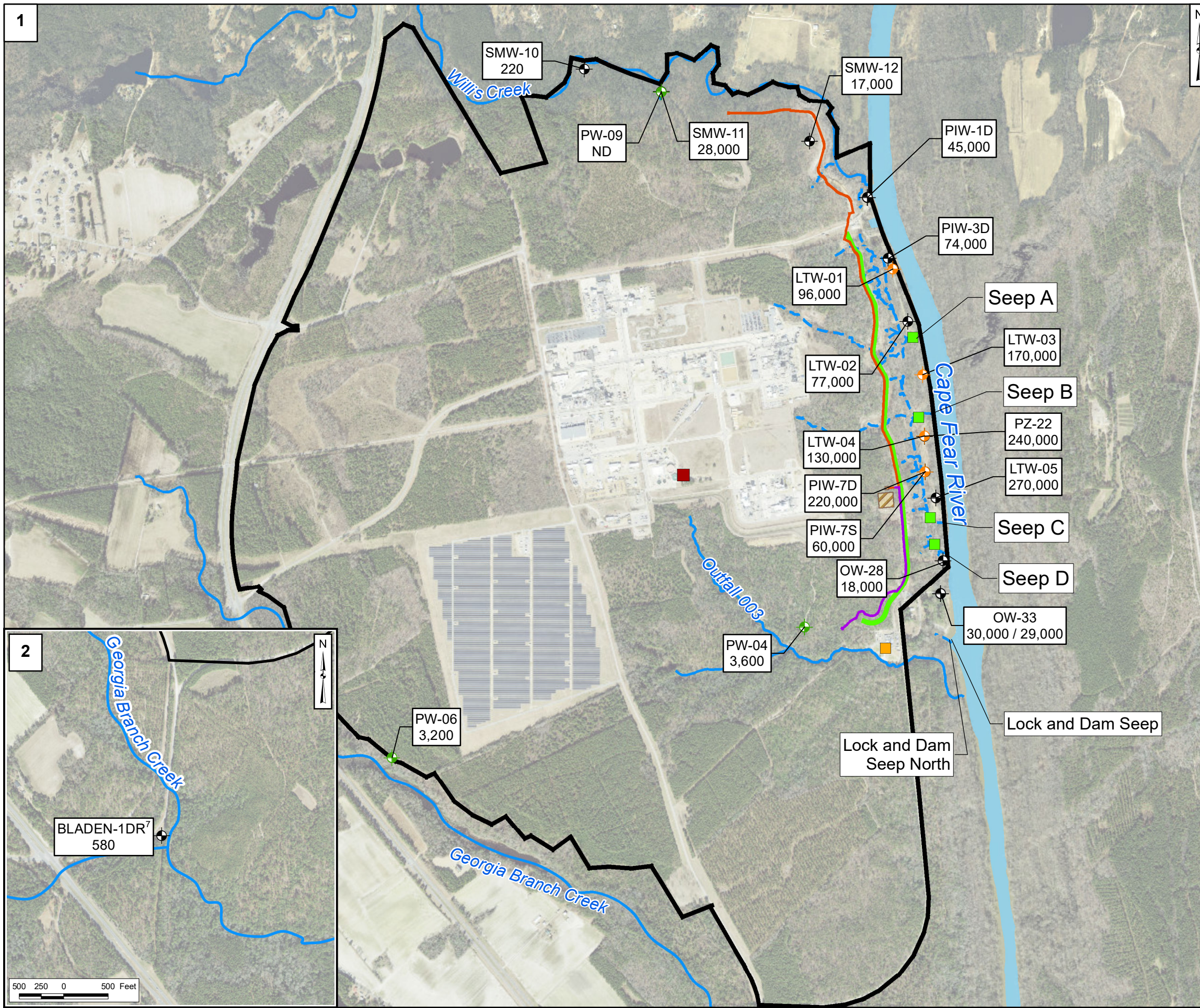
Geosyntec Consultants of NC, P.C.
NC License No.: C 3500 and C 295

Raleigh

March 2024

**Figure
A3**

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



Legend

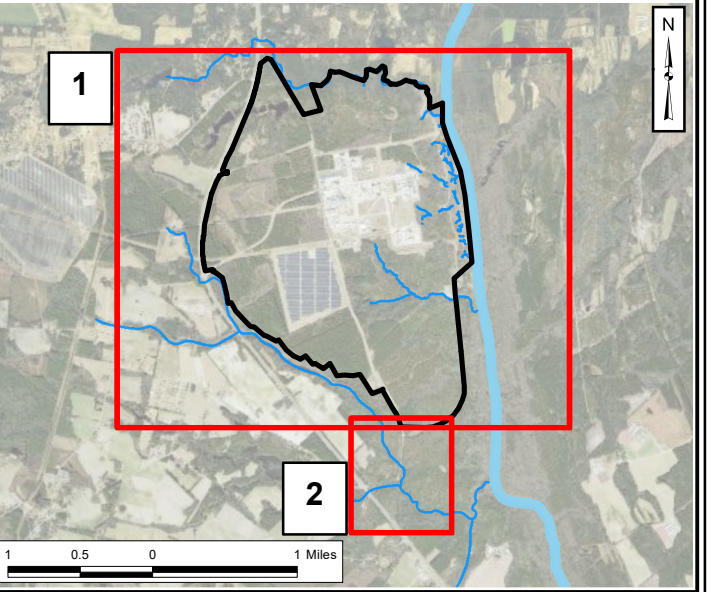
- Surficial Aquifer Monitoring Well
- Black Creek Aquifer Monitoring Well
- Floodplain Deposits Monitoring Well
- Flow-Through Cell
- Outfall 003 Treatment System
- Stormwater Treatment System
- Observed Seep
- Nearby Tributary
- Site Boundary
- North Forcemain
- South Forcemain
- Barrier Wall
- Groundwater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

Notes:

NS - not sampled
 ND - no Table 3+ analytes (17 compounds) were detected above the associated reporting limits

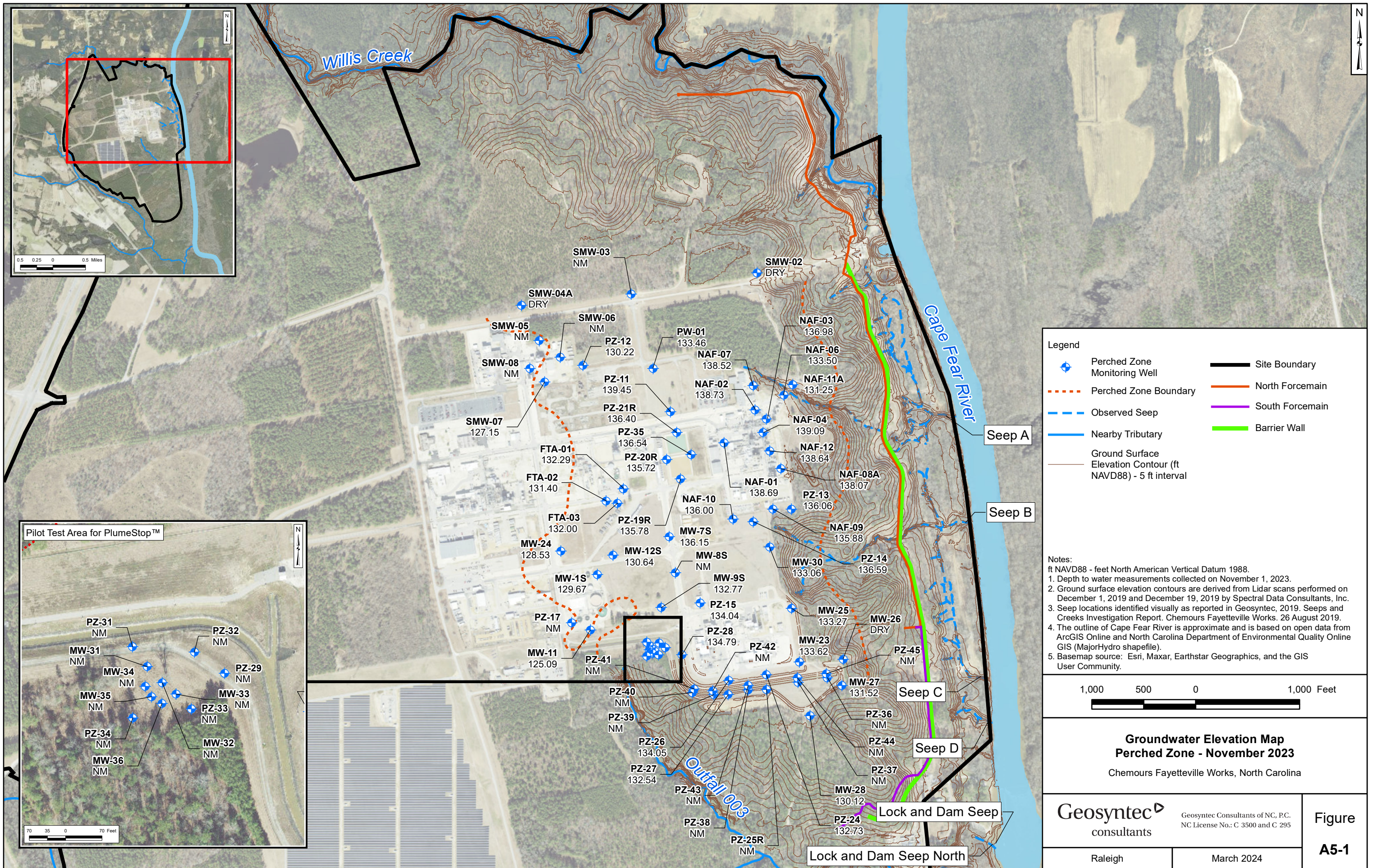
1. All results are in nanograms per liter.
 2. Total table 3+ concentration includes HFPO-DA results evaluated by EPA Method 537 Mod and does not include R-PSDA, Hydrolyzed PSDA, and R-EVE.
 3. Non-detect values were not included in sum of total Table 3+ results.
 4. Total Table 3+ results include J-qualified data.
 5. 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.
 6. Basemap sources: Esri, Maxar, Earthstar Geographics, and the GIS User Community.
 7. Bladen-1DR was not sampled during the Q4 2023 sampling event because an adjacent well was attempted to be sampled instead. As a result, Bladen-1DR was sampled on January 4, 2024, and this sample was incorporated to this quarter's event.

PIW-1D 45,000 ← Location Name
 ← Total Table 3+ Concentration (ng/L)



**Total Table 3+ Concentrations
 (17 Compounds) in Groundwater - Q4 2023**
 Chemours Fayetteville Works, North Carolina

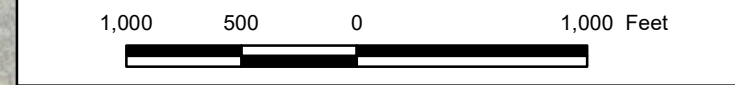
Projection: NAD 1983 StatePlane North Carolina FIPS 3200 Feet, Units in Foot US



Legend

- ◆ Perched Zone Monitoring Well
- - - Perched Zone Boundary
- - - Observed Seep
- Nearby Tributary
- Ground Surface Elevation Contour (ft NAVD88) - 5 ft interval
- Site Boundary
- North Forcemain
- South Forcemain
- Barrier Wall

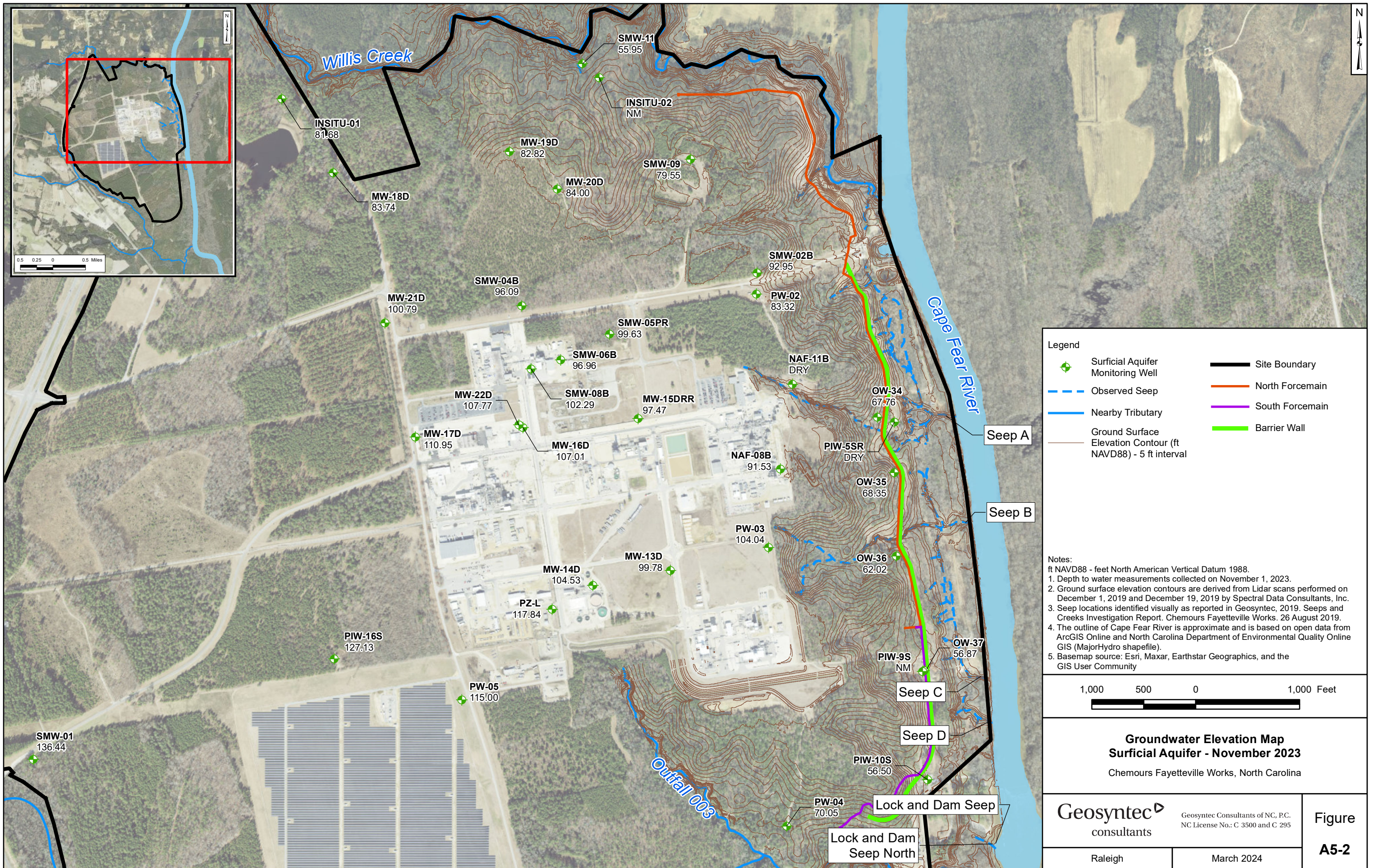
Notes:
 ft NAVD88 - feet North American Vertical Datum 1988.
 1. Depth to water measurements collected on November 1, 2023.
 2. Ground surface elevation contours are derived from Lidar scans performed on December 1, 2019 and December 19, 2019 by Spectral Data Consultants, Inc.
 3. Seep locations identified visually as reported in Geosyntec, 2019. Seeps and Creeks Investigation Report. Chemours Fayetteville Works. 26 August 2019.
 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 (MajorHydro shapefile).
 5. Basemap source: Esri, Maxar, Earthstar Geographics, and the GIS User Community.



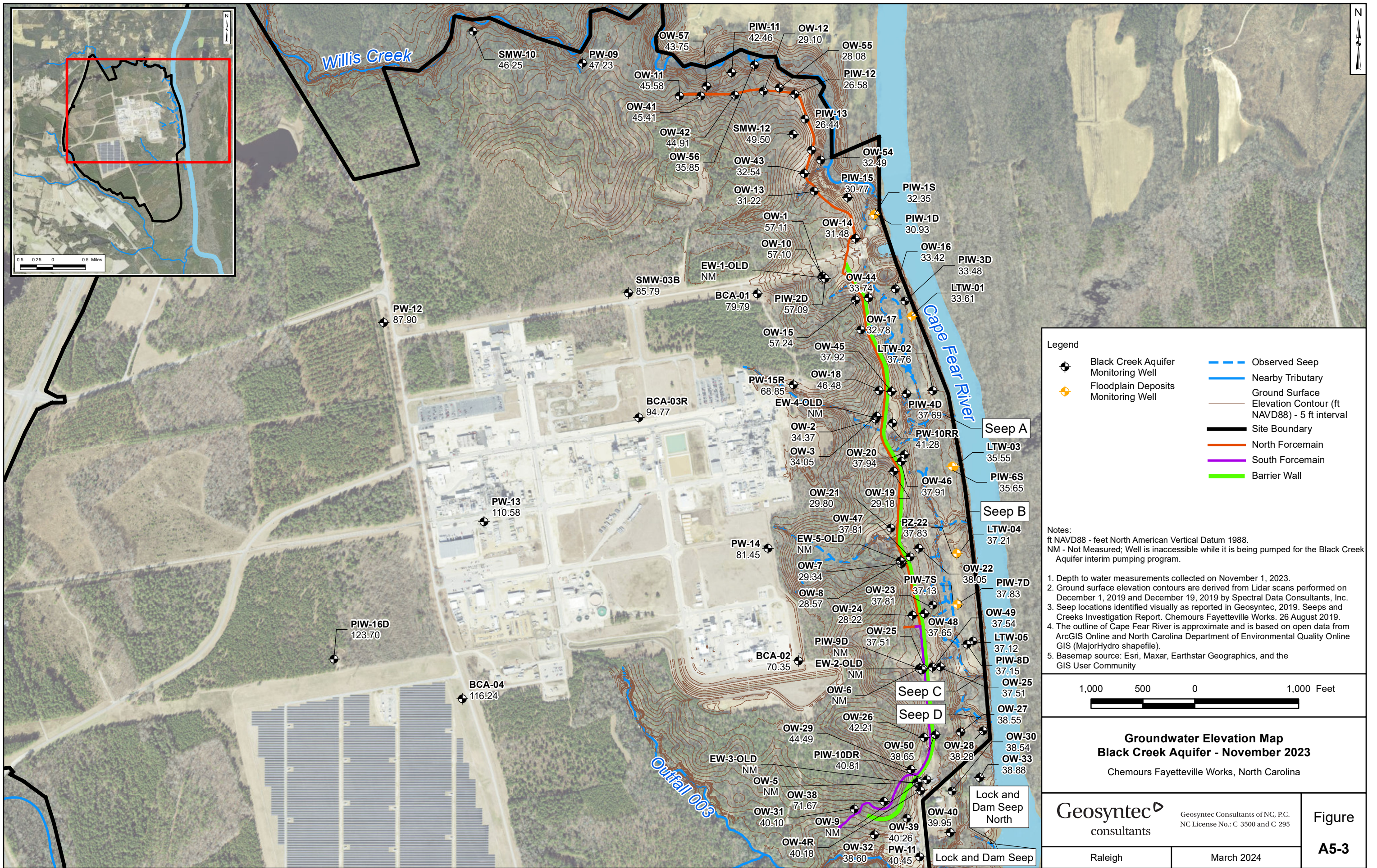
**Groundwater Elevation Map
 Perched Zone - November 2023**
 Chemours Fayetteville Works, North Carolina

	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295	Figure A5-1
	Raleigh	

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



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

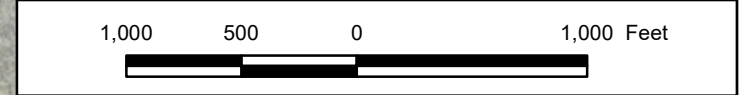


Legend

- ⊕ Black Creek Aquifer Monitoring Well
- ⊕ Floodplain Deposits Monitoring Well
- Observed Seep
- Nearby Tributary
- Ground Surface
- Elevation Contour (ft NAVD88) - 5 ft interval
- Site Boundary
- North Forcemain
- South Forcemain
- Barrier Wall

Notes:
 ft NAVD88 - feet North American Vertical Datum 1988.
 NM - Not Measured; Well is inaccessible while it is being pumped for the Black Creek Aquifer interim pumping program.

1. Depth to water measurements collected on November 1, 2023.
2. Ground surface elevation contours are derived from Lidar scans performed on December 1, 2019 and December 19, 2019 by Spectral Data Consultants, Inc.
3. Seep locations identified visually as reported in Geosyntec, 2019. Seeps and Creeks Investigation Report. Chemours Fayetteville Works. 26 August 2019.
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 (MajorHydro shapefile).
5. Basemap source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Groundwater Elevation Map
Black Creek Aquifer - November 2023
 Chemours Fayetteville Works, North Carolina

	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295	Figure A5-3
	Raleigh	

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

Attachment ATT1

Supplemental Tables to the Mass Loading Model

TABLE ATT1-1
SEEP A FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Flow Volume¹ (gal)
--	--	--
Total Flow Volume (gal)		--

Notes:

gal - gallons

gpm - gallons per minute

FTC - Flow Through Cell

1 - There was insufficient flow observed in Seep A FTC Effluent Basin at the time of sampling and therefore a flow rate was not calculated.

TABLE ATT1-2
SEEP B FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Flow Volume¹ (gal)
--	--	--
Total Flow Volume (gal)		--

Notes:

gal - gallons

gpm - gallons per minute

FTC - Flow Through Cell

1 - There was insufficient flow observed in Seep B FTC Effluent Basin at the time of sampling and therefore a flow rate was not calculated.

**TABLE ATT1-3
SEEP C FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina**

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Bypass Spillway Flow Rate (gpm)	Bypass Spillway Volume² (gal)	Flow Volume³ (gal)
11/22/2023 10:12	306.1	94.0	1410.6	6,002
11/22/2023 10:27	354.9	14.7	220.6	5,544
11/22/2023 10:42	305.0	0	0	4,575
11/22/2023 10:57	436.6	0	0	6,549
11/22/2023 11:12	189.5	0	0	2,843
11/22/2023 11:27	233.0	0	0	3,494
11/22/2023 11:42	296.8	0	0	4,452
11/22/2023 11:57	276.9	0	0	4,154
11/22/2023 12:12	287.1	0	0	4,306
11/22/2023 12:27	168.2	0	0	2,524
11/22/2023 12:42	304.4	0	0	4,567
11/22/2023 12:57	281.7	0	0	4,226
11/22/2023 13:12	268.0	0	0	4,019
11/22/2023 13:27	260.1	0	0	3,902
11/22/2023 13:42	231.0	0	0	3,464
11/22/2023 13:57	226.9	0	0	3,404
11/22/2023 14:12	203.4	0	0	3,051
11/22/2023 14:27	88.4	0	0	1,326
11/22/2023 14:42	94.7	0	0	1,421
11/22/2023 14:57	79.7	0	0	1,195
11/22/2023 15:12	70.5	0	0	1,058
11/22/2023 15:27	109.5	0	0	1,642
11/22/2023 15:42	79.7	0	0	1,195
11/22/2023 15:57	66.8	0	0	1,002
11/22/2023 16:12	83.3	0	0	1,249
11/22/2023 16:27	84.7	0	0	1,271
11/22/2023 16:42	92.5	0	0	1,387
11/22/2023 16:57	92.9	0	0	1,393
11/22/2023 17:12	102.4	0	0	1,536
11/22/2023 17:27	104.7	0	0	1,571
11/22/2023 17:42	93.6	0	0	1,404
11/22/2023 17:57	107.1	0	0	1,606
11/22/2023 18:12	97.0	0	0	1,455
11/22/2023 18:27	83.3	0	0	1,249
11/22/2023 18:42	109.1	0	0	1,636
11/22/2023 18:57	117.9	0	0	1,768

TABLE ATT1-3
SEEP C FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Bypass Spillway Flow Rate (gpm)	Bypass Spillway Volume² (gal)	Flow Volume³ (gal)
11/22/2023 19:12	101.2	0	0	1,519
11/22/2023 19:27	86.2	0	0	1,293
11/22/2023 19:42	86.9	0	0	1,304
11/22/2023 19:57	73.0	0	0	1,094
11/22/2023 20:12	77.9	0	0	1,168
11/22/2023 20:27	74.4	0	0	1,115
11/22/2023 20:42	73.7	0	0	1,105
11/22/2023 20:57	67.1	0	0	1,007
11/22/2023 21:12	104.3	0	0	1,565
11/22/2023 21:27	109.8	0	0	1,648
11/22/2023 21:42	90.6	0	0	1,359
11/22/2023 21:57	72.3	0	0	1,084
11/22/2023 22:12	90.6	0	0	1,359
11/22/2023 22:27	77.9	0	0	1,168
11/22/2023 22:42	64.1	0	0	962
11/22/2023 22:57	91.7	0	0	1,376
11/22/2023 23:12	73.3	0	0	1,100
11/22/2023 23:27	69.5	0	0	1,043
11/22/2023 23:42	84.4	0	0	1,265
11/22/2023 23:57	68.2	0	0	1,022
11/23/2023 0:12	59.2	0	0	888
11/23/2023 0:27	74.4	0	0	1,115
11/23/2023 0:42	60.8	0	0	912
11/23/2023 0:57	61.8	0	0	927
11/23/2023 1:12	55.6	0	0	835
11/23/2023 1:27	70.9	0	0	1,063
11/23/2023 1:42	63.5	0	0	952
11/23/2023 1:57	69.2	0	0	1,038
11/23/2023 2:12	71.9	0	0	1,079
11/23/2023 2:27	47.3	0	0	709
11/23/2023 2:42	66.5	0	0	997
11/23/2023 2:57	74.4	0	0	1,115
11/23/2023 3:12	76.8	0	0	1,152
11/23/2023 3:27	61.5	0	0	922
11/23/2023 3:42	62.5	0	0	937
11/23/2023 3:57	56.9	0	0	854

TABLE ATT1-3
SEEP C FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Bypass Spillway Flow Rate (gpm)	Bypass Spillway Volume² (gal)	Flow Volume³ (gal)
11/23/2023 4:12	64.1	0	0	962
11/23/2023 4:27	70.5	0	0	1,058
11/23/2023 4:42	71.6	0	0	1,074
11/23/2023 4:57	66.8	0	0	1,002
11/23/2023 5:12	51.9	0	0	778
11/23/2023 5:27	61.8	0	0	927
11/23/2023 5:42	60.8	0	0	912
11/23/2023 5:57	70.2	0	0	1,053
11/23/2023 6:12	69.9	0	0	1,048
11/23/2023 6:27	71.6	0	0	1,074
11/23/2023 6:42	58.9	0	0	883
11/23/2023 6:57	70.5	0	0	1,058
11/23/2023 7:12	58.5	0	0	878
11/23/2023 7:27	68.5	0	0	1,027
11/23/2023 7:42	65.5	0	0	982
11/23/2023 7:57	48.8	0	0	732
11/23/2023 8:12	51.6	0	0	773
11/23/2023 8:27	62.8	0	0	942
11/23/2023 8:42	48.8	0	0	732
11/23/2023 8:57	47.3	0	0	709
11/23/2023 9:12	47.0	0	0	705
11/23/2023 9:27	61.8	0	0	927
11/23/2023 9:42	42.0	0	0	629
11/23/2023 9:57	51.3	0	0	769
11/23/2023 10:12	42.5	0	0	638
11/23/2023 10:27	37.4	0	0	561
Total Flow Volume (gal)				151,726

Notes:

gal - gallons

gpm - gallons per minute

FTC - Flow Through Cell

1 - Flow volumes are calculated as the total volume of flow passing through the Flow through cell (FTC) for the duration of the interval (15 mins). Where the interval duration is calculated as the time between the present recording and the previous recording.

TABLE ATT1-4
SEEP D FLOW THROUGH CELL (FTC) DATA
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Date/Time	Flow Rate (gpm)	Flow Volume¹ (gal)
--	--	--
Total Flow Volume (gal)		--

Notes:

gal - gallons

gpm - gallons per minute

FTC - Flow Through Cell

1 - There was insufficient flow observed in Seep D FTC Effluent Basin at the time of sampling and therefore a flow rate was not calculated.

TABLE ATT1-5
OUTFALL 003 STREAM VOLUMETRIC DISCHARGE CALCULATIONS
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Measurement Point	Distance Along Measured Cross Section	Measured Water Column Depth	Calculated Creek Cell Area ²	Measured Creek Velocity	Cell Velocity	Calculated Discharge Through Creek Cell Area ¹
	(ft)					
West Bank	0	0.00	0.17	0.00	0.43	0.07
T	1	0.00		0.87		
B	1	0.33	0.29	0.85	0.54	0.16
T	2	0.00		0.18		
B	2	0.25	0.29	0.27	0.79	0.23
T	3	0.00		2.38		
B	3	0.33	0.50	0.32	1.45	0.72
T	4	0.00		2.31		
M	4	0.33		1.54		
B	4	0.67	0.33	0.32	0.77	0.26
East Bank	5	0.00		0.00		
<i>Associated Measurement Notes</i>			Total Volumetric Discharge			
Location: Chemours Fayetteville			(ft ³ /s)			1.4
Station: Outfall 003 Treatment Plant Effluent Stream			(gpm)			646
Date: Nov 22, 2023			(L/s)			41

Acronyms

ft³/s - cubic feet per second
 MGD - million gallons per day

Notes

- 1 - Discharge is calculated as product of creek velocity measured at the mid-depth (feet per second) times the cross sectional area of each measurement
- 2 - Measurement cell areas are calculated assuming a trapezoidal geometry based on distances between measurement points and the measured water column depths. A measurement cell is an areal section from the width of the river channel.

TABLE ATT1-6
WILLIS CREEK VOLUMETRIC DISCHARGE CALCULATIONS
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Measurement Point	Distance Along Measured Cross Section	Measured Water Column Depth	Calculated Creek Cell Area ²	Measured Creek Velocity	Cell Velocity	Calculated Discharge Through Creek Cell Area ¹
	(ft)	(ft)	(ft ²)	(ft/s)	(ft/s)	(ft ³ /s)
South Bank	0	0.00	0.38	0.00	0.09	0.03
T	3	0.00		0.25		
B	3	0.25	1.88	0.09	0.66	1.24
T	6	0.00		0.95		
M	6	0.50		1.15		
B	6	1.00	2.50	0.25	1.26	3.14
T	9	0.00		1.58		
M	9	0.33		1.36		
B	9	0.67	2.00	1.18	1.39	2.78
T	12	0.00		0.58		
M	12	0.33		1.42		
B	12	0.67	2.50	1.59	1.58	3.94
T	15	0.00		1.10		
M	15	0.50		1.73		
B	15	1.00	2.00	1.82	1.12	2.23
T	18	0.00		0.42		
B	18	0.33	2.00	0.58	0.96	
T	21	0.00		1.94		0.00
M	21	0.50		1.42		
B	21	1.00	2.00	1.11	1.06	2.12
T	24	0.00		0.68		
B	24	0.33	0.17	0.71	0.35	0.06
North Bank	25	0.00		0.00		
				Total Volumetric Discharge		
				(ft ³ /s)		15.5
				(gpm)		6,969
				(L/s)		440

Associated Measurement Notes

Location: Chemours Fayetteville
 Station: Willis Creek 01 (SW-WC-01)
 Date: Nov 22, 2023

Acronyms

- - data not measured or calculated
- B - Bottom depth of water
- ft - feet
- ft² - square feet
- ft³/s - cubic feet per second
- gpm - gallons per minute
- L/s - liters per second
- M - Middle depth of water
- T - Top depth of water (i.e., 0 ft)

Notes

- 1 - Discharge is calculated as product of creek velocity measured at the mid-depth (feet per second) times the cross sectional area of each measurement cell.
- 2 - Measurement cell areas are calculated assuming a trapezoidal geometry based on distances between measurement points and the measured water column depths. A measurement cell is an areal section from the width of the river channel.

TABLE ATT1-7
GEORGIA BRANCH CREEK VOLUMETRIC DISCHARGE CALCULATIONS
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Location	Distance Along Measured Cross Section	Measured Water Column Depth	Calculated Creek Cell Area ²	Measured Creek Velocity	Cell Velocity	Calculated Discharge Through Creek Cell Area ¹
	(ft)	(ft)	(ft ²)	(ft/s)	(ft/s)	(ft ³ /s)
South Bank	12	0	0.75	0	0.14	0.11
T	11	0.05		0		
M	11	0.1		0		
M	11	0.7		0.22		
B	11	1.5	1.75	0.09	0.36	0.63
T	10	0.1		0.41		
M	10	1		0.44		
B	10	2	2.15	0.26	0.45	0.96
T	9	0.1		0.4		
M	9	1.1		0.45		
B	9	2.3	2.70	0.35	0.30	0.80
T	8	0.1		0.52		
M	8	1.6		0.14		
B	8	3.1	3.10	0.22	0.33	1.02
T	7	0.1		0.23		
M	7	1.6		0.52		
B	7	3.1	3.00	0.57	0.69	2.07
T	6	1		0.86		
M	6	1.5		0.86		
B	6	2.9	2.80	0.22	0.88	2.46
T	5	0.1		1.12		
M	5	1.5		0.9		
B	5	2.7	2.60	0.43	0.97	2.51
T	4	0.1		0.54		
M	4	1.5		1.03		
B	4	2.5	2.35	0.75	0.88	2.07
T	3	1		0.2		
M	3	1.1		0.73		
B	3	2.2	2.10	0.92	0.56	1.17
T	2	0.1		0.12		
M	2	1		0.38		
B	2	2	1.50	0.66	0.38	0.57
T	1	1		0		
M	1	0.5		0.38		
B	1	1	0.50	0.05	0.19	0.10
North Bank	0	0		0		
Total Volumetric Discharge						
(ft ³ /s)						14.5
(gpm)						6,489
(L/s)						409

Associated Measurement Notes

Location: Chemours Fayetteville
 Station: Georgia Branch 01 (SW-GB-01)
 Date: Nov 22, 2023

Acronyms

- - data not measured or calculated
- B - Bottom depth of water
- ft - feet
- ft² - square feet
- ft³/s - cubic feet per second
- gpm - gallons per minute
- L/s - liters per second
- M - Middle depth of water
- T - Top depth of water (i.e., 0 ft)

Notes

- 1 - Discharge is calculated as product of creek velocity measured at the middle-depth (feet per second) times the cross sectional area of each measurement cell.
- 2 - Measurement cell areas are calculated assuming a trapezoidal geometry based on distances between measurement points and the measured water column depths. A measurement cell is an areal section from the width of the river channel.

TABLE ATT1-8
OUTFALL 002 FLOW RATE
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Q4 2023 Quarterly Event	Date	Outfall 002 Flow (MGD)	Total Daily Volume (gal)	Hours of Sample Collection	Approximate Total Volume during 24 hour Sample Collection (gal)
Nov 2023 ¹	11/22/2023	15.817	15,817,000	13.8	9,094,775
	11/23/2023	13.338	13,338,000	9.2	5,112,900
	11/22/2023 10:12:00 AM to 11/23/2023 9:12:00 AM			23.0	14,207,675

Notes:

Daily flow rates collected from facility Discharge Monitoring Reports.

1 - Total flow volume for 24-hour temporal composite sample collected at 9:12 AM on 11/22/23 approximated based on flow rates for 11/22/23 and 11/23/23.

Acronyms:

gal - gallons

MGD - millions of gallons per day

TABLE ATT1-9
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Q4 2023 Quarterly Event	Pathway/ Location	Sample Collection Timepoint	Flow Gauging Location¹	Grab Sample Instantaneous Flow Rate (ft³/s)²
November 2023	Upstream River Water and Groundwater	11/22/23 9:10	William O Huske Lock and Dam	1,100

Notes:

- 1 - Flow rate measured at USGS gauging station #02105500 located at William O Huske Lock & Dam, North Carolina.
- 2 - Instantaneous flow rate for grab samples is the recorded flow rate at the time of grab sample collection.

Acronyms:

- ft³/s - cubic feet per second
- hr - hours
- MGD - millions of gallons per day

TABLE ATT1-10
CHEMOURS FACILITY INTAKE FLOW RATE
Chemours Fayetteville Works, North Carolina

Geosyntec Consultants of NC, P.C.

Q4 2022 Quarterly Event	Date	Intake Flow River Water Total Daily Flow Average (gpm)	Total Daily Volume (gal)	Hours of Sample Collection	Approximate Total Volume during 24 hour Sample Collection (gal)
November 2022 ¹	11/8/2022	9,343	13,454,104	14.9	8,352,756
	11/9/2022	9,375	13,500,367	8.10	4,556,374
	11/8/22 9:06:00 AM to 11/9/22 8:06:00 AM			23.0	12,909,130

Notes:

Daily flow rates collected from facility Discharge Monitoring Reports.

1 - Total flow volume for 24-hour temporal composite sample collected at 7:00 am on 11/23/23 approximated based on flow rates for 11/22/23 and 11/23/23 was not measured due to a power spike. The Total flow volume collected for 24-hour temporal composite sample collected at 4:06 am on 11/8/22 and 11/9/22 was used as surrogate instead.

Acronyms:

gal - gallons

gpm - gallons per minute

**TABLE ATT1-11
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	CFR-BLADEN	CFR-KINGS	CFR-MILE-76	CFR-TARHEEL	CFR-TARHEEL	GBC-1	Lock-Dam North
Field Sample ID	CAP4Q23-CFR-BLADEN-120623	CAP4Q23-CFR-KINGS-121423	CAP4Q23-CFR-RM-76-112223	CAP4Q23-TARHEEL-24-112423	CAP4Q23-CFR-TARHEEL-120623	CAP4Q23-GBC-1-112223	CAP4Q23-LOCK-DAM-NORTH-112223
Sample Date	12/06/2023	12/14/2023	11/22/2023	11/24/2023	12/06/2023	11/22/2023	11/22/2023
QA/QC							
Sample Matrix	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID
Sample Delivery Group (SDG)	320-107896-1	320-108081-1	320-107648-1	320-107480-1	320-107896-1	320-107648-1	320-107648-1
Lab Sample ID	320-107896-1	320-108081-1	320-107648-1	320-107480-8	320-107896-2	320-107648-2	320-107648-5
537 Mod (ng/L)							
10:2 Fluorotelomer sulfonate	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0 UJ	<4.0	<4.0	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
DONA	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	9.6	8.8 J	11	11	10	2.0	2.0
Perfluorobutanoic Acid	9.7	5.1 J	8.9	8.1	9.9	11	36
Perfluorodecane Sulfonic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	4.8	3.7 J	6.3	5.2	5.0	2.5	6.9
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	6.3	5.0 J	7.5	7.7	6.2	<2.0	<2.0
Perfluorohexanoic Acid	14	11 J	17	15	14	3.3	9.2
Perfluoronanesulfonic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoronanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	13	11 J	16	16	13	9.3	84
Perfluorotetradecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0	<2.0
PFOA	7.4	5.7 J	10	9.9	7.3	3.3	8.7
PFOS	9.9	8.9 J	12	14	9.5	<2.0	6.7

**TABLE ATT1-11
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	Lock-Dam Seep	Lock-Dam Seep	OLDOF-1	OUTFALL 002 ¹	River Water Intake 2 ¹	SEEP-C-EFF	WC-1
Field Sample ID	CAP4Q23-LOCK-DAM-SEEP-112223	CAP4Q23-LOCK-DAM-SEEP-112223-D	CAP4Q23-OLDOF-1-24-112323	O2431119	2R31119	CAP4Q23-SEEP-C-112323	CAP4Q23-WC-1-112323
Sample Date	11/22/2023	11/22/2023	11/23/2023	20-Nov-23	20-Nov-23	11/23/2023	11/23/2023
QA/QC		Field Duplicate					
Sample Matrix	LIQUID	LIQUID	LIQUID	Liquid	LIQUID	LIQUID	LIQUID
Sample Delivery Group (SDG)	320-107648-1	320-107648-1	320-107480-1	320-107355-1	320-107355-1	320-107480-1	320-107480-1
Lab Sample ID	320-107648-3	320-107648-4	320-107480-9	320-107355-7	320-107355-8	320-107480-4	320-107480-1
537 Mod (ng/L)							
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0	--	--	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0	--	--	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
DONA	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	--	--	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	--	--	<5.0	<5.0
Perfluorobutane Sulfonic Acid	2.3	2.1	<2.0	--	--	<2.0	3.7
Perfluorobutanoic Acid	52	53	<5.0	--	--	<5.0	<5.0
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluoroheptanoic Acid	29	26	<2.0	--	--	<2.0	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorohexane Sulfonic Acid	2.8	2.7	<2.0	--	--	<2.0	<2.0
Perfluorohexanoic Acid	11	11	<2.0	--	--	<2.0	<2.0
Perfluorononanesulfonic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorononanoic Acid	2.8	2.5	<2.0	--	--	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluoropentanoic Acid	170	170	7.1	--	--	<2.0	3.4
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	--	--	<2.0	<2.0
PFOA	12	11	<2.0	--	--	<2.0	2.1
PFOS	23	22	<2.0	--	--	<2.0	<2.0

**TABLE ATT1-11
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	WC-1
Field Sample ID	CAP4Q23-WC-1-112323-D
Sample Date	11/23/2023
QA/QC	Field Duplicate
Sample Matrix	LIQUID
Sample Delivery Group (SDG)	320-107480-1
Lab Sample ID	320-107480-7
537 Mod (ng/L)	
10:2 Fluorotelomer sulfonate	<2.0
11Cl-PF3OUdS	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0
6:2 Fluorotelomer sulfonate	<5.0
9Cl-PF3ONS	<2.0
DONA	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0
Perfluorobutane Sulfonic Acid	4.7
Perfluorobutanoic Acid	<5.0
Perfluorodecane Sulfonic Acid	<2.0
Perfluorodecanoic Acid	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0
Perfluorododecanoic Acid	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0
Perfluoroheptanoic Acid	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0
Perfluorohexane Sulfonic Acid	<2.0
Perfluorohexanoic Acid	2.1
Perfluorononanesulfonic Acid	<2.0
Perfluorononanoic Acid	<2.0
Perfluorooctadecanoic Acid	<2.0
Perfluorooctane Sulfonamide	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0
Perfluoropentanoic Acid	4.6
Perfluorotetradecanoic Acid	<2.0
Perfluorotridecanoic Acid	<2.0
Perfluoroundecanoic Acid	<2.0
PFOA	3.0
PFOS	<2.0

Notes:

Bold - Analyte detected above associated reporting limit

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

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

< - Analyte not detected above associated reporting limit.

-- - Not measured / Not Applicable

1 - In the November 2023 sampling event, the Total Table 3+ (17 compounds) concentration of Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results were several orders of magnitude higher than past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the HFPO-DA Sampling program collected on November 20, 2023, were used to calculate the mass discharge.

**TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Black Creek Aquifer	Black Creek Aquifer	Black Creek Aquifer	Floodplain Deposits	Floodplain Deposits	Black Creek Aquifer	Black Creek Aquifer
Location ID	BLADEN-1DR	LTW-01	LTW-02	LTW-03	LTW-04	LTW-05	OW-28
Field Sample ID	CAP4Q23-BLADEN-1DR-010424	CAP4Q23-LTW-01-110323	CAP4Q23-LTW-02-110323	CAP4Q23-LTW-03-111323	CAP4Q23-LTW-04-110223	CAP4Q23-LTW-05-110223	CAP4Q23-OW-28-110223
Sample Date	01/04/2024	11/03/2023	11/03/2023	11/13/2023	11/02/2023	11/02/2023	11/02/2023
QA/QC							
Sample Delivery Group (SDG)	320-108551-1	320-106773-1	320-106772-1	320-107233-1	320-106772-1	320-106772-1	320-106772-1
Lab Sample ID	320-108551-1	320-106773-1	320-106772-7	320-107233-3	320-106772-5	320-106772-1	320-106772-6
537 Mod (ng/L)							
10:2 Fluorotelomer sulfonate	<2.0	<67	<67	<2.0	<67	<67	<67
11Cl-PF3OUdS	<2.0	<32	<32	<2.0	<32	<32	<32
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<46	<46	<2.0	<46	<46	<46
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<24	<24	<2.0	<24	<24	<24
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<85	<85	<2.0	<85	<85	<85
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<140	<140	<4.0	<140	<140	<140
6:2 Fluorotelomer sulfonate	<5.0	<250	<250	<5.0	<250	<250	<250
9Cl-PF3ONS	<2.0	<24	<24	<2.0	<24	<24	<24
DONA	<2.0	<40	<40	<2.0	<40	<40	<40
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<130	<130	<5.0	<130	<130	<130
N-ethylperfluoro-1-octanesulfonamide	<2.0	<87	<87	<2.0	<87	<87	<87
N-methyl perfluoro-1-octanesulfonamide	<2.0	<43	<43	<2.0	<43	<43	<43
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<120	<120	<5.0	<120	<120	<120
Perfluorobutane Sulfonic Acid	<2.0	<20	<20	<2.0	<20	<20	<20
Perfluorobutanoic Acid	<5.0	<240	<240	120	330	270	<240
Perfluorodecane Sulfonic Acid	<2.0	<32	<32	<2.0	<32	<32	<32
Perfluorodecanoic Acid	<2.0	<31	<31	<2.0	<31	<31	<31
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<97	<97	<2.0	<97	<97	<97
Perfluorododecanoic Acid	<2.0	<55	<55	<2.0	<55	<55	<55
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<19	<19	<2.0	<19	<19	<19
Perfluoroheptanoic Acid	<2.0	47 J	<25	24	60	250	<25
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<89	<89	<2.0	<89	<89	<89
Perfluorohexane Sulfonic Acid	<2.0	<57	<57	<2.0	<57	<57	<57
Perfluorohexanoic Acid	<2.0	<58	<58	17	<58	66	<58
Perfluorononanesulfonic Acid	<2.0	<37	<37	<2.0	<37	<37	<37
Perfluorononanoic Acid	<2.0	<27	<27	<2.0	<27	<27	<27
Perfluorooctadecanoic Acid	<2.0	<94	<94	<120 UJ	<94	<94	<94
Perfluorooctane Sulfonamide	<2.0	<98	<98	<2.0	<98	<98	<98
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<30	<30	<2.0	<30	<30	<30
Perfluoropentanoic Acid	3.4	330	300	610	1,200	2,300	49
Perfluorotetradecanoic Acid	<2.0	<73	<73	<2.0	<73	<73	<73
Perfluorotridecanoic Acid	<2.0	<130	<130	<2.0	<130	<130	<130
Perfluoroundecanoic Acid	<2.0	<110	<110	<2.0	<110	<110	<110
PFOA	<2.0	<85	<85	<2.0	<85	<85	<85
PFOS	<2.0	<54	<54	<2.0	<54	<54	<54

TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina

Water Bearing Unit ¹	Black Creek Aquifer	Black Creek Aquifer	Floodplain Deposits	Black Creek Aquifer	Black Creek Aquifer	Black Creek Aquifer	Black Creek Aquifer
Location ID	OW-33	OW-33	PIW-1S ²	PIW-1D	PIW-1D	PIW-3D	PIW-7D
Field Sample ID	CAP4Q23-OW-33-110223	CAP4Q23-OW-33-110223-D	--	CAP4Q23-PIW-1D-110723	CAP4Q23-PIW-1D-110723-Z	CAP4Q23-PIW-3D-110323	CAP4Q23-PIW-7D-110223
Sample Date	11/02/2023	11/02/2023	--	11/07/2023	11/07/2023	11/03/2023	11/02/2023
QA/QC		Field Duplicate	--				
Sample Delivery Group (SDG)	320-106773-1	320-106773-1	--	320-106887-1	320-106887-1	320-106773-1	320-106772-1
Lab Sample ID	320-106773-3	320-106773-4	--	320-106887-1	320-106887-2	320-106773-2	320-106772-3
537 Mod (ng/L)							
10:2 Fluorotelomer sulfonate	<67	<67	--	<67	<67	<67	<67
11Cl-PF3OUdS	<32	<32	--	<32	<32	<32	<32
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<46	<46	--	<46	<46	<46	<46
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<24	<24	--	<24	<24	<24	<24
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<85	<85	--	<85	<85	<85	<85
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<140	<140	--	<140	<140	<140	<140
6:2 Fluorotelomer sulfonate	<250	<250	--	<250	<250	<250	<250
9Cl-PF3ONS	<24	<24	--	<24	<24	<24	<24
DONA	<40	<40	--	<40	<40	<40	<40
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<130	<130	--	<130	<130	<130	<130
N-ethylperfluoro-1-octanesulfonamide	<87	<87	--	<87	<87	<87	<87
N-methyl perfluoro-1-octanesulfonamide	<43	<43	--	<43	<43	<43	<43
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<120	<120	--	<120	<120	<120	<120
Perfluorobutane Sulfonic Acid	<20	<20	--	<20	<20	<20	<20
Perfluorobutanoic Acid	<240	<240	--	<240	<240	<240	<240
Perfluorodecane Sulfonic Acid	<32	<32	--	<32	<32	<32	<32
Perfluorodecanoic Acid	<31	<31	--	<31	<31	<31	<31
Perfluorododecane Sulfonic Acid (PFDoS)	<97	<97	--	<97	<97	<97	<97
Perfluorododecanoic Acid	<55	<55	--	<55	<55	<55	<55
Perfluoroheptane Sulfonic Acid (PFHpS)	<19	<19	--	<19	<19	<19	<19
Perfluoroheptanoic Acid	<25	<25	--	<25	<25	49	97
Perfluorohexadecanoic Acid (PFHxDA)	<89	<89	--	<89	<89	<89	<89
Perfluorohexane Sulfonic Acid	<57	<57	--	<57	<57	<57	<57
Perfluorohexanoic Acid	<58	<58	--	<58	<58	<58	<58
Perfluorononanesulfonic Acid	<37	<37	--	<37	<37	<37	<37
Perfluorononanoic Acid	<27	<27	--	<27	<27	<27	<27
Perfluorooctadecanoic Acid	<94 UJ	<94	--	<94	<94	<94	<94
Perfluorooctane Sulfonamide	<98	<98	--	<98	<98	<98	<98
Perfluoropentane Sulfonic Acid (PFPeS)	<30	<30	--	<30	<30	<30	<30
Perfluoropentanoic Acid	140	120	--	150	150	190	1,500
Perfluorotetradecanoic Acid	<73	<73	--	<73	<73	<73	<73
Perfluorotridecanoic Acid	<130	<130	--	<130	<130	<130	<130
Perfluoroundecanoic Acid	<110	<110	--	<110	<110	<110	<110
PFOA	<85	<85	--	<85	<85	<85	<85
PFOS	<54	<54	--	<54	<54	<54	<54

**TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Floodplain Deposits	Surficial Aquifer	Surficial Aquifer	Surficial Aquifer	Black Creek Aquifer	Black Creek Aquifer
Location ID	PIW-7S	PW-04	PW-04	PW-06	PW-09	PW-09
Field Sample ID	CAP4Q23-PIW-7S-110223	CAP4Q23-PW-04-110923	CAP4Q23-PW-04-110923-Z	CAP4Q23-PW-06-110623	CAP4Q23-PW-09-110823	CAP4Q23-PW-09-110823-Z
Sample Date	11/02/2023	11/09/2023	11/09/2023	11/06/2023	11/08/2023	11/08/2023
QA/QC						
Sample Delivery Group (SDG)	320-106772-1	320-107233-1	320-107233-1	320-106773-1	320-106887-1	320-106887-1
Lab Sample ID	320-106772-2	320-107233-1	320-107233-2	320-106773-5	320-106887-4	320-106887-7
537 Mod (ng/L)						
10:2 Fluorotelomer sulfonate	<67	<67	<2.0	<67	<2.0 UJ	<2.0 UJ
11Cl-PF3OUdS	<32	<32	<2.0	<32	<2.0 UJ	<2.0 UJ
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<46	<46	<2.0	<46	<2.0 UJ	<2.0 UJ
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<24	<24	<2.0	<24	<2.0 UJ	<2.0 UJ
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<85	<85	<2.0	<85	<2.0 UJ	<2.0 UJ
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<140	<140	<4.0	<140	<4.0 UJ	<4.0 UJ
6:2 Fluorotelomer sulfonate	<250	<250	<5.0	<250	<5.0 UJ	<5.0 UJ
9Cl-PF3ONS	<24	<24	<2.0	<24	<2.0 UJ	<2.0 UJ
DONA	<40	<40	<2.0	<40	<2.0 UJ	<2.0 UJ
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<130	<130	<5.0	<130	<5.0 UJ	<5.0 UJ
N-ethylperfluoro-1-octanesulfonamide	<87	<87	<2.0	<87	<2.0 UJ	<2.0 UJ
N-methyl perfluoro-1-octanesulfonamide	<43	<43	<2.0	<43	<2.0 UJ	<2.0 UJ
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<120	<120	<5.0	<120	<5.0 UJ	<5.0 UJ
Perfluorobutane Sulfonic Acid	<20	<20	<2.0	<20	<2.0 UJ	<2.0 UJ
Perfluorobutanoic Acid	<240	<240	12	<240	<5.0 UJ	<5.0 UJ
Perfluorodecane Sulfonic Acid	<32	<32	<2.0	<32	<2.0 UJ	<2.0 UJ
Perfluorodecanoic Acid	<31	<31	<2.0	<31	<2.0 UJ	<2.0 UJ
Perfluorododecane Sulfonic Acid (PFDoS)	<97	<97	<2.0	<97	<2.0 UJ	<2.0 UJ
Perfluorododecanoic Acid	<55	<55	<2.0	<55	<2.0 UJ	<2.0 UJ
Perfluoroheptane Sulfonic Acid (PFHpS)	<19	<19	<2.0	<19	<2.0 UJ	<2.0 UJ
Perfluoroheptanoic Acid	61	<25	5.7	<25	<2.0 UJ	<2.0 UJ
Perfluorohexadecanoic Acid (PFHxDA)	<89	<89	<2.0	<89	<2.0 UJ	<2.0 UJ
Perfluorohexane Sulfonic Acid	<57	<57	<2.0	<57	<2.0 UJ	<2.0 UJ
Perfluorohexanoic Acid	<58	<58	2.8	<58	<2.0 UJ	<2.0 UJ
Perfluorononanesulfonic Acid	<37	<37	<2.0	<37	<2.0 UJ	<2.0 UJ
Perfluorononanoic Acid	<27	<27	<2.0	<27	<2.0 UJ	<2.0 UJ
Perfluorooctadecanoic Acid	<94	<94	<120 UJ	<94	<2.0 UJ	<2.0 UJ
Perfluorooctane Sulfonamide	<98	<98	<2.0	<98	<2.0 UJ	<2.0 UJ
Perfluoropentane Sulfonic Acid (PFPeS)	<30	<30	<2.0	<30	<2.0 UJ	<2.0 UJ
Perfluoropentanoic Acid	620	<49	17	<49	<2.0 UJ	<2.0 UJ
Perfluorotetradecanoic Acid	<73	<73	<2.0	<73	<2.0 UJ	<2.0 UJ
Perfluorotridecanoic Acid	<130	<130	<2.0	<130	<2.0 UJ	<2.0 UJ
Perfluoroundecanoic Acid	<110	<110	<2.0	<110	<2.0 UJ	<2.0 UJ
PFOA	<85	<85	<2.0	<85	<2.0 UJ	<2.0 UJ
PFOS	<54	<54	<2.0	<54	<2.0 UJ	<2.0 UJ

**TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	Surficial Aquifer	Black Creek Aquifer	Surficial Aquifer	Surficial Aquifer	Black Creek Aquifer	--
Location ID	PW-07 ²	PZ-22	SMW-10	SMW-11	SMW-12	EB
Field Sample ID	--	CAP4Q23-PZ-22-110223	CAP4Q23-SMW-10-111623	CAP4Q23-SMW-11-110723	CAP4Q23-SMW-12-110823	CAP4Q23-EQBLK-DV-110823
Sample Date	--	11/02/2023	11/16/2023	11/07/2023	11/08/2023	11/08/2023
QA/QC						Equipment Blank
Sample Delivery Group (SDG)	--	320-106772-1	320-107233-1	320-106887-1	320-107233-1	320-102509-1
Lab Sample ID	--	320-106772-4	320-107233-5	320-106887-3	320-107233-4	320-102509-10
537 Mod (ng/L)						
10:2 Fluorotelomer sulfonate	--	<67	<2.0	<67	<67	<2.0
11Cl-PF3OUdS	--	<32	<2.0	<32	<32	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	--	<46	<2.0	<46	<46	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	--	<24	<2.0	<24	<24	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	--	<85	<2.0	<85	<85	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	--	<140	<4.0	<140	<140	<4.0
6:2 Fluorotelomer sulfonate	--	<250	<5.0	<250	<250	<5.0
9Cl-PF3ONS	--	<24	<2.0	<24	<24	<2.0
DONA	--	<40	<2.0	<40	<40	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	--	<130	<5.0	<130	<130	<5.0
N-ethylperfluoro-1-octanesulfonamide	--	<87	<2.0	<87	<87	<2.0
N-methyl perfluoro-1-octanesulfonamide	--	<43	<2.0	<43	<43	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	--	<120	<5.0	<120	<120	<5.0
Perfluorobutane Sulfonic Acid	--	<20	<2.0	<20	<20	<2.0
Perfluorobutanoic Acid	--	<240	<5.0	<240	<240	<5.0
Perfluorodecane Sulfonic Acid	--	<32	<2.0	<32	<32	<2.0
Perfluorodecanoic Acid	--	<31	<2.0	<31	<31	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	--	<97	<2.0	<97	<97	<2.0
Perfluorododecanoic Acid	--	<55	<2.0	<55	<55	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	--	<19	<2.0	<19	<19	<2.0
Perfluoroheptanoic Acid	--	31	<2.0	<25	<25	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	--	<89	<2.0	<89	<89	<2.0
Perfluorohexane Sulfonic Acid	--	<57	<2.0	<57	<57	<2.0
Perfluorohexanoic Acid	--	<58	<2.0	<58	<58	<2.0
Perfluorononanesulfonic Acid	--	<37	<2.0	<37	<37	<2.0
Perfluorononanoic Acid	--	<27	<2.0	<27	<27	<2.0
Perfluorooctadecanoic Acid	--	<94	<2.0 UJ	<94	<94	<2.0
Perfluorooctane Sulfonamide	--	<98	<2.0	<98	<98	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	--	<30	<2.0	<30	<30	<2.0
Perfluoropentanoic Acid	--	1,100	<2.0	69	92	<2.0
Perfluorotetradecanoic Acid	--	<73	<2.0	<73	<73	<2.0
Perfluorotridecanoic Acid	--	<130	<2.0	<130	<130	<2.0
Perfluoroundecanoic Acid	--	<110	<2.0	<110	<110	<2.0
PFOA	--	<85	<2.0	190	<85	<2.0
PFOS	--	<54	<2.0	<54	<54	<2.0

**TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit ¹	--	--	--	--
Location ID	EB	EB	EB	EB
Field Sample ID	CAP4Q23-EQBLK-DV-110823-Z	CAP4Q23-EQBLK-PP-110823	CAP4Q23-EQBLK-PP-110823-Z	CAP4Q23-EQBLK-BAILER-110923
Sample Date	11/08/2023	11/08/2023	11/08/2023	11/09/2023
QA/QC	Equipment Blank	Equipment Blank	Equipment Blank	Equipment Blank
Sample Delivery Group (SDG)	320-102509-1	320-102527-1	320-102718-1	320-102718-1
Lab Sample ID	320-102509-11	320-102527-10	320-102718-11	320-102718-10
537 Mod (ng/L)				
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0	<2.0	<2.0
DONA	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorobutanoic Acid	<5.0	<5.0	<5.0	<5.0
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorohexanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorononanesulfonic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorononanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0	<2.0	<2.0	<2.0 UJ
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	<2.0
PFOA	<2.0	<2.0	<2.0	<2.0
PFOS	<2.0	<2.0	<2.0	<2.0

**TABLE ATT1-12
GROUNDWATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Water Bearing Unit¹	--	
Location ID	EB	EB
Field Sample ID	CAP4Q23-EQBLK-BAILER-110923-Z	CAP4Q23-EQBLK-PP-010424
Sample Date	11/09/2023	01/04/2024
QA/QC	Equipment Blank	Equipment Blank
Sample Delivery Group (SDG)	320-104043-1	320-108551-1
Lab Sample ID	320-104043-4	320-108551-2
537 Mod (ng/L)		
10:2 Fluorotelomer sulfonate	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0
DONA	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0
Perfluorobutane Sulfonic Acid	<2.0	<2.0
Perfluorobutanoic Acid	<5.0	<5.0
Perfluorodecane Sulfonic Acid	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0
Perfluoroheptanoic Acid	<2.0	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0
Perfluorohexane Sulfonic Acid	<2.0	<2.0
Perfluorohexanoic Acid	<2.0	<2.0
Perfluorononanesulfonic Acid	<2.0	<2.0
Perfluorononanoic Acid	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0 UJ	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0
Perfluoropentanoic Acid	<2.0	<2.0
Perfluorotetradecanoic Acid	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0
PFOA	<2.0	<2.0
PFOS	<2.0	<2.0

Notes:

1 - Refers to the primary aquifer unit that the well screen is estimated to be screened within.

2- PIW-1S and PW-07 were not sampled because the wells were dry.

Bold - Analyte detected above associated reporting limit.

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

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

SDG - Sample Delivery Group

"-Z" in Sample ID denotes field filtration

< - Analyte not detected above associated reporting limit.

-- - Not measured / Not Applicable

TABLE ATT1-13

TABLE 3+ PFAS MASS DISCHARGE BY PATHWAY DOWNGRADIENT OF REMEDIES (AFTER REMEDIES)
Chemours Fayetteville Works, North Carolina

Pathway Number ¹	1	2	4	4A
Pathway Name	Upstream River Water and Groundwater	Willis Creek	Outfall 002 ³	Stormwater Treatment System ⁴
Flow (MG)	345	10.0	14.2	--
Program	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	STS Compliance Sampling
Location ID	CFR-MILE-76	WC-1	OUTFALL 002	STS DISCHARGE
Field Sample ID	CAP4Q23-CFR-RM-76-112223	CAP4Q23-WC-1-112323	O2431119	--
Sample Date and Time ²	11/22/23	11/23/23	11/20/23	--
Sample Delivery Group (SDG)	320-107648-1	320-107480-1	320-107355-1	--
Lab Sample ID	320-107648-1	320-107480-1	320-107355-7	--
Sample Type	Grab	Composite	Composite	--
<i>Table 3+ Lab SOP Mass Discharge⁶ (mg/s)</i>				
HFPO-DA	ND	0.04	1.3E-02	--
PFMOAA	ND	0.09	ND	--
PFO2HxA	ND	0.07	6.8E-03	--
PFO3OA	ND	0.01	ND	--
PFO4DA	ND	2.4E-03	ND	--
PFO5DA	ND	ND	ND	--
PMPA	0.05	0.07	3.7E-03	--
PEPA	ND	0.02	ND	--
PS Acid	ND	ND	ND	--
Hydro-PS Acid	ND	2.3E-03	ND	--
R-PSDA	ND	4.8E-03	ND	--
Hydrolyzed PSDA	ND	0.01	ND	--
R-PSDCA	ND	ND	ND	--
NVHOS, Acid Form	ND	1.7E-03	ND	--
EVE Acid	ND	ND	ND	--
Hydro-EVE Acid	ND	ND	ND	--
R-EVE	ND	2.6E-03	ND	--
PES	ND	ND	ND	--
PFECA B	ND	ND	ND	--
PFECA-G	ND	ND	ND	--
PFPrA	0.17	0.07	ND	--
Total Attachment C Mass Discharge^{7,8}	0.05	0.30	0.05	--
Total Table 3+ Mass Discharge (17 compounds)^{7,9}	0.05	0.30	0.06	--
Total Table 3+ Mass Discharge (18 compounds)^{7,10}	0.21	0.38	0.06	--
Total Table 3+ Mass Discharge (21 Compounds)⁷	0.21	0.40	0.10	--

TABLE 3+ PFAS MASS DISCHARGE BY PATHWAY DOWNGRADIENT OF REMEDIES (AFTER REMEDIES)
Chemours Fayetteville Works, North Carolina

Pathway Number ¹	5	6A	6B	6C
Pathway Name	Onsite Groundwater ⁵	Seep A	Seep B	Seep C
Flow (MG)	--	--	--	0.15
Program	--	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23
Location ID	--	SEEP-A-EFF	SEEP-B-EFF	SEEP-C-EFF
Field Sample ID	--	--	--	CAP4Q23-SEEP-C-112323
Sample Date and Time ²	--	--	--	11/23/23
Sample Delivery Group (SDG)	--	--	--	320-107480-1
Lab Sample ID	--	--	--	320-107480-4
Sample Type	--	--	--	Composite
Table 3+ Lab SOP Mass Discharge⁶ (mg/s)				
HFPO-DA	4.1E-03	--	--	ND
PFMOAA	0.03	--	--	1.3E-04
PFO2HxA	0.01	--	--	4.5E-05
PFO3OA	1.8E-03	--	--	ND
PFO4DA	2.4E-04	--	--	ND
PFO5DA	1.0E-05	--	--	ND
PMPA	3.9E-03	--	--	2.7E-05
PEPA	1.2E-03	--	--	ND
PS Acid	ND	--	--	ND
Hydro-PS Acid	4.4E-05	--	--	ND
R-PSDA	2.2E-04	--	--	ND
Hydrolyzed PSDA	4.5E-04	--	--	ND
R-PSDCA	ND	--	--	ND
NVHOS, Acid Form	2.4E-04	--	--	ND
EVE Acid	ND	--	--	ND
Hydro-EVE Acid	5.2E-05	--	--	ND
R-EVE	1.6E-04	--	--	ND
PES	2.1E-07	--	--	ND
PFECA B	ND	--	--	ND
PFECA-G	ND	--	--	ND
PFPPrA	ND	--	--	9.3E-05
Total Attachment C Mass Discharge^{7,8}	0.05	--	--	2.0E-04
Total Table 3+ Mass Discharge (17 compounds)^{7,9}	0.05	--	--	2.0E-04
Total Table 3+ Mass Discharge (18 compounds)^{7,10}	0.06	--	--	2.9E-04
Total Table 3+ Mass Discharge (21 Compounds)⁷	0.06	--	--	2.9E-04

TABLE 3+ PFAS MASS DISCHARGE BY PATHWAY DOWNGRADIENT OF REMEDIES (AFTER REMEDIES)
Chemours Fayetteville Works, North Carolina

Pathway Number ¹	6D	6E	6F	7
Pathway Name	Seep D	Lock and Dam Seep	Lock and Dam North	Outfall 003 Stream
Flow (MG)	--	7.3E-03	1.0E-03	0.93
Program	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23
Location ID	SEEP-D-EFF	Lock-Dam Seep	Lock-Dam North	OLDOF-1
Field Sample ID	--	CAP4Q23-LOCK-DAM-SEEP-112223	CAP4Q23-LOCK-DAM-NORTH-112223	CAP4Q23-OLDOF-1-24-112323
Sample Date and Time ²	--	11/22/23	11/22/23	11/23/23
Sample Delivery Group (SDG)	--	320-107648-1	320-107648-1	320-107480-1
Lab Sample ID	--	320-107648-3	320-107648-5	320-107480-9
Sample Type	--	Grab	Grab	Composite
<i>Table 3+ Lab SOP Mass Discharge⁶ (mg/s)</i>	--			
HFPO-DA	--	8.7E-04	9.5E-05	1.0E-02
PFMOAA	--	1.0E-02	1.9E-04	4.9E-02
PFO2HxA	--	2.1E-03	1.4E-04	2.1E-02
PFO3OA	--	1.3E-03	2.0E-05	6.1E-03
PFO4DA	--	3.2E-04	3.6E-06	1.9E-03
PFO5DA	--	3.2E-05	4.0E-07	9.8E-04
PMPA	--	1.0E-03	1.4E-04	9.0E-03
PEPA	--	3.0E-04	4.5E-05	2.9E-03
PS Acid	--	ND	ND	ND
Hydro-PS Acid	--	2.5E-05	2.3E-06	4.9E-04
R-PSDA	--	ND	ND	ND
Hydrolyzed PSDA	--	ND	ND	ND
R-PSDCA	--	1.3E-06	ND	ND
NVHOS, Acid Form	--	1.1E-04	2.6E-06	7.7E-04
EVE Acid	--	0.000	ND	ND
Hydro-EVE Acid	--	2.4E-05	5.0E-07	2.9E-04
R-EVE	--	ND	ND	ND
PES	--	ND	ND	ND
PFECA B	--	ND	ND	ND
PFECA-G	--	ND	ND	ND
PFPrA	--	ND	1.4E-04	0.04
Total Attachment C Mass Discharge^{7,8}	--	1.6E-02	6.3E-04	0.10
Total Table 3+ Mass Discharge (17 compounds)^{7,9}	--	1.6E-02	6.3E-04	0.10
Total Table 3+ Mass Discharge (18 compounds)^{7,10}	--	1.8E-02	7.7E-04	0.14
Total Table 3+ Mass Discharge (21 Compounds)⁷	--	1.8E-02	7.7E-04	0.15

TABLE 3+ PFAS MASS DISCHARGE BY PATHWAY DOWNGRADEMENT OF REMEDIES (AFTER REMEDIES)

Chemours Fayetteville Works, North Carolina

Pathway Number ¹	9	Sum of All Pathways
Pathway Name	Georgia Branch Creek	
Flow (MG)	9.3	
Program	CAP SW Sampling 4Q23	
Location ID	GBC-1	
Field Sample ID	CAP4Q23-GBC-1-112223	
Sample Date and Time ²	11/22/23	
Sample Delivery Group (SDG)	320-107648-1	
Lab Sample ID	320-107648-2	
Sample Type	Grab	
Table 3+ Lab SOP Mass Discharge⁶ (mg/s)		
HFPO-DA	0.14	0.21
PFMOAA	4.9E-02	0.22
PFO2HxA	0.15	0.25
PFO3OA	2.6E-02	0.05
PFO4DA	7.4E-03	1.2E-02
PFO5DA	1.6E-03	2.6E-03
PMPA	0.23	0.37
PEPA	0.06	0.09
PS Acid	ND	ND
Hydro-PS Acid	8.2E-03	1.1E-02
R-PSDA	ND	0.01
Hydrolyzed PSDA	ND	0.01
R-PSDCA	ND	1.3E-06
NVHOS, Acid Form	1.2E-03	4.0E-03
EVE Acid	ND	1.1E-06
Hydro-EVE Acid	ND	3.7E-04
R-EVE	ND	2.8E-03
PES	ND	2.1E-07
PFECA B	ND	ND
PFECA-G	ND	ND
PFPrA	0.17	ND
Total Attachment C Mass Discharge^{7,8}	0.66	1.22
Total Table 3+ Mass Discharge (17 compounds)^{7,9}	0.66	1.24
Total Table 3+ Mass Discharge (18 compounds)^{7,10}	0.82	1.69
Total Table 3+ Mass Discharge (21 Compounds)⁷	0.86	1.79

Notes:

1 - Pathway 3 (Aerial Deposition on Water Features) and Pathway 8 (Offsite Adjacent and Downstream Groundwater) are not included in this table. Loading from Pathway 3 was estimated using relative concentration ratios from offsite wells, and loading from Pathway 8 was estimated by scaling to the upstream offsite groundwater loading. Further details are provided in Attachment 2 and Cape Fear River PFAS Mass Loading Calculation Protocol Version 2 (Geosyntec, 2020a).

2 - For composite samples, the end of the composite sample time period is listed as the sample date.

3 - Total Table 3+ concentrations at the Intake River Water at the Facility are subtracted from Outfall 002 concentrations to compute the mass discharge at Outfall 002.

4 - The stormwater treatment system treats PFAS originating from Stormwater in the Monomers/IXM area that would otherwise flow to Outfall 002 during storm events. When stormwater is being treated by the stormwater treatment system, HFPO-DA, PFMOAA, and PMPA concentrations are measured in the stormwater treatment system influent and effluent flows. The concentrations and mass loads reported here are the sum of these 3 compounds in the stormwater treatment system influent flow.

5 - Due to transient conditions as a result of the groundwater remedy installation and commissioning, gradient measurements are impacted from these activities and should be considered estimates.

6 - Mass discharge by analyte is calculated based on Table 3+ concentrations in Tables A5 and A6, and flow volumes reported in Table A2.

7 - Total PFAS mass discharge is based on the summed Total PFAS concentrations reported in Table A5 and Table A6, which are rounded to two significant figures.

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

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

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

Bold - Analyte detected above associated reporting limit

SOP - Standard Operating Procedure

MG - million gallons ; mg/s - milligrams per second

ND - Analyte not detected above associated reporting limit.

Attachment ATT2

Direct Aerial Deposition on Cape Fear River

Attachment ATT2: Supporting Calculations – Direct Aerial Deposition on Cape Fear River

Introduction and Objective

Nine pathways (Table A1 of Appendix A) were identified as potentially contributing to observed Cape Fear River per- and polyfluoroalkyl substances (PFAS) concentrations. These pathways include direct PFAS aerial deposition to the Cape Fear River. This pathway was identified as Transport Pathway Number 3 in the PFAS mass loading model. The mass discharge (mass per unit time measured in milligrams per second [mg/s]) from direct aerial deposition of PFAS to the Cape Fear River was estimated by scaling air deposition modeling results for Hexafluoropropylene oxide dimer acid (HFPO-DA; ERM, 2018). The objective of the supporting calculations presented in this appendix is to estimate aerially deposited PFAS directly on the Cape Fear River during a mass loading event.

Approach

HFPO-DA mass loading directly to the Cape Fear River was estimated using the reported aerial extent and deposition contours modeled for October 2018 (ERM, 2018). As depicted in Table ATT2-1, the HFPO-DA air loading data (micrograms per meters squared [$\mu\text{g}/\text{m}^2$]) provided from ERM (2018) was used to calculate the net hourly deposition rate (nanograms per meters squared per hour [$\text{ng}/\text{m}^2/\text{hr}$]) using the Equation 1 below:

Equation 1: Net Hourly Deposition Rate

$$DR_{NET} = \frac{ML_{AIR}}{t_{AIR}}$$

where,

DR_{NET} = Net hourly deposition rate with units of mass per area per time ($\text{M L}^{-2} \text{T}^{-1}$), typically in $\text{ng}/\text{m}^2/\text{hr}$;

ML_{AIR} = Air mass loading of HFPO-DA with units of mass per area (M L^{-2}), typically $\mu\text{g}/\text{m}^2$;
and

t_{AIR} = Time that air mass loading was modeled (T), typically hours.

Depositional area along the river was calculated using available data for river width and computed river lengths where deposition contours were modeled. Eighteen sections (Figure ATT 2-1) provided from FEMA (2007) were selected along the Cape Fear River to measure the average river width (m). As depicted in Figures ATT2-2 through ATT2-6, sections along the Cape Fear River with HFPO-DA concentrations contours ranging from 40 to 640 $\mu\text{g}/\text{m}^2$ were selected, and the length of the Cape Fear River along each of the sections was measured. The average river width calculated in Table ATT2-2 and section lengths from Figures ATT2-2 through ATT2-6 were used to calculate section areas (m^2) as described in Equation 2 below:

**Attachment ATT2: Supporting Calculations – Direct Aerial
Deposition on Cape Fear River**

Equation 2: Cape Fear River Surface Area for Each Section

$$A_s = L_s \times W_s$$

where,

A_s = Total spatial area over which deposition occurs between contours (L^2) in section “s”, typically in m^2 ;

s = Section along the Cape Fear River with HFPO-DA concentrations contours ranging from 40 to $640 \mu g/m^2$ (five sections in total);

L = Total length of river within section “s”, typically in m; and

W_s = Average river width in section “s”, typically in m.

Start and end deposition rates ($ng/m^2/hr$) for each section along the Cape Fear River will be estimated based on the deposition contours and corresponding net hourly deposition rate (Table ATT2-1); a combined deposition rate for each section will be calculated as the average of the start and end deposition rates. River velocity (meters per hour [m/hr]) will be estimated from measured flow rates from USGS (2024) and the calculated river cross sectional area. Section lengths will be used to calculate HFPO-DA travel time based on the river velocities in Table ATT2-3. The combined deposition rate ($ng/m^2/hr$) from Table ATT2-1, section area (m^2), and travel time (hr) will be used to calculate mass HFPO-DA deposited (ng) as follows in **Equation 3** below.

Equation 3: Total HFPO-DA Mass Discharge to Cape Fear River

$$MD_{HFPO-DA} = \sum_{s=1}^S DR_{AVG,s} \times A_s \times t_s$$

where,

$MD_{HFPO-DA}$ = total mass discharge of HFPO-DA into the river across all sections, with units of mass per time ($M T^{-1}$), typically mg/s ;

s = section along the Cape Fear River with HFPO-DA concentrations contours ranging from 40 to $640 \mu g/m^2$;

S = total number of sections along the Cape Fear River with HFPO-DA concentrations contours ranging from 40 to $640 \mu g/m^2$, five in total;

$DR_{AVG,s}$ = average deposition rate based from the ERM model (2018) in section “s”, typically in $ng/m^2/hr$;

A_s = spatial area over which deposition occurs in section “s”, typically in m^2 ; and

t_s = travel time through the river length in section “s”, typically in hr.

As reported in the Corrective Action Plan (Geosyntec, 2019), ten offsite groundwater seeps south of Outfall 003 (Seeps E to M) were identified on the west bank of the Cape Fear River south of

**Attachment ATT2: Supporting Calculations – Direct Aerial
Deposition on Cape Fear River**

the Site. Seeps E to M were sampled in October 2019 and Seeps E to K were sampled in March 2020 and analyzed for PFAS. The results of both sampling events indicate that Seeps E to M show an aerial deposition PFAS signature (concentrations decrease in seeps more distant from the Site). Accordingly, the offsite seep data were used to build a relationship between HFPO-DA and other PFAS compounds (Figure ATT 2-7). A scaling factor (Table ATT2-4) was used to estimate mass discharge of Total PFAS compounds to the Cape Fear River as shown in Equation 4. Table ATT2-5 shows the estimated mass discharges of HFPO-DA and Total PFAS compounds to the Cape Fear River.

Equation 4: Total PFAS Mass Discharge to Cape Fear River

$$MD_{PFAS} = MD_{HFPO-DA} \times R$$

where,

MD_{PFAS} = total mass discharge of PFAS compounds into the river, typically in mg/s;

$MD_{HFPO-DA}$ = total mass discharge of HFPO-DA into the river, typically in mg/s; and

R = average ratio of measured HFPO-DA to PFAS compounds across the nine offsite seeps.

References

- ERM, 2018. Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.
- Federal Emergency Management Agency (FEMA), 2007. "A Report of Flood Hazards in Bladen County, North Carolina and Incorporated Areas." (2007) Flood Insurance Study, Federal Emergency Management Agency. North Carolina Flood Risk Information System Engineering Model. Cape Fear River ADJ. HEC-RAS 5.0.7.
- Geosyntec, 2019. Corrective Action Plan. Chemours Fayetteville Works. December 31, 2019.
- USGS, 2024. USGS 02105500 Cape Fear River at Wilm O Huske Lock near Tarheel, NC. Available at: https://waterdata.usgs.gov/nwis/uv?site_no=02105500

TABLE ATT2-1
NET HOURLY HFPO-DA DEPOSITION RATE
Chemours Fayetteville Works, North Carolina

Air Loading ($\mu\text{g}/\text{m}^2$)	Air Loading (ng/m^2)	Time (year)	Time (hour)	Net Hourly Deposition Rate ($\text{ng}/\text{m}^2/\text{hr}$)
40	40,000	1	8,760	4.6
80	80,000	1	8,760	9.1
160	160,000	1	8,760	18.3
320	320,000	1	8,760	36.5
640	640,000	1	8,760	73.1

Notes:

1. HFPO-DA model values are from ERM (2018). Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.
2. Air deposition contours are shown in Figures ATT2 through ATT6.
3. Net hourly deposition rates are used in the mass discharge calculations, Table ATT2-5.

Abbreviations:

- $\mu\text{g}/\text{m}^2$: micrograms per meter square.
 ng/L : nanograms per liter.
 $\text{ng}/\text{m}^2/\text{hr}$: nanograms per meter square per hour.

**TABLE ATT2-2
ESTIMATION OF CAPE FEAR RIVER AVERAGE WIDTH
Chemours Fayetteville Works, North Carolina**

Cross section ID*	HEC-RAS Model Point ID**	Easting (ft)	Northing (ft)	Cape Fear River Width at Cross Section (m)
619506	0	2,052,368	399,949	84
	1	2,052,366	399,949	
	2	2,052,334	399,946	
	3	2,052,254	399,938	
	4	2,052,155	399,928	
	5	2,052,095	399,922	
	6	2,052,093	399,922	
614224	18	2,053,460	394,655	163
	19	2,053,436	394,649	
	20	2,053,281	394,613	
	21	2,053,277	394,612	
	22	2,053,180	394,590	
	23	2,053,079	394,566	
	24	2,052,977	394,543	
	25	2,052,949	394,536	
616535	7	2,053,113	396,901	91
	8	2,053,070	396,895	
	9	2,052,990	396,886	
	10	2,052,891	396,874	
	11	2,052,831	396,867	
	12	2,052,815	396,865	
613542	21	2,053,373	393,937	89
	22	2,053,349	393,931	
	23	2,053,271	393,913	
	24	2,053,174	393,891	
	25	2,053,115	393,877	
	26	2,053,081	393,869	
614517	13	2,053,209	394,897	76***
	14	2,053,130	394,878	
	15	2,053,032	394,854	
	16	2,052,974	394,840	
	17	2,052,961	394,837	
610240	31	2,053,769	390,652	60***
	32	2,053,729	390,645	
	33	2,053,643	390,630	
	34	2,053,602	390,623	
	35	2,053,572	390,618	
612082	27	2,053,560	392,482	72
	28	2,053,430	392,455	
	29	2,053,370	392,443	
	30	2,053,322	392,433	
606667	1271	2,054,059	387,249	101
	1272	2,054,022	387,215	
	1273	2,053,995	387,190	
	1274	2,053,946	387,145	
	1275	2,053,861	387,067	
	1276	2,053,812	387,023	
	1277	2,053,801	387,012	
	1278	2,053,727	386,945	
608468	1193	2,053,950	388,876	107
	1194	2,053,902	388,874	
	1195	2,053,843	388,871	
	1196	2,053,717	388,866	
	1197	2,053,659	388,864	
	1198	2,053,650	388,863	
	1199	2,053,600	388,861	
606667	1271	2,054,059	387,249	101
	1272	2,054,022	387,215	
	1273	2,053,995	387,190	
	1274	2,053,946	387,145	
	1275	2,053,861	387,067	
	1276	2,053,812	387,023	
	1277	2,053,801	387,012	
	1278	2,053,727	386,945	

**TABLE ATT2-2
ESTIMATION OF CAPE FEAR RIVER AVERAGE WIDTH
Chemours Fayetteville Works, North Carolina**

Cross section ID*	HEC-RAS Model Point ID**	Easting (ft)	Northing (ft)	Cape Fear River Width at Cross Section (m)
600052	1498	2,057,643	382,269	87
	1499	2,057,610	382,246	
	1500	2,057,556	382,208	
	1501	2,057,461	382,141	
	1502	2,057,408	382,103	
	1503	2,057,398	382,096	
	1504	2,057,358	382,067	
604474	1331	2,055,879	386,154	95
	1332	2,055,812	386,120	
	1333	2,055,753	386,090	
	1334	2,055,647	386,037	
	1335	2,055,588	386,007	
	1336	2,055,566	385,996	
597968	1565	2,058,901	380,593	116
	1566	2,058,830	380,549	
	1567	2,058,774	380,515	
	1568	2,058,675	380,453	
	1569	2,058,619	380,418	
	1570	2,058,518	380,356	
602061	1406	2,056,453	383,857	104
	1407	2,056,356	383,798	
	1408	2,056,301	383,763	
	1409	2,056,202	383,702	
	1410	2,056,146	383,667	
	1411	2,056,113	383,647	
594185	1717	2,060,560	377,186	100
	1718	2,060,482	377,157	
	1719	2,060,421	377,134	
	1720	2,060,312	377,094	
	1721	2,060,250	377,071	
	1722	2,060,232	377,065	
596259	1644	2,059,549	379,003	84
	1645	2,059,534	378,996	
	1646	2,059,474	378,970	
	1647	2,059,368	378,923	
	1648	2,059,308	378,896	
	1649	2,059,275	378,881	
587968	2042	2,061,270	371,304	93
	2043	2,061,246	371,290	
	2044	2,061,179	371,252	
	2045	2,061,092	371,203	
	2046	2,061,042	371,174	
	2047	2,060,966	371,131	
591595	1825	2,060,295	374,663	91
	1826	2,060,270	374,661	
	1827	2,060,201	374,658	
	1828	2,060,079	374,653	
	1829	2,060,010	374,650	
	1830	2,059,995	374,649	
590322	1931	2,060,424	373,459	100
	1932	2,060,378	373,442	
	1933	2,060,372	373,439	
	1934	2,060,311	373,416	
	1935	2,060,202	373,376	
	1936	2,060,140	373,353	
	1937	2,060,097	373,336	
Average River Cross Section Width (m) =				99

Notes:

*Cross sections locations are shown in Figure ATT2-1.

**Model point ID: are locations with northing, easting, and river depths provided in the HEC-RAS model.

1. Data provided from: "A Report of Flood Hazards in Bladen County, North Carolina and Incorporated Areas." RiverADJ. HEC-RAS 5.0.7. (2007) Flood Insurance Study, Federal Emergency Management Agency. North Carolina Flood Risk Information System Engineering Model. Cape Fear RiverADJ. HEC-RAS 5.0.7.
2. The horizontal datum is North American Datum 1983 projected into North Carolina East State Plane (3200).
3. The vertical datum is North American Datum 1988 projected into North Carolina East State Plane (3200).

Abbreviations:

ft: feet
m: meter

**TABLE ATT2-3
SUMMARY OF FLOW IN CAPE FEAR RIVER AT WILM O'HUSKE LOCK NR TARHEEL, NC
Chemours Fayetteville Works, North Carolina**

Date	USGS Reported Average Discharge ¹ (cfs)	USGS Reported Average Gage Height ¹ (ft)	USGS Reported Total Precipitation ^{1,2} (inches)	USGS Reported Average Discharge (L/s)	Measured River Width (ft)	Estimated River Depth (ft)	Z Value ³	Calculated Total Cross Sectional Area (ft ²)	Calculated River Velocity (ft/s)
11/22/2023	1433.57	1.69	0	40,594	323	18	2	5,221	0.3
11/23/2023	2791.56	2.46	0	79,048	323	19	2	5,414	0.5
12/6/2023	813.01	1.15	0	23,022	323	18	2	5,085	0.2
Average River Velocity:									0.3

Notes:

- 1) Measurements are recorded from the USGS flow gauging station at the W.O. Huske Dam, ID 02105500 (USGS, 2023).
- 2) The minimum value recorded by a USGS raingage is 0.01 inches. Anything detected below this threshold is recorded as 0 inches.
- 3) Z value is an estimated factor used to compute total cross sectional area from river depth.

cfs: cubic feet per second

ft: feet

ft²: feet squared

ft/s: feet per second

L/s: Liter per second

USGS - United States Geological Survey

TABLE ATT2-4
RATIO OF OTHER PFAS COMPOUNDS TO HFPO-DA
Chemours Fayetteville Works, North Carolina

Location ID	SEEP-E	SEEP-E	SEEP-F	SEEP-F	SEEP-G	SEEP-G	SEEP-H
Field Sample ID	SEEP-E-0930	Seep E-030420	SEEP-F-0923	Seep F-030420	SEEP-G-0911	Seep G-030420	SEEP-H-0905
Sample Date	10/22/2019	3/4/2020	10/22/2019	3/4/2020	10/22/2019	3/4/2020	10/22/2019
QA/QC	--	--	--	--	--	--	--
Sample Delivery Group (SDG)	320-55576-1	2091227	320-55576-1	2091227	320-55576-1	2091227	320-55576-1
Lab Sample ID	320-55576-1	1274949	320-55576-2	1274953	320-55576-3	1274957	320-55576-4
<i>Table 3+ SOP (ng/L)</i>							
HFPO-DA	1,200	950	1,100	1,100	700	730	550
PFMOAA	480 J	390	900	730	190	220	140
PFO2HxA	800	470	810	640	470	410	350
PFO3OA	170	83	130	110	57	56	28
PFO4DA	83	17	7.3	9.1	9	7.9	<2
PFO5DA	46	<2	<2	<2	<2	<2	<2
PMPA	2,300	1,800	2,800	2,100	1,500	1,500	1,200
PEPA	710	600	870	710	490	520	360
PS Acid	<2	<2	<2	<2	<2	<2	<2
Hydro-PS Acid	90	24	9.6	10	22	11	16
R-PSDA	220 J	53 J	92	68 J	79 J	44 J	39 J
Hydrolyzed PSDA	2.1 J	<2	<2.9	<2	<2	<2	<2
R-PSDCA	<2	<2	<2	<2	<2	<2	<2
NVHOS	15	6	12	8	5.4	5	4.3
EVE Acid	<2	<2	<2	<2	<2	<2	<2
Hydro-EVE Acid	7.7	2.3	2	<2	<2	<2	<2
R-EVE	76	20	60	40	39	28	21 J
PES	<2	<2	<2.3	<2	<2	<2	<2
PFECA B	<2	<2	<3	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2	<2	<2	<2
Total Attachment C (ng/L)^{1,2}	5,900	4,300	6,600	5,400	3,400	3,500	2,600
Total Table 3+ (17 compounds) (ng/L)^{2,3}	5,900	4,300	6,600	5,400	3,400	3,500	2,600
Ratio of Total Attachment C to HFPO-DA	4.9	4.5	6.0	4.9	4.9	4.8	4.7
Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.9	4.5	6.0	4.9	4.9	4.8	4.7
Average Ratio of Total Attachment C to HFPO-DA	4.85						
Average Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.87						

TABLE ATT2-4
RATIO OF OTHER PFAS COMPOUNDS TO HFPO-DA
Chemours Fayetteville Works, North Carolina

Location ID	SEEP-H	SEEP-I	SEEP-I	SEEP-J	SEEP-J	SEEP-K	SEEP-K
Field Sample ID	Seep H-030420	SEEP-I-0856	Seep I-030420	SEEP-J-0843	Seep J-030420	SEEP-K-0835	Seep K-030420
Sample Date	3/4/2020	10/22/2019	3/4/2020	10/22/2019	3/4/2020	10/22/2019	3/4/2020
QA/QC	--	--	--	--	--	--	--
Sample Delivery Group (SDG)	2091227	320-55576-1	2091227	320-55576-1	2091227	320-55576-1	2091227
Lab Sample ID	1274961	320-55576-5	1274965	320-55576-6	1274969	320-55576-7	1274973
<i>Table 3+ SOP (ng/L)</i>							
HFPO-DA	540	570	470	580	250	640	490
PFMOAA	180	130	200	180 J	140	160	210
PFO2HxA	330	300	280	350 J	130	320	230
PFO3OA	30	17	18	120 J	16	41	28
PFO4DA	<2	<2	<2	58	4.7	11	5
PFO5DA	<2	<2	<2	20 J	2.2	4.8	<2
PMPA	1,100	1,200	1,100	810 J	660	1,300	1,000
PEPA	360	390	390	260	200	400	350
PS Acid	<2	<2	<2	<2	<2	<2	<2
Hydro-PS Acid	9.3	12	12	37	6.9	70	16
R-PSDA	30 J	53 J	36	110 J	23	130 J	49
Hydrolyzed PSDA	<2	<2	<2	<2	<2	<2	<2
R-PSDCA	<2	<2	<2	<2	<2	<2	<2
NVHOS	3.7	4.4	4.5	8.1 J	2.8	5.2	4.7
EVE Acid	<2	<2	<2	<2	<2	<2	<2
Hydro-EVE Acid	<2	<2	<2	2.7	<2	3.5	<2
R-EVE	20	23 J	17	16	13	46 J	25
PES	<2	<2	<2	<2	<2	<2	<2
PFECA B	<2	<2	<2	<2	<2	<2	<2
PFECA-G	<2	<2	<2	<2	<2	<2	<2
Total Attachment C (ng/L)^{1,2}	2,500	2,600	2,500	2,400	1,400	2,900	2,300
Total Table 3+ (17 compounds) (ng/L)^{2,3}	2,600	2,600	2,500	2,400	1,400	3,000	2,300
Ratio of Total Attachment C to HFPO-DA	4.6	4.6	5.3	4.1	5.6	4.5	4.7
Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.8	4.6	5.3	4.1	5.6	4.7	4.7
Average Ratio of Total Attachment C to HFPO-DA	4.85						
Average Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.87						

**TABLE ATT2-4
RATIO OF OTHER PFAS COMPOUNDS TO HFPO-DA
Chemours Fayetteville Works, North Carolina**

Location ID	SEEP-L	SEEP-M
Field Sample ID	SEEP-L-0825	SEEP-M-0818
Sample Date	10/22/2019	10/22/2019
QA/QC	--	--
Sample Delivery Group (SDG)	320-55576-1	320-55576-1
Lab Sample ID	320-55576-8	320-55576-9
Table 3+ SOP (ng/L)		
HFPO-DA	520	570
PFMOAA	130	100
PFO2HxA	220	190
PFO3OA	18	15
PFO4DA	2.7	<2
PFO5DA	<2	<2
PMPA	1,200	1,300
PEPA	350	410
PS Acid	<2	<2
Hydro-PS Acid	44	28
R-PSDA	120 J	78 J
Hydrolyzed PSDA	<2	<2
R-PSDCA	<2	<2
NVHOS	5.9	5.6
EVE Acid	<2	<2
Hydro-EVE Acid	<2	<2
R-EVE	44 J	26 J
PES	<2	<2
PFECA B	<2	<2
PFECA-G	<2	<2
Total Attachment C (ng/L)^{1,2}	2,500	2,600
Total Table 3+ (17 compounds) (ng/L)^{2,3}	2,500	2,600
Ratio of Total Attachment C to HFPO-DA	4.8	4.6
Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.8	4.6
Average Ratio of Total Attachment C to HFPO-DA	4.85	
Average Ratio of Total Table 3+ (17 compounds) to HFPO-DA	4.87	

Notes:

Bold - Analyte detected above associated reporting limit

J - Analyte detected. Reported value may not be accurate or precise
ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

SOP - standard operating procedure

< - Analyte not detected above associated reporting limit.

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

2 - 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.

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

**TABLE ATT2-5
CALCULATION OF HFPO-DA DEPOSITED MASS AND MASS FLUX
Chemours Fayetteville Works, North Carolina**

Section ¹	Start Air Loading (ug/m ²)	End Air Loading (ug/m ²)	Start Deposition Rate (ng/m ² /hr) ²	End Deposition Rate (ng/m ² /hr) ²	Average Deposition Rate (ng/m ² /hr)	Section Distance ³ (m)	Average River Width (m)	Section Area (m ²)	River Velocity ⁴ (ft/s)	River Velocity (m/hr)	Travel Time (hrs)	Mass Deposited (mg)	Mass Discharge (mg/s)
Center	160	160	18.3	18.3	18.3	903	98.59	89,028	0.3	347.48	2.60	4.2	0.00045
Up River Section 1	160	80	18.3	9.1	13.7	490	98.59	48,300	0.3	347.48	1.41	0.9	0.00018
Up River Section 2	80	40	9.1	4.6	6.8	909	98.59	89,570	0.3	347.48	2.61	1.6	0.00017
Down River Section 1	160	80	18.3	9.1	13.7	586	98.59	57,813	0.3	347.48	1.69	1.3	0.00022
Down River Section 2	80	40	9.1	4.6	6.8	565	98.59	55,672	0.3	347.48	1.63	0.6	0.00011
Total HFPO-DA:												0.0011	
Total Attachment C:												0.010	
Total Table 3+ (17 Compounds):												0.006	

Notes:

1. River cross sections are shown in Figure ATT2-1.
2. Based on model deposition rate, Table ATT2-1.
3. Section distances are measured in GIS as shown on Figures ATT2-2 through ATT2-6.
4. River velocity is calculated as an average from USGS discharge data between November 22 to November 23, 2023 and December 6, 2023, Table ATT2-3.
5. Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
6. Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, R-EVE, and PFPrA.

µg/m²/yr: micrograms per meter square per year

ft/s: feet per second

hr: hours

m/hr: meters per hour

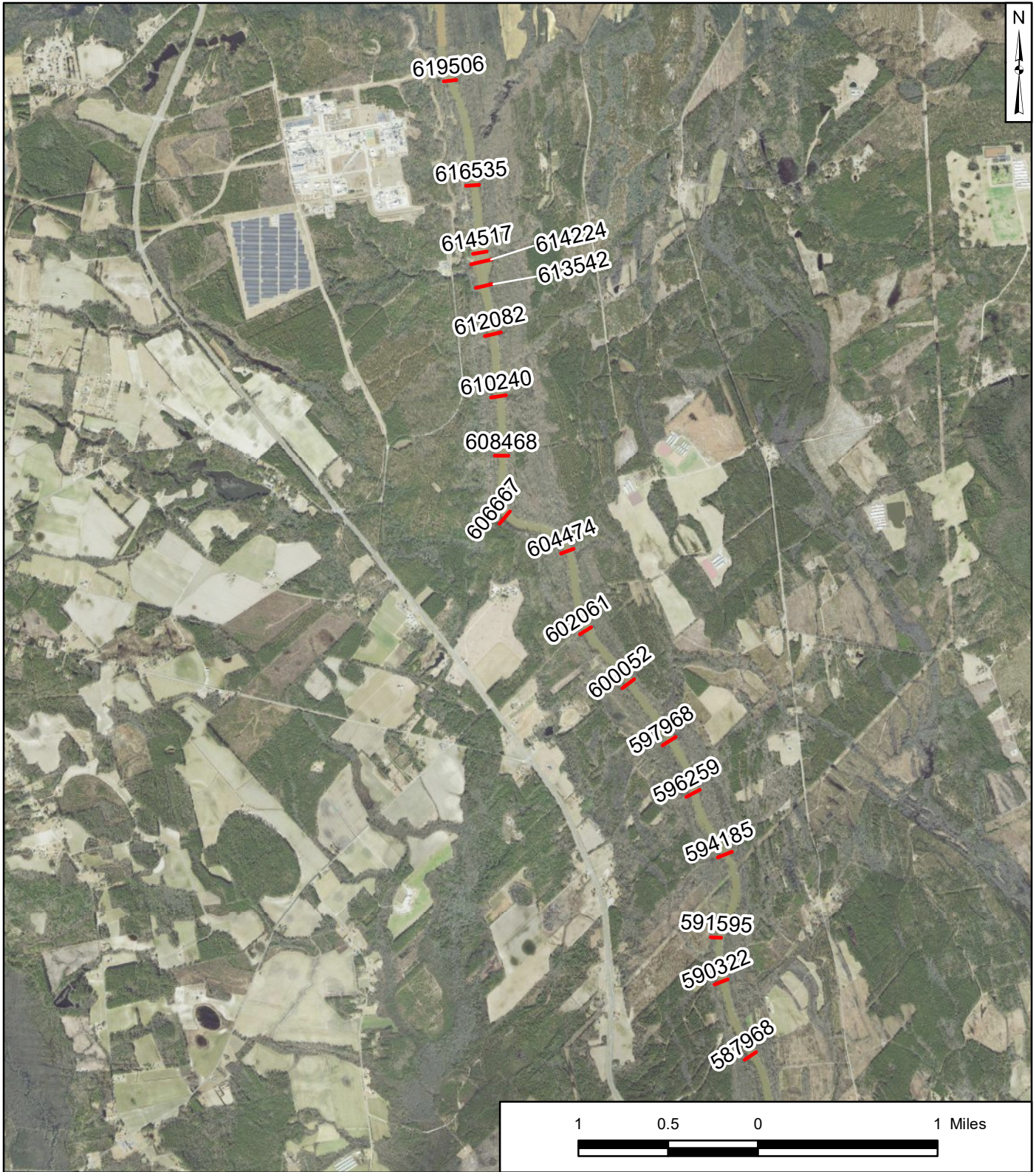
m: meter

m²: meter square


mg/s: milligrams per second

mg: milligrams

ng/m²/hr: nanograms per meter square per hour



Legend

 Cross Section

Notes:

1. Cape Fear River cross section locations obtained from "A Report of Flood Hazards in Bladen County, North Carolina and Incorporated Areas." (2007) Flood Insurance Study, Federal Emergency Management Agency. North Carolina Flood Risk Information System Engineering Model. Cape Fear RiverADJ. HEC-RAS 5.0.7.
2. Cross sections used for calculation of average river widths for calculation of aerial mass loading.
3. Basemap source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Cape Fear River Cross Sections Locations

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

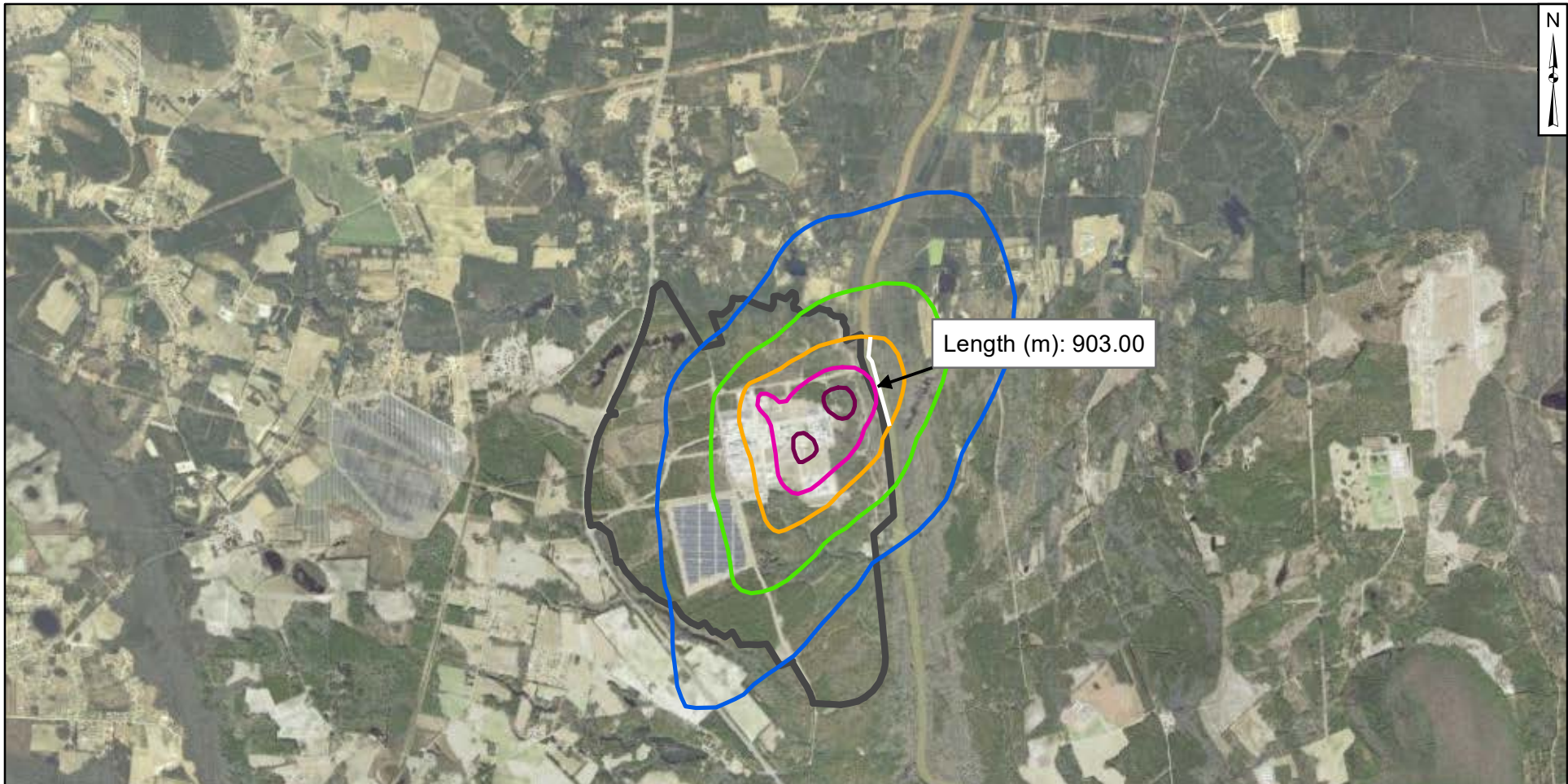
Geosyntec Consultants of NC, P.C.
NC License No.: C 3500 and C 295

Figure

ATT2-1

Raleigh

March 2024



Legend

— Site Boundary

Modeled Deposition Contours, October 2018 Scenario

- 40 $\mu\text{g}/\text{m}^2/\text{yr}$
- 80 $\mu\text{g}/\text{m}^2/\text{yr}$
- 160 $\mu\text{g}/\text{m}^2/\text{yr}$
- 320 $\mu\text{g}/\text{m}^2/\text{yr}$
- 640 $\mu\text{g}/\text{m}^2/\text{yr}$

Notes:
 $\mu\text{g} / \text{m}^2 / \text{yr}$ - micrograms per square meter per year

HFPO-DA deposition model contours for October 2018 from ERM, 2018, Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

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

1 0.5 0 1 Miles



Measurement of Cape Fear River Length at Center Section

Chemours Fayetteville Works, North Carolina

Geosyntec
 consultants

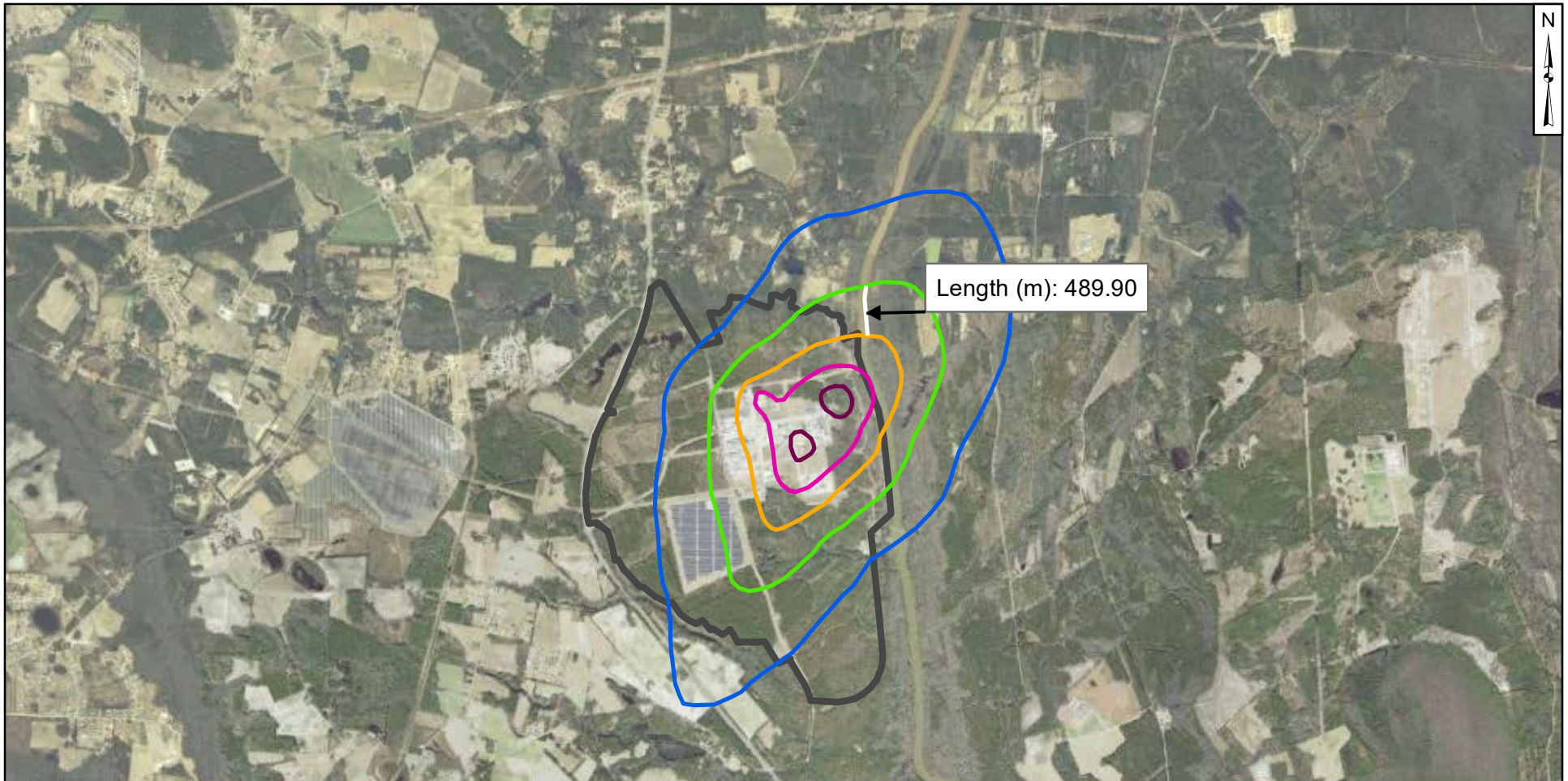
Geosyntec Consultants of NC, P.C.
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Figure

ATT2-2

Raleigh

March 2024



Legend

— Site Boundary

Modeled Deposition Contours, October 2018 Scenario

- 40 µg/m²/yr
- 80 µg/m²/yr
- 160 µg/m²/yr
- 320 µg/m²/yr
- 640 µg/m²/yr

Notes:

µg / m² / yr - micrograms per square meter per year

HFPO-DA deposition model contours for October 2018 from ERM, 2018, Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

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

1 0.5 0 1 Miles



Measurement of Cape Fear River Length at Up-River Section 1

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

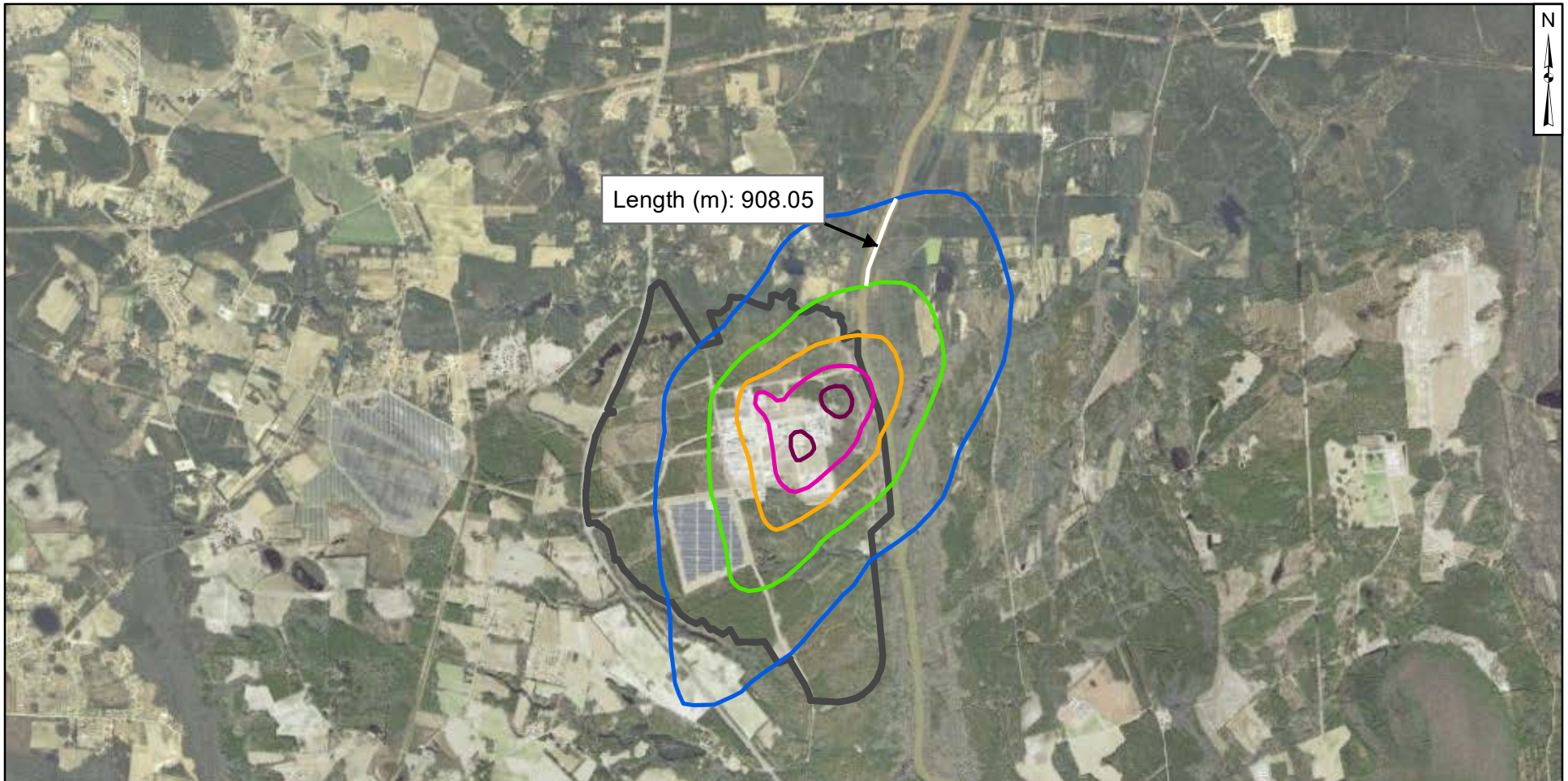
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Figure

ATT2-3

Raleigh

March 2024



Legend

— Site Boundary

Modeled Deposition Contours, October 2018 Scenario

- 40 $\mu\text{g}/\text{m}^2/\text{yr}$
- 80 $\mu\text{g}/\text{m}^2/\text{yr}$
- 160 $\mu\text{g}/\text{m}^2/\text{yr}$
- 320 $\mu\text{g}/\text{m}^2/\text{yr}$
- 640 $\mu\text{g}/\text{m}^2/\text{yr}$

Notes:
 $\mu\text{g} / \text{m}^2 / \text{yr}$ - micrograms per square meter per year

HFPO-DA deposition model contours for October 2018 from ERM, 2018, Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

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

1 0.5 0 1 Miles



Measurement of Cape Fear River Length at Up-River Section 2

Chemours Fayetteville Works, North Carolina

Geosyntec
 consultants

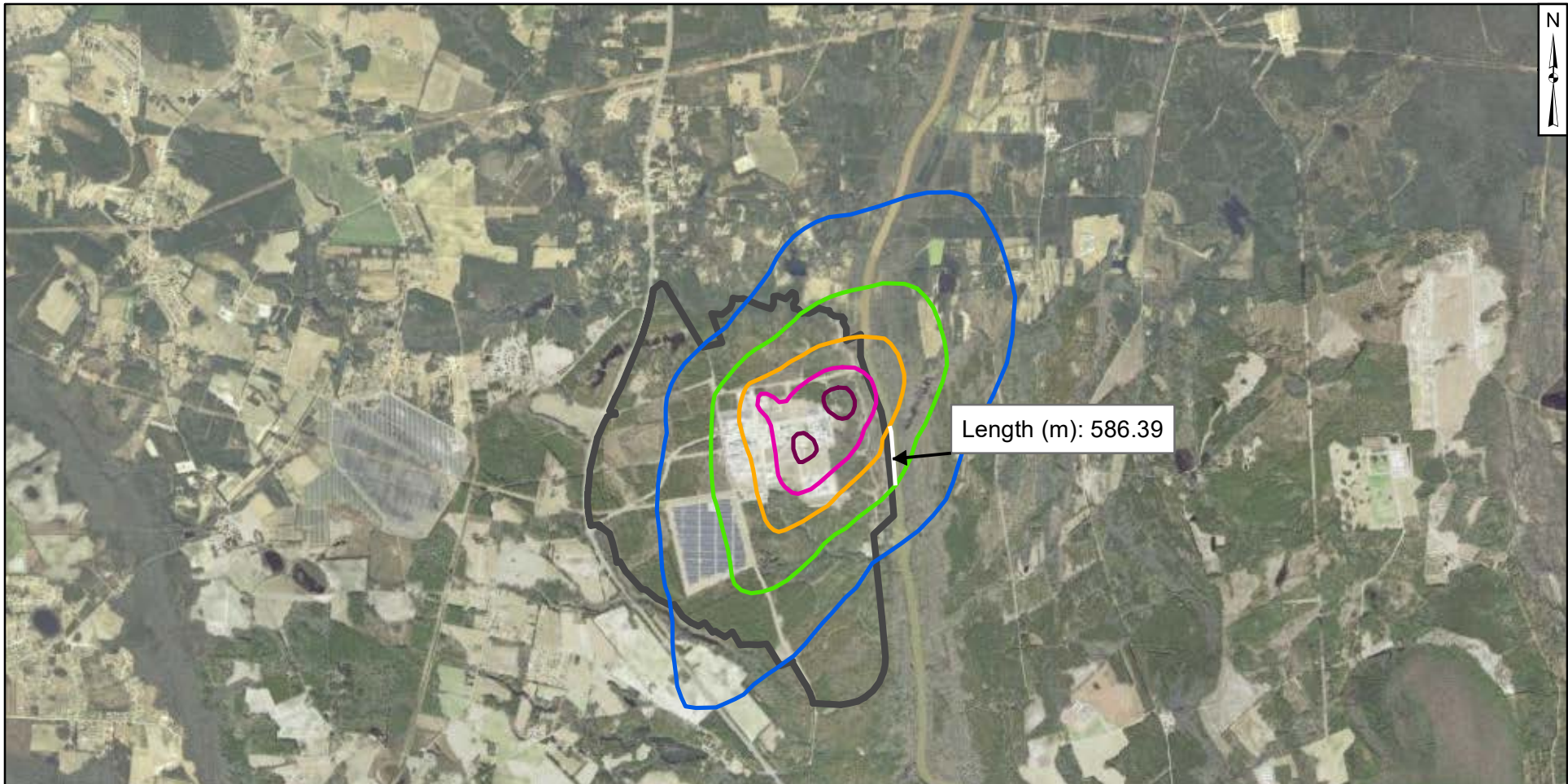
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Figure

ATT2-4

Raleigh

March 2024



Legend

— Site Boundary

Modeled Deposition Contours, October 2018 Scenario

- 40 µg/m²/yr
- 80 µg/m²/yr
- 160 µg/m²/yr
- 320 µg/m²/yr
- 640 µg/m²/yr

Notes:

µg / m² / yr - micrograms per square meter per year

HFPO-DA deposition model contours for October 2018 from ERM, 2018, Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

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

1 0.5 0 1 Miles



Measurement of Cape Fear River Length at Down-River Section 1

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

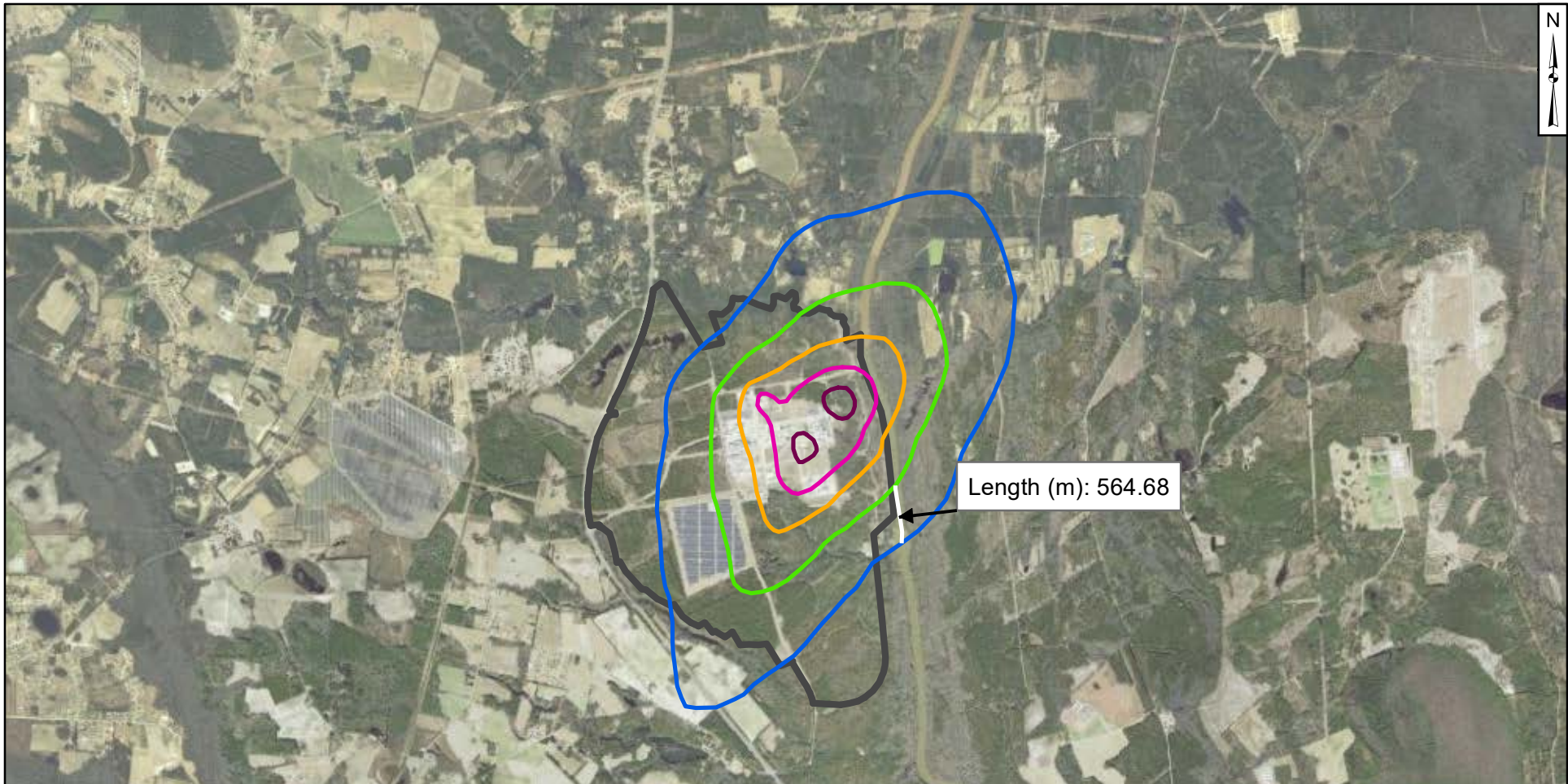
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Figure

ATT2-5

Raleigh

March 2024



Legend

— Site Boundary

Modeled Deposition Contours, October 2018 Scenario

- 40 $\mu\text{g}/\text{m}^2/\text{yr}$
- 80 $\mu\text{g}/\text{m}^2/\text{yr}$
- 160 $\mu\text{g}/\text{m}^2/\text{yr}$
- 320 $\mu\text{g}/\text{m}^2/\text{yr}$
- 640 $\mu\text{g}/\text{m}^2/\text{yr}$

Notes:

$\mu\text{g} / \text{m}^2 / \text{yr}$ - micrograms per square meter per year

HFPO-DA deposition model contours for October 2018 from ERM, 2018, Modeling Report: HFPO-DA Atmospheric Deposition and Screening Groundwater Effects. 27 April 2018.

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

1 0.5 0 1 Miles



Measurement of Cape Fear River Length at Down-River Section 2

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

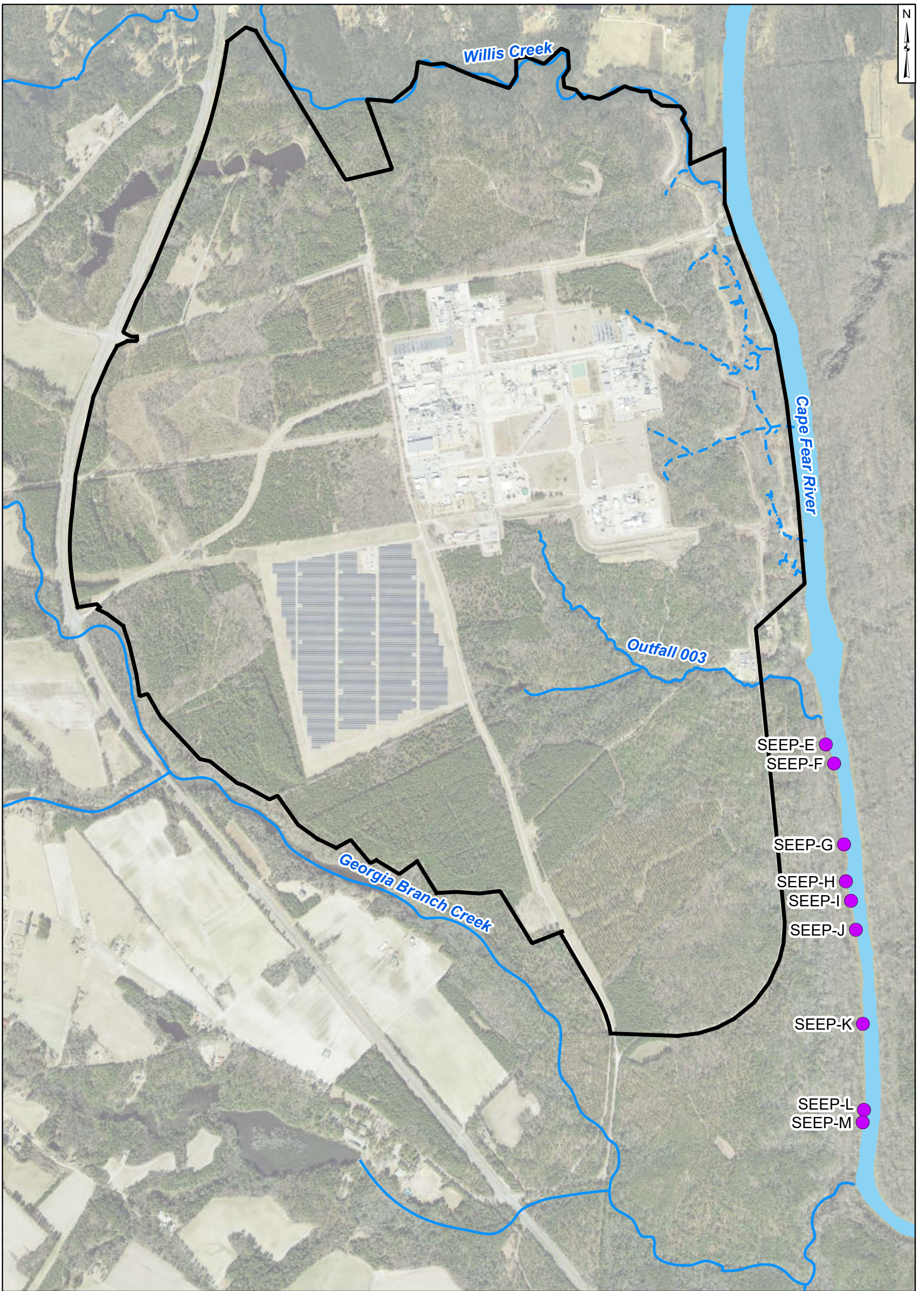
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NC License No.: C 3500 and C 295

Figure

ATT2-6

Raleigh

March 2024



Legend

- Observed Seep
- Nearby Tributary
- Site Boundary

Notes:

1. Seep E to M samples were collected where the seeps entered the Cape Fear River. Their locations on this figure have been slightly adjusted to facilitate interpretation so that they do not appear to be in the Cape Fear River.
2. 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).
3. Basemap Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

1,000 500 0 1,000 Feet



Southwestern Offsite Seeps Locations

Chemours Fayetteville Works, North Carolina

Geosyntec
consultants

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

Figure

Raleigh

March 2024

ATT2-7

Attachment ATT3

Onsite Groundwater Pathway

**Attachment ATT3: Supporting Calculations – Onsite
Groundwater Pathway**

Introduction and Objective

Based on the conceptual site model, the Black Creek Aquifer and the Flood Plain deposits at the river bank are the primary hydrogeologic units that are potentially in hydraulic connection with the Cape Fear River. The Cape Fear River stage is lower than the top of the Black Creek Aquifer, except during peak rainfall or flooding, indicating that the Cape Fear River is a discharge boundary for the aquifer. Onsite groundwater from the Black Creek Aquifer discharging to the Cape Fear River is therefore a potential pathway for per- and polyfluoroalkyl substances (PFAS) mass loading to the Cape Fear River. This pathway was identified as Transport Pathway Number 5 in the PFAS mass loading in this report. The objective of the supporting calculations presented in this appendix is to estimate PFAS mass loading from onsite groundwater discharge based on calculated PFAS mass flux for segments of the Black Creek Aquifer along the river frontage.

Previous assessments derived hydraulic gradients from potentiometric maps. Starting this quarter, hydraulic gradients were estimated between well pairs downgradient of the remedy, since the prior method is considered not appropriate for these new conditions since barrier wall results in a discontinuous potentiometric surface. This change will continue to be incorporated in future mass loading assessments.

Approach

The PFAS mass loading from onsite groundwater discharge was estimated as follows. Supporting data are provided in Table ATT3-1:

1. The Cape Fear River frontage was divided into nine segments (Figure ATT3-1). Each segment includes one well pair, consisting of:
 - a. One primary groundwater monitoring well that is considered representative of the Black Creek Aquifer and that is included in the Corrective Action Plan¹ (Geosyntec, 2019); and
 - b. One secondary paired groundwater monitoring well that is generally west of the groundwater monitoring well, east of the Barrier Wall remedy, and also considered representative of the Black Creek Aquifer.
2. The thickness of the Black Creek Aquifer (h) was estimated for each segment based on the segment length and the cross-sectional area of the Black Creek Aquifer, as determined by the three-dimensional hydrostratigraphic model of the Site, constructed using CTech’s Earth Volumetric Studio (EVS) software (Geosyntec, 2019):

¹ The Black Creek Aquifer is not observed in boreholes from Segment 4 suggesting a localized "pinch-out" of the Black Creek Aquifer in Segment 4. The monitoring well used to determine PFAS mass loading in this segment is screened in the Floodplain Deposits (LTW-03).

**Attachment ATT3: Supporting Calculations – Onsite
Groundwater Pathway**

$$h = \frac{A}{l}$$

where,

h = the Black Creek Aquifer thickness [ft];

A = the cross-sectional area of the Black Creek Aquifer [ft²]; and

l = the segment length [ft].

The EVS model output for each segment is presented in Figure ATT3-2.

3. The hydraulic gradient (i) for each segment was derived based on the groundwater elevations and distance between each well within the well pair (Figure ATT3-3):

$$i = \frac{-\Delta h}{d}$$

where,

i = the hydraulic gradient [ft/ft];

Δh = the head difference between the two wells [ft]; and

d = the distance between the two wells [ft]

Unlike past quarterly reports, only a single hydraulic gradient value was estimated for each segment (i.e., no lower and upper bound values). Based on the hydrographs from wells along the river presented in Figure ATT3-4, hydraulic gradients in the aquifer are relatively constant over time. With the exception of large changes in the river level (over 10 feet), these wells respond to river level fluctuation in the subdued manner.

4. The hydraulic conductivity (K) was estimated for each segment using the results of constant rate tests performed at five extraction wells installed in the Black Creek Aquifer upstream of the river frontage (Geosyntec, 2021). The extraction wells used to determine the hydraulic conductivity for each segment are as follows, based on their locations relative to the segments (Figure ATT 3-1):

**Attachment ATT3: Supporting Calculations – Onsite
Groundwater Pathway**

Extraction Well	Segment
EW-1	1
	2
EW-4	3
	4
EW-5	5
	6
EW-2	7
EW-3	8
	9

5. The total PFAS concentration for each segment was determined based on grab samples collected from the primary groundwater monitoring wells. PFAS analytical results for these groundwater samples are presented in Table ATT1-15-1 and ATT1-15-2 in Attachment 1.
6. Mass flux for each segment, representing the PFAS mass loading to the river from groundwater, was determined as follows:

$$Q = lhKiCf$$

where,

Q = the mass flux [mg/sec];

l = the segment length [ft];

h = the Black Creek Aquifer thickness [ft];

K = the hydraulic conductivity of the aquifer [ft/sec];

i = the hydraulic gradient [ft/ft], using an upper and lower contour elevation difference;

C = the total PFAS concentration [ng/L]; and

f = the conversion factor between cubic feet and liters and between ng and mg.

The mass flux is interpreted as zero for segments where a negative hydraulic gradient was computed (i.e., groundwater flow is moving away from the river). Parameters listed above were used to estimate groundwater flow rates, shown in Table ATT3-2.

Potential Future Methodology Modifications

The groundwater flows in the Black Creek Aquifer have changed due to the implementation of the groundwater extraction system and the barrier wall construction remedy. Adjustments to this calculation methodology were made this quarter and may be required in future assessments based on changes in conditions or refinement of Site knowledge.

**Attachment ATT3: Supporting Calculations – Onsite
Groundwater Pathway**

References

Geosyntec, 2019. Corrective Action Plan. Chemours Fayetteville Works. December 2019.

Geosyntec, 2021. Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2020 Report, Chemours Fayetteville Works. March 31, 2021.

**TABLE ATT3-1
ONSITE GROUNDWATER PATHWAY SUPPORTING DATA
Chemours Fayetteville Works, North Carolina**

Segment	Primary Well	Sample Date	Segment Length (ft)	Cross-sectional Area of Black Creek Aquifer ¹ (ft ²)	Average Thickness of Black Creek Aquifer (ft)	Secondary Paired Well ²	Difference in Hydraulic Head ³ (ft)	Difference in Distance (ft)	Hydraulic Gradient (ft/ft)	Hydraulic Conductivity ⁴ (ft/sec)	Total Attachment C ⁵		Total Table 3+ (17 Compounds) ⁶		Total Table 3+ (18 Compounds) ⁷		Total Table 3+ (21 Compounds)	
											Concentration ⁷ (ng/L)	Mass Loading ⁸ (mg/s)	Concentration ⁷ (ng/L)	Mass Loading ⁸ (mg/s)	Concentration ¹ (ng/L)	Mass Loading (mg/s)	Concentration ⁷ (ng/L)	Mass Loading ⁸ (mg/s)
1	PIW-1D	11/7/2023	1,150	13,400	11.7	OW-14	-0.61	305.47	0.0020	1.71E-04	45,000	0.0058	45,000	0.006	52,000	0.0067	53,000	0.0068
2	PIW-3D	11/3/2023	873	11,010	12.6	OW-44	-0.33	351.79	0.0009	1.71E-04	73,000	0.0036	74,000	0.004	87,000	0.0043	88,000	0.0044
3	LTW-02	11/3/2023	875	5,560	6.4	OW-45	-0.12	399.66	0.0003	1.02E-04	77,000	0.0004	77,000	0.0004	90,000	0.0004	92,000	0.0004
4	LTW-03	11/13/2023	729	2,800	3.9	OW-46	-2.20	510.17	0.0043	1.02E-04	170,000	0.0060	170,000	0.006	210,000	0.0074	210,000	0.0074
5	PZ-22	11/2/2023	656	15,200	23.2	OW-22	-0.18	370.47	0.0005	3.28E-04	240,000	0.0165	240,000	0.017	290,000	0.0199	300,000	0.0206
6	PIW-7D	11/2/2023	524	16,000	30.5	OW-48	0.18	331.98	0.0000	3.28E-04	220,000	0	220,000	0	270,000	0.0000	280,000	0
7	LTW-05	11/2/2023	672	11,800	19.4	OW-25	-0.40	398.47	0.0010	1.28E-04	270,000	0.0128	270,000	0.013	340,000	0.0161	340,000	0.0161
8	OW-28	11/2/2023	594	15,500	26.0	OW-27	-0.23	216.60	0.0011	2.59E-04	18,000	0.0022	18,000	0.002	22,000	0.0027	22,000	0.0027
9	OW-33	11/2/2023	1607	46,300	28.8	OW-30	0.35	297.99	0.0000	2.59E-04	30,000	0	30,000	0	36,000	0.0000	37,000	0
Total											--	0.0473	--	0.0473	--	0.0576	--	0.0585

- Notes**
- 1 - Cross sectional areas were determined using the three-dimensional hydrostratigraphic model of the Site, constructed using CTech's Earth Volumetric Studio (EVS) software (Figure ATT3-2).
 - 2 - Second paired well is east of the Barrier Wall remedy and west of the primary well.
 - 3 - Groundwater elevation difference for hydraulic gradient based on water levels measured on November 28, 2023 (Figure ATT3-3).
 - 4 - Hydraulic conductivity values are based on constant rate pumping test results from extraction wells described in Attachment ATT3.
 - 5 - Attachment C does not include Perfluorohexanoic acid (PFHpA).
 - 6 - Total Table 3+ (17 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, R-EVE, and PFPrA.
 - 7 - Total Table 3+ (18 compounds) does not include PFHpA, R-PSDA, Hydrolyzed PSDA, and R-EVE.
 - 8 - Detailed PFAS Concentrations provided in Appendix A.
 - 9 - A value of zero represents a negative mass loading value (i.e., computed negative gradient).

-- not applicable
ft - feet
ft/sec - feet per second
ft² - square feet
mg/s - milligrams per second
ng/L - nanograms per liter

TABLE ATT3-2
NOVEMBER 2023 ONSITE GROUNDWATER FLOW RATE
Chemours Fayetteville Works, North Carolina

Segment	Cross-sectional Area of Black Creek Aquifer ¹ (ft ²)	Hydraulic Gradient ^{1,2} (ft/ft)	Hydraulic Conductivity (ft/sec) ¹	Flow Upper Bound (ft ³ /sec)	Flow Upper Bound (gal/day)
1	13,400	0.0020	1.71E-04	4.56E-03	2,946
2	11,010	0.0009	1.71E-04	1.76E-03	1,139
3	5,560	0.0003	1.02E-04	1.70E-04	110
4	2,800	0.0043	1.02E-04	1.24E-03	802
5	15,200	0.0005	3.28E-04	2.43E-03	1,570
6	16,000	0.0000	3.28E-04	0	0
7	11,800	0.0010	1.28E-04	1.51E-03	977
8	15,500	0.0011	2.59E-04	4.25E-03	2,750
9	46,300	0.0000	2.59E-04	0	0
				0.016	10,294

Notes

1 - Supporting data for cross-sectional area, hydraulic gradient, and hydraulic conductivity provided in Table ATT3-1.

2 - Hydraulic gradient based on water levels measured on November 28, 2023 (Figure ATT3-3).

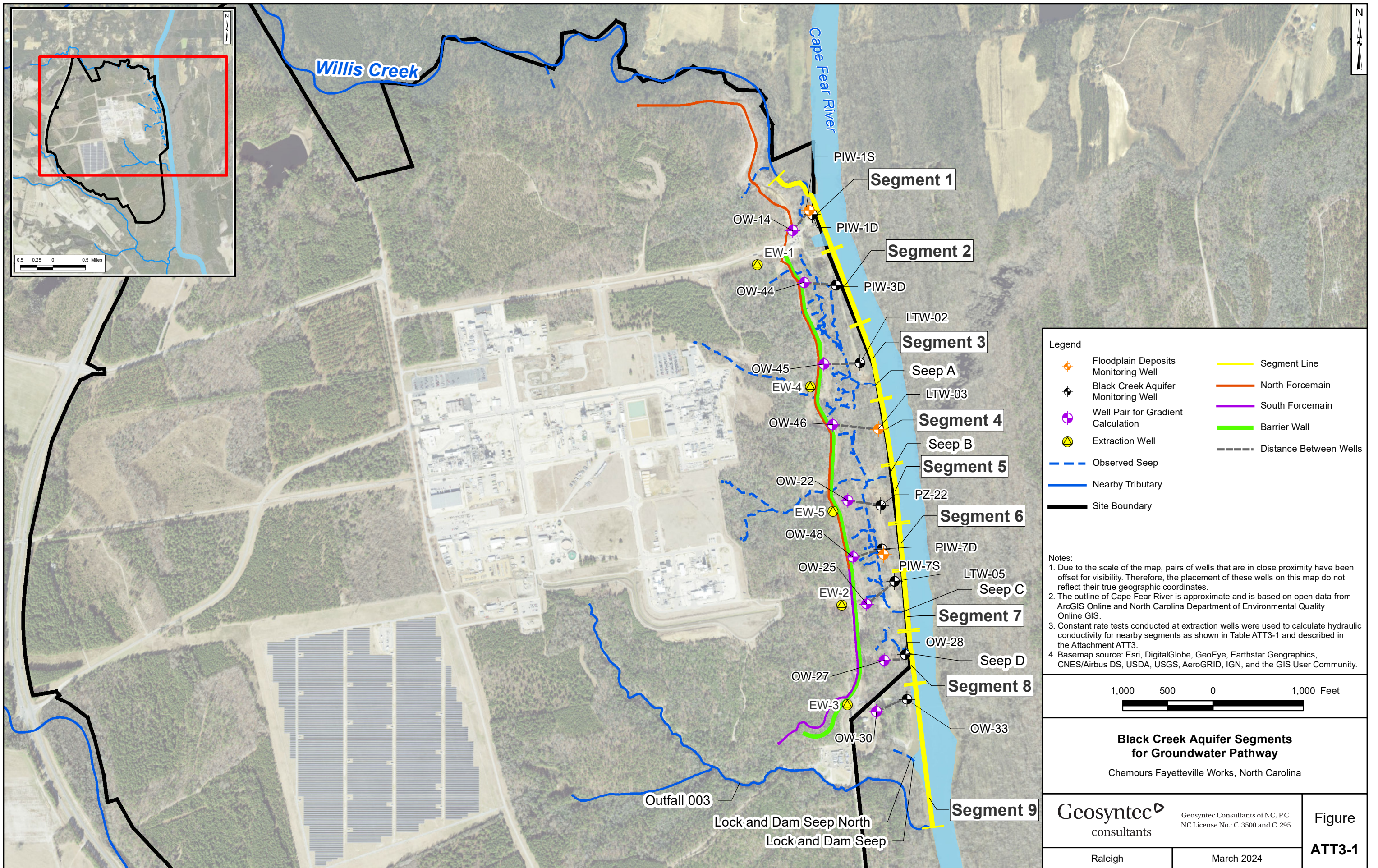
ft - feet

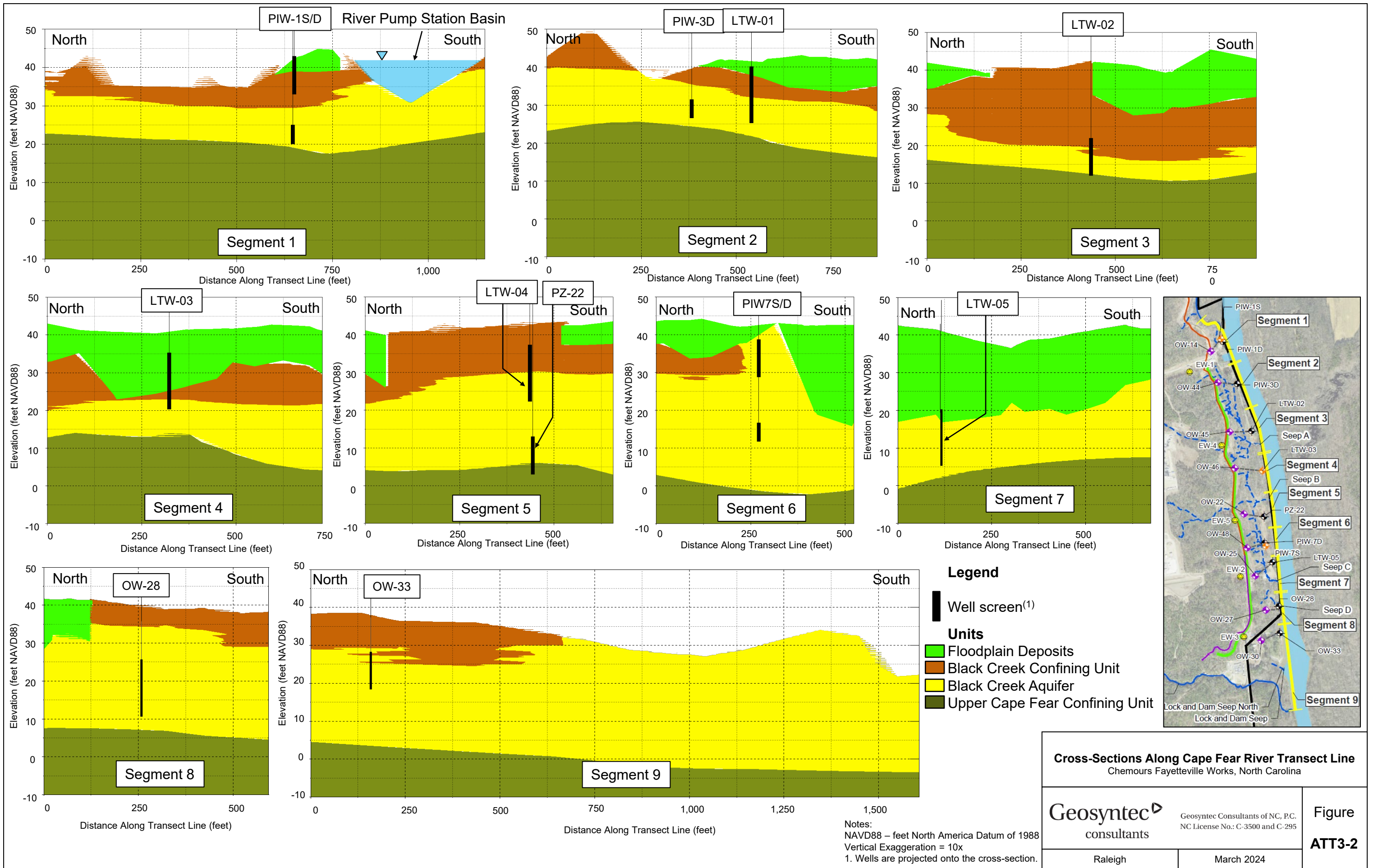
ft² - square feet

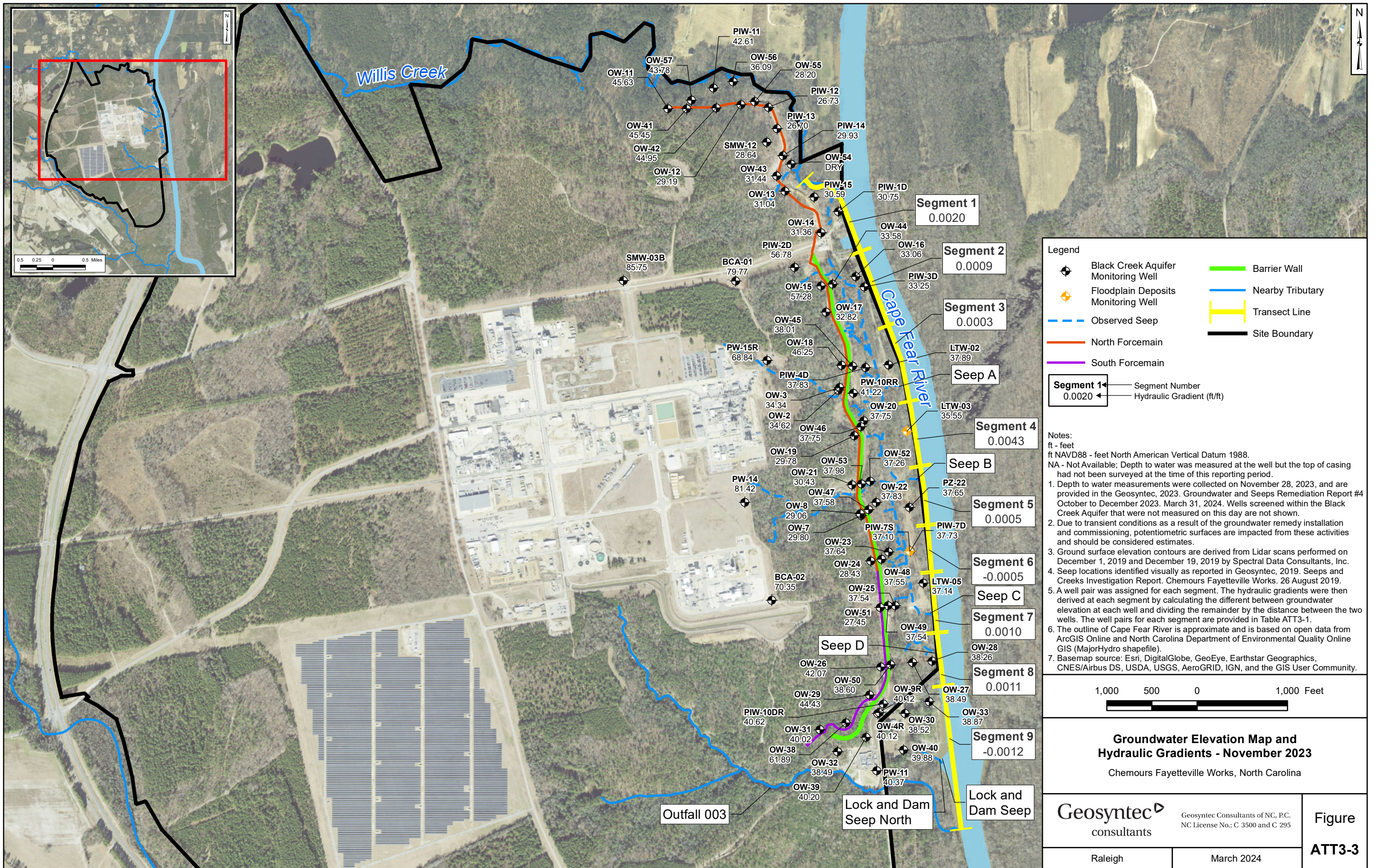
ft/sec - feet per second

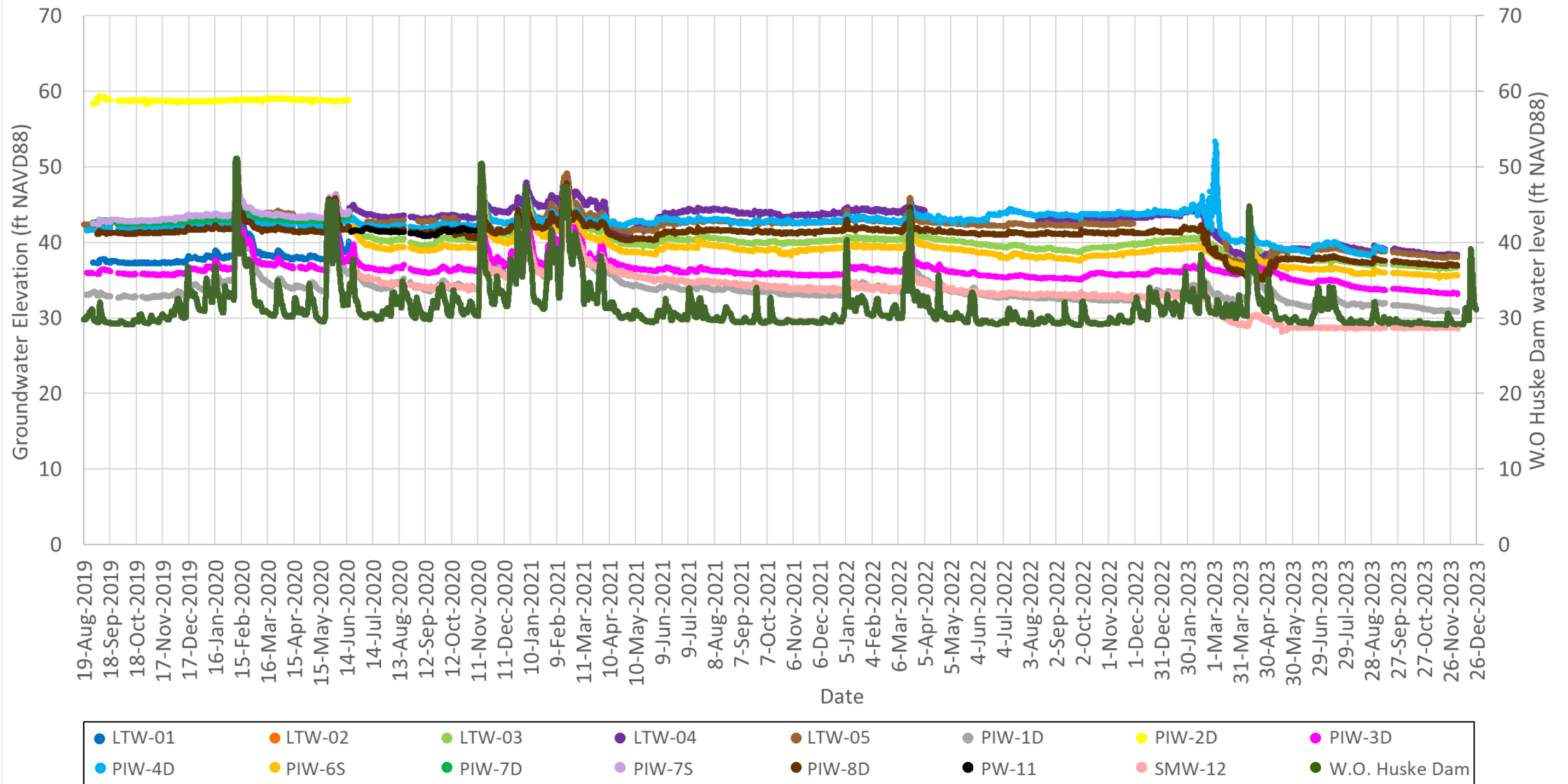
ft³/sec - cubic feet per second

gal/day - gallons per day









Notes:
 ft - feet
 NAVD88 - North American Vertical Datum of 1988

Hydrograph for Select Onsite Groundwater Monitoring Wells and W.O Huske Dam Chemours Fayetteville Works, North Carolina	
Geosyntec consultants	Geosyntec Consultants of NC, P.C. NC License No.: C 3500 and C 295
Raleigh	March 2024

Figure
ATT3-4

Appendix B

Supplemental Tables

**TABLE B1-1
OUTFALL 003 CAPTURED MASS LOAD BY COMPOUND AND TIME INTERVAL - Q4 2023
Chemours Fayetteville Works, North Carolina**

Interval Details					Calculated Captured Mass Load (lbs) ¹																				
Interval ID	Start Time	End Time	Duration (hours)	Total Flow (MG)	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 Table 3+ (17 compounds) ²
OF003_2023_1_Q4	10/1/23 0:00	10/31/23 23:59	744	11.5	0.54	1.5	0.60	0.16	0.077	0.045	0.29	0.096	0.064	0.027	0.022	0.066	0.00069	0.022	0.0027	0.014	0.0106	0.0027	0	0	3.5
OF003_2023_2_Q4	11/1/23 0:00	11/30/23 23:59	720	10.7	0.42	1.4	0.54	0.14	0.062	0.044	0.27	0.089	0.057	0.026	0.025	0.073	0	0.024	0.0031	0.015	0.0134	0.012	0	0	3.1
OF003_2023_3_Q4	12/1/23 0:00	12/31/23 23:59	744	12.3	0.45	1.2	0.50	0.16	0.087	0.047	0.26	0.094	0.045	0.023	0.021	0.050	0	0.021	0	0.013	0.0093	0	0	0	3.0
Total				34.5	1.4	4.2	1.6	0.47	0.23	0.14	0.81	0.28	0.17	0.075	0.068	0.19	0.00069	0.067	0.0058	0.043	0.033	0.014	0	0	9.6

Notes:

1 - The calculated captured mass load is a product of the concentration difference in the influent and the effluent samples and total flow at the influent for the sampling interval, see Appendix B for more details.

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

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

OF003 - previously Old Outfall 002 treatment system

lbs - pounds

MG - million gallons

TABLE B1-2
STORMWATER TREATMENT SYSTEM CAPTURED MASS LOAD
BY COMPOUND AND DATE - Q4 2023

Geosyntec Consultants of NC, P.C.

Chemours Fayetteville Works, North Carolina

Date ¹	Total Flow (MG) ²	Calculated Captured Mass Load (lbs) ^{3,4}			
		HFPO-DA	PFMOAA	PMPA	Total of 3 Compounds ⁵
10/13/23	0.12	0.027	0.033	0.0016	0.061
10/14/23	0.13	0.030	0.036	0.0017	0.068
10/15/23	0.12	0.027	0.034	0.0016	0.063
10/16/23	0.093	0.021	0.026	0.0011	0.049
10/17/23	0.082	0.019	0.023	0.0010	0.043
11/7/23	0.084	0.014	0.018	0.0012	0.033
11/8/23	0.10	0.017	0.021	0.0014	0.039
11/9/23	0.064	0.011	0.013	0.0009	0.025
11/16/23	0.041	0.010	0.008	0.0007	0.019
11/17/23	0.068	0.017	0.014	0.0012	0.032
11/30/23	0.081	0.019	0.015	0.0019	0.035
12/1/23	0.11	0.025	0.020	0.0025	0.047
12/2/23	0.10	0.024	0.019	0.0024	0.045
12/3/23	0.10	0.023	0.016	0.0020	0.042
12/4/23	0.069	0.017	0.012	0.0015	0.030
12/19/23	0.10	0.015	0.011	0.0015	0.027
12/20/23	0.13	0.019	0.014	0.0020	0.034
12/21/23	0.14	0.021	0.016	0.0022	0.040
12/22/23	0.14	0.021	0.017	0.0023	0.041
Total	1.9	0.38	0.36	0.031	0.77

Notes:

lbs - pounds

MG - million gallons

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 details.

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 B2
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	CFR-BLADEN	CFR-KINGS	CFR-MILE-76	CFR-TARHEEL	CFR-TARHEEL	GBC-1
Field Sample ID	CAP4Q23-CFR-BLADEN-120623	CAP4Q23-CFR-KINGS-121423	CAP4Q23-CFR-RM-76-112223	CAP4Q23-TARHEEL-24-112423	CAP4Q23-CFR-TARHEEL-120623	CAP4Q23-GBC-1-112223
Sample Date	12/06/2023	12/14/2023	11/22/2023	11/24/2023	12/06/2023	11/22/2023
QA/QC						
Sample Delivery Group (SDG)	320-107896-1	320-108081-1	320-107648-1	320-107480-1	320-107896-1	320-107648-1
Lab Sample ID	320-107896-1	320-108081-1	320-107648-1	320-107480-8	320-107896-2	320-107648-2
<i>537 Mod (ng/L)</i>						
10:2 Fluorotelomer sulfonate	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0 UJ	<4.0	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
DONA	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0 UJ	<5.0	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	9.6	8.8 J	11	11	10	2.0
Perfluorobutanoic Acid	9.7	5.1 J	8.9	8.1	9.9	11
Perfluorodecane Sulfonic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	4.8	3.7 J	6.3	5.2	5.0	2.5
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	6.3	5.0 J	7.5	7.7	6.2	<2.0
Perfluorohexanoic Acid	14	11 J	17	15	14	3.3
Perfluorononanesulfonic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorononanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	13	11 J	16	16	13	9.3
Perfluorotetradecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0 UJ	<2.0	<2.0	<2.0	<2.0
PFOA	7.4	5.7 J	10	9.9	7.3	3.3
PFOS	9.9	8.9 J	12	14	9.5	<2.0

**TABLE B2
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	Lock-Dam North	Lock-Dam Seep	Lock-Dam Seep	OLDOF-1	OUTFALL 002 ¹	River Water Intake 2 ¹
Field Sample ID	CAP4Q23-LOCK-DAM-NORTH-112223	CAP4Q23-LOCK-DAM-SEEP-112223	CAP4Q23-LOCK-DAM-SEEP-112223-D	CAP4Q23-OLDOF-1-24-112323	O2431119	2R31119
Sample Date	11/22/2023	11/22/2023	11/22/2023	11/23/2023	11/20/2023	11/20/2023
QA/QC			Field Duplicate			
Sample Delivery Group (SDG)	320-107648-1	320-107648-1	320-107648-1	320-107480-1	320-107355-1	320-107355-1
Lab Sample ID	320-107648-5	320-107648-3	320-107648-4	320-107480-9	320-107355-7	320-107355-8
537 Mod (ng/L)						
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0	<2.0	--	--
11Cl-PF3OUdS	<2.0	<2.0	<2.0	<2.0	--	--
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0	<2.0	--	--
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0	<2.0	--	--
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0	<2.0	--	--
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0	<4.0	--	--
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0	<5.0	--	--
9Cl-PF3ONS	<2.0	<2.0	<2.0	<2.0	--	--
DONA	<2.0	<2.0	<2.0	<2.0	--	--
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	--	--
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	--	--
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0	<2.0	--	--
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0	<5.0	--	--
Perfluorobutane Sulfonic Acid	2.0	2.3	2.1	<2.0	--	--
Perfluorobutanoic Acid	36	52	53	<5.0	--	--
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorodecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorododecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0	<2.0	--	--
Perfluoroheptanoic Acid	6.9	29	26	<2.0	--	--
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorohexane Sulfonic Acid	<2.0	2.8	2.7	<2.0	--	--
Perfluorohexanoic Acid	9.2	11	11	<2.0	--	--
Perfluorononanesulfonic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorononanoic Acid	<2.0	2.8	2.5	<2.0	--	--
Perfluorooctadecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0	<2.0	--	--
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0	<2.0	--	--
Perfluoropentanoic Acid	84	170	170	7.1	--	--
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0	<2.0	--	--
PFOA	8.7	12	11	<2.0	--	--
PFOS	6.7	23	22	<2.0	--	--

**TABLE B2
SEEP AND SURFACE WATER OTHER PFAS ANALYTICAL RESULTS
Chemours Fayetteville Works, North Carolina**

Location ID	SEEP-C-EFF	WC-1	WC-1
Field Sample ID	CAP4Q23-SEEP-C-112323	CAP4Q23-WC-1-112323	CAP4Q23-WC-1-112323-D
Sample Date	11/23/2023	11/23/2023	11/23/2023
QA/QC			Field Duplicate
Sample Delivery Group (SDG)	320-107480-1	320-107480-1	320-107480-1
Lab Sample ID	320-107480-4	320-107480-1	320-107480-7
537 Mod (ng/L)			
10:2 Fluorotelomer sulfonate	<2.0	<2.0	<2.0
11Cl-PF3OUdS	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	<2.0	<2.0	<2.0
1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	<2.0	<2.0	<2.0
2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	<2.0	<2.0	<2.0
2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	<4.0	<4.0	<4.0
6:2 Fluorotelomer sulfonate	<5.0	<5.0	<5.0
9Cl-PF3ONS	<2.0	<2.0	<2.0
DONA	<2.0	<2.0	<2.0
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0
N-ethylperfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0
N-methyl perfluoro-1-octanesulfonamide	<2.0	<2.0	<2.0
N-Methyl Perfluorooctane Sulfonamidoacetic Acid	<5.0	<5.0	<5.0
Perfluorobutane Sulfonic Acid	<2.0	3.7	4.7
Perfluorobutanoic Acid	<5.0	<5.0	<5.0
Perfluorodecane Sulfonic Acid	<2.0	<2.0	<2.0
Perfluorodecanoic Acid	<2.0	<2.0	<2.0
Perfluorododecane Sulfonic Acid (PFDoS)	<2.0	<2.0	<2.0
Perfluorododecanoic Acid	<2.0	<2.0	<2.0
Perfluoroheptane Sulfonic Acid (PFHpS)	<2.0	<2.0	<2.0
Perfluoroheptanoic Acid	<2.0	<2.0	<2.0
Perfluorohexadecanoic Acid (PFHxDA)	<2.0	<2.0	<2.0
Perfluorohexane Sulfonic Acid	<2.0	<2.0	<2.0
Perfluorohexanoic Acid	<2.0	<2.0	2.1
Perfluorononanesulfonic Acid	<2.0	<2.0	<2.0
Perfluorononanoic Acid	<2.0	<2.0	<2.0
Perfluorooctadecanoic Acid	<2.0	<2.0	<2.0
Perfluorooctane Sulfonamide	<2.0	<2.0	<2.0
Perfluoropentane Sulfonic Acid (PFPeS)	<2.0	<2.0	<2.0
Perfluoropentanoic Acid	<2.0	3.4	4.6
Perfluorotetradecanoic Acid	<2.0	<2.0	<2.0
Perfluorotridecanoic Acid	<2.0	<2.0	<2.0
Perfluoroundecanoic Acid	<2.0	<2.0	<2.0
PFOA	<2.0	2.1	3.0
PFOS	<2.0	<2.0	<2.0

Notes:

Bold - Analyte detected above associated reporting limit

B - Analyte detected in an associated blank

EPA - Environmental Protection Agency

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

ng/L - nanograms per liter

QA/QC - Quality assurance/ quality control

< - Analyte not detected above associated reporting limit.

-- - Not measured / Not Applicable

1 - In the November 2023 sampling event, the Total Table 3+ (17 compounds) concentration of Intake River Water at Facility was greater than Outfall 002, which would result in a negative mass discharge. In addition, the Total Table 3+ (17 compounds) concentration results were several orders of magnitude higher than past quarters. As such, the sample results for Intake River Water at Facility and Outfall 002 from the HFPO-DA Sampling program collected on November 20, 2023, were used to calculate the mass discharge.

TABLE B3
FLOW SUMMARY FOR CAPE FEAR RIVER LOCATIONS
Chemours Fayetteville Works, North Carolina

Q4 2023 Quarterly Event	Pathway/ Location	Sample Collection Timepoint	Flow Gauging Location ¹	Travel Time Offset (hr) ²	Adjusted Flow Gauging Timepoint	Composite Sample 24-Hour Flow Volume (MGD) ³	Grab Sample Instantaneous Flow Rate (ft ³ /s) ⁴
November 2023	Upstream River Water and Groundwater	11/22/23 9:10	William O Huske Lock and Dam	--	11/22/23 9:10	--	1,100
	Tarheel (Grab Sample)	12/06/23 16:38	William O Huske Lock and Dam	19	12/05/23 21:45	--	793
	Tarheel (Composite Sample)	11/24/23 4:36	William O Huske Lock and Dam	7	11/23/23 21:45	1,780	--
	Bladen Bluff	12/06/23 11:25	William O Huske Lock and Dam	13	12/05/23 22:45	--	793
	Kings Bluff	12/14/23 12:15	Cape Fear River Lock and Dam #1	--	12/14/23 12:15	--	3,960

Notes:

- 1 - Flow rate measured at USGS gauging station #02105500 located at William O Huske Lock & Dam and USGS gauging station # 02105769 located at Lock and Dam #1 near Kelly, North Carolina.
- 2 - Flow rates measured at William O Huske Lock and Dam were used for mass loading assessments at Tar heel and Bladen Bluff sample locations. Travel times between William O Huske Lock and Dam and the downstream locations were estimated based on the results of a numerical model of the Cape Fear River developed by Geosyntec which developed a regression curve between the USGS reported gage heights at William O Huske Lock and Dam and travel times.
- 3 - Total flow volume for composite samples is based on measurements taken over 24-hour sample collection period.
- 4 - Instantaneous flow rate for grab samples is the recorded flow rate at the time of grab sample collection.

Acronyms:

- ft³/s - cubic feet per second
- hr - hours
- MGD - millions of gallons per day

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft³/sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in)¹
11/22/2023 0:00	680	4,578,066	1.17	0
11/22/2023 0:15	691	4,652,123	1.18	0
11/22/2023 0:30	691	4,652,123	1.18	0
11/22/2023 0:45	680	4,578,066	1.17	0
11/22/2023 1:00	680	4,578,066	1.17	0
11/22/2023 1:15	680	4,578,066	1.17	0
11/22/2023 1:30	680	4,578,066	1.17	0
11/22/2023 1:45	691	4,652,123	1.18	0
11/22/2023 2:00	691	4,652,123	1.18	0
11/22/2023 2:15	691	4,652,123	1.18	0
11/22/2023 2:30	691	4,652,123	1.18	0
11/22/2023 2:45	691	4,652,123	1.18	0
11/22/2023 3:00	691	4,652,123	1.18	0
11/22/2023 3:15	692	4,658,855	1.18	0.01
11/22/2023 3:30	704	4,739,645	1.19	0.02
11/22/2023 3:45	705	4,746,377	1.19	0.1
11/22/2023 4:00	718	4,833,899	1.2	0.09
11/22/2023 4:15	719	4,840,632	1.2	0.07
11/22/2023 4:30	732	4,928,153	1.21	0.02
11/22/2023 4:45	744	5,008,943	1.22	0
11/22/2023 5:00	745	5,015,675	1.22	0
11/22/2023 5:15	747	5,029,140	1.22	0
11/22/2023 5:30	771	5,190,719	1.24	0.01
11/22/2023 5:45	761	5,123,394	1.23	0.03
11/22/2023 6:00	785	5,284,973	1.25	0.13
11/22/2023 6:15	798	5,372,495	1.26	0.04
11/22/2023 6:30	799	5,379,228	1.26	0.01
11/22/2023 6:45	812	5,466,749	1.27	0
11/22/2023 7:00	825	5,554,271	1.28	0
11/22/2023 7:15	850	5,722,582	1.3	0.03
11/22/2023 7:30	962	6,476,617	1.39	0.21
11/22/2023 7:45	976	6,570,871	1.4	0.04
11/22/2023 8:00	990	6,665,125	1.41	0.02
11/22/2023 8:15	1000	6,732,450	1.42	0.09
11/22/2023 8:30	1040	7,001,748	1.45	0.04
11/22/2023 8:45	1060	7,136,397	1.46	0.01
11/22/2023 9:00	1090	7,338,370	1.48	0.01
11/22/2023 9:15	1100	7,405,695	1.49	0.11
11/22/2023 9:30	1150	7,742,317	1.53	0.07
11/22/2023 9:45	1180	7,944,291	1.55	0.05
11/22/2023 10:00	1200	8,078,940	1.56	0.02
11/22/2023 10:15	1230	8,280,913	1.58	0.01
11/22/2023 10:30	1250	8,415,562	1.6	0.01
11/22/2023 10:45	1300	8,752,185	1.63	0
11/22/2023 11:00	1310	8,819,509	1.64	0
11/22/2023 11:15	1360	9,156,132	1.67	0
11/22/2023 11:30	1400	9,425,430	1.7	0
11/22/2023 11:45	1430	9,627,403	1.72	0
11/22/2023 12:00	1450	9,762,052	1.73	0
11/22/2023 12:15	1460	9,829,377	1.74	0
11/22/2023 12:30	1490	10,031,350	1.76	0

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft ³ /sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in) ¹
11/22/2023 12:45	1520	10,233,324	1.78	0
11/22/2023 13:00	1560	10,502,622	1.8	0
11/22/2023 13:15	1590	10,704,595	1.82	0
11/22/2023 13:30	1630	10,973,893	1.85	0
11/22/2023 13:45	1650	11,108,543	1.86	0
11/22/2023 14:00	1670	11,243,191	1.87	0
11/22/2023 14:15	1680	11,310,516	1.88	0
11/22/2023 14:30	1700	11,445,165	1.89	0
11/22/2023 14:45	1730	11,647,138	1.91	0
11/22/2023 15:00	1770	11,916,436	1.93	0
11/22/2023 15:15	1800	12,118,410	1.95	0
11/22/2023 15:30	1820	12,253,059	1.96	0
11/22/2023 15:45	1830	12,320,383	1.97	0
11/22/2023 16:00	1850	12,455,033	1.98	0
11/22/2023 16:15	1880	12,657,006	2	0
11/22/2023 16:30	1900	12,791,655	2.01	0
11/22/2023 16:45	1920	12,926,304	2.02	0
11/22/2023 17:00	1940	13,060,953	2.03	0
11/22/2023 17:15	1960	13,195,602	2.04	0
11/22/2023 17:30	1980	13,330,251	2.05	0.01
11/22/2023 17:45	2010	13,532,224	2.07	0
11/22/2023 18:00	2010	13,532,224	2.07	0
11/22/2023 18:15	2030	13,666,874	2.08	0
11/22/2023 18:30	2050	13,801,522	2.09	0
11/22/2023 18:45	2070	13,936,171	2.1	0
11/22/2023 19:00	2100	14,138,145	2.12	0
11/22/2023 19:15	2120	14,272,794	2.13	0
11/22/2023 19:30	2160	14,542,092	2.15	0
11/22/2023 19:45	2140	14,407,443	2.14	0
11/22/2023 20:00	2160	14,542,092	2.15	0
11/22/2023 20:15	2180	14,676,741	2.16	0
11/22/2023 20:30	2200	14,811,390	2.17	0
11/22/2023 20:45	2200	14,811,390	2.17	0
11/22/2023 21:00	2220	14,946,039	2.18	0
11/22/2023 21:15	2240	15,080,688	2.19	0
11/22/2023 21:30	2240	15,080,688	2.19	0
11/22/2023 21:45	2240	15,080,688	2.19	0
11/22/2023 22:00	2280	15,349,986	2.21	0
11/22/2023 22:15	2300	15,484,635	2.22	0
11/22/2023 22:30	2310	15,551,959	2.23	0
11/22/2023 22:45	2320	15,619,284	2.23	0
11/22/2023 23:00	2330	15,686,608	2.24	0
11/22/2023 23:15	2340	15,753,933	2.24	0
11/22/2023 23:30	2360	15,888,582	2.25	0
11/22/2023 23:45	2370	15,955,906	2.26	0
11/23/2023 0:00	2390	16,090,555	2.27	0
11/23/2023 0:15	2400	16,157,880	2.27	0
11/23/2023 0:30	2410	16,225,204	2.28	0
11/23/2023 0:45	2430	16,359,853	2.29	0
11/23/2023 1:00	2450	16,494,503	2.3	0
11/23/2023 1:15	2470	16,629,151	2.31	0

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft³/sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in)¹
11/23/2023 1:30	2470	16,629,151	2.31	0
11/23/2023 1:45	2490	16,763,801	2.32	0
11/23/2023 2:00	2510	16,898,449	2.33	0
11/23/2023 2:15	2530	17,033,098	2.34	0
11/23/2023 2:30	2550	17,167,748	2.35	0
11/23/2023 2:45	2570	17,302,396	2.36	0
11/23/2023 3:00	2570	17,302,396	2.36	0
11/23/2023 3:15	2590	17,437,046	2.37	0
11/23/2023 3:30	2590	17,437,045	2.37	0
11/23/2023 3:45	2630	17,706,343	2.39	0
11/23/2023 4:00	2650	17,840,993	2.4	0
11/23/2023 4:15	2650	17,840,992	2.4	0
11/23/2023 4:30	2670	17,975,641	2.41	0
11/23/2023 4:45	2690	18,110,291	2.42	0
11/23/2023 5:00	2690	18,110,290	2.42	0
11/23/2023 5:15	2710	18,244,939	2.43	0
11/23/2023 5:30	2730	18,379,589	2.44	0
11/23/2023 5:45	2730	18,379,588	2.44	0
11/23/2023 6:00	2750	18,514,237	2.45	0
11/23/2023 6:15	2770	18,648,887	2.46	0
11/23/2023 6:30	2770	18,648,886	2.46	0
11/23/2023 6:45	2790	18,783,535	2.47	0
11/23/2023 7:00	2800	18,850,860	2.47	0
11/23/2023 7:15	2810	18,918,184	2.48	0
11/23/2023 7:30	2830	19,052,833	2.49	0
11/23/2023 7:45	2840	19,120,158	2.49	0
11/23/2023 8:00	2860	19,254,807	2.5	0
11/23/2023 8:15	2860	19,254,807	2.5	0
11/23/2023 8:30	2860	19,254,807	2.5	0
11/23/2023 8:45	2880	19,389,456	2.51	0
11/23/2023 9:00	2900	19,524,105	2.52	0
11/23/2023 9:15	2900	19,524,105	2.52	0
11/23/2023 9:30	2920	19,658,754	2.53	0
11/23/2023 9:45	2920	19,658,754	2.53	0
11/23/2023 10:00	2920	19,658,754	2.53	0
11/23/2023 10:15	2940	19,793,403	2.54	0
11/23/2023 10:30	2940	19,793,403	2.54	0
11/23/2023 10:45	2950	19,860,728	2.54	0
11/23/2023 11:00	2950	19,860,727	2.54	0
11/23/2023 11:15	2970	19,995,376	2.55	0
11/23/2023 11:30	2950	19,860,728	2.54	0
11/23/2023 11:45	2950	19,860,727	2.54	0
11/23/2023 12:00	2950	19,860,727	2.54	0
11/23/2023 12:15	2950	19,860,728	2.54	0
11/23/2023 12:30	2970	19,995,376	2.55	0
11/23/2023 12:45	2950	19,860,727	2.54	0
11/23/2023 13:00	2970	19,995,377	2.55	0
11/23/2023 13:15	2970	19,995,376	2.55	0
11/23/2023 13:30	2950	19,860,727	2.54	0
11/23/2023 13:45	2950	19,860,728	2.54	0
11/23/2023 14:00	2950	19,860,727	2.54	0

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft³/sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in)¹
11/23/2023 14:15	2950	19,860,727	2.54	0
11/23/2023 14:30	2970	19,995,377	2.55	0
11/23/2023 14:45	2950	19,860,727	2.54	0
11/23/2023 15:00	2950	19,860,727	2.54	0
11/23/2023 15:15	2950	19,860,728	2.54	0
11/23/2023 15:30	2930	19,726,078	2.53	0
11/23/2023 15:45	2930	19,726,078	2.53	0
11/23/2023 16:00	2930	19,726,079	2.53	0
11/23/2023 16:15	2920	19,658,754	2.52	0
11/23/2023 16:30	2920	19,658,754	2.52	0
11/23/2023 16:45	2920	19,658,754	2.52	0
11/23/2023 17:00	2920	19,658,754	2.52	0
11/23/2023 17:15	2920	19,658,754	2.52	0
11/23/2023 17:30	2900	19,524,105	2.51	0
11/23/2023 17:45	2900	19,524,105	2.51	0
11/23/2023 18:00	2880	19,389,456	2.5	0
11/23/2023 18:15	2880	19,389,456	2.5	0
11/23/2023 18:30	2860	19,254,807	2.49	0
11/23/2023 18:45	2860	19,254,807	2.49	0
11/23/2023 19:00	2840	19,120,158	2.48	0
11/23/2023 19:15	2840	19,120,158	2.48	0
11/23/2023 19:30	2840	19,120,158	2.48	0
11/23/2023 19:45	2820	18,985,509	2.47	0
11/23/2023 20:00	2820	18,985,509	2.47	0
11/23/2023 20:15	2810	18,918,184	2.46	0
11/23/2023 20:30	2810	18,918,185	2.46	0
11/23/2023 20:45	2790	18,783,535	2.45	0
11/23/2023 21:00	2790	18,783,535	2.45	0
11/23/2023 21:15	2770	18,648,887	2.44	0
11/23/2023 21:30	2770	18,648,886	2.44	0
11/23/2023 21:45	2750	18,514,237	2.43	0
11/23/2023 22:00	2750	18,514,238	2.43	0
11/23/2023 22:15	2730	18,379,588	2.42	0
11/23/2023 22:30	2730	18,379,588	2.42	0
11/23/2023 22:45	2720	18,312,264	2.41	0
11/23/2023 23:00	2700	18,177,615	2.4	0
11/23/2023 23:15	2700	18,177,615	2.4	0
11/23/2023 23:30	2680	18,042,966	2.39	0
11/23/2023 23:45	2680	18,042,966	2.39	0
12/6/2023 0:00	793	5,338,833	1.13	0
12/6/2023 0:15	805	5,419,622	1.14	0
12/6/2023 0:30	805	5,419,622	1.14	0
12/6/2023 0:45	805	5,419,622	1.14	0
12/6/2023 1:00	805	5,419,622	1.14	0
12/6/2023 1:15	817	5,500,412	1.15	0
12/6/2023 1:30	805	5,419,622	1.14	0
12/6/2023 1:45	805	5,419,622	1.14	0
12/6/2023 2:00	805	5,419,622	1.14	0
12/6/2023 2:15	805	5,419,622	1.14	0
12/6/2023 2:30	805	5,419,622	1.14	0
12/6/2023 2:45	805	5,419,622	1.14	0

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft³/sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in)¹
12/6/2023 3:00	793	5,338,833	1.13	0
12/6/2023 3:15	805	5,419,622	1.14	0
12/6/2023 3:30	805	5,419,622	1.14	0
12/6/2023 3:45	805	5,419,622	1.14	0
12/6/2023 4:00	817	5,500,412	1.15	0
12/6/2023 4:15	805	5,419,622	1.14	0
12/6/2023 4:30	805	5,419,622	1.14	0
12/6/2023 4:45	805	5,419,622	1.14	0
12/6/2023 5:00	805	5,419,622	1.14	0
12/6/2023 5:15	805	5,419,622	1.14	0
12/6/2023 5:30	805	5,419,622	1.14	0
12/6/2023 5:45	805	5,419,622	1.14	0
12/6/2023 6:00	805	5,419,622	1.14	0
12/6/2023 6:15	805	5,419,622	1.14	0
12/6/2023 6:30	805	5,419,622	1.14	0
12/6/2023 6:45	805	5,419,622	1.14	0
12/6/2023 7:00	805	5,419,622	1.14	0
12/6/2023 7:15	805	5,419,622	1.14	0
12/6/2023 7:30	817	5,500,412	1.15	0
12/6/2023 7:45	805	5,419,622	1.14	0
12/6/2023 8:00	805	5,419,622	1.14	0
12/6/2023 8:15	805	5,419,622	1.14	0
12/6/2023 8:30	805	5,419,622	1.14	0
12/6/2023 8:45	805	5,419,622	1.14	0
12/6/2023 9:00	805	5,419,622	1.14	0
12/6/2023 9:15	805	5,419,622	1.14	0
12/6/2023 9:30	805	5,419,622	1.14	0
12/6/2023 9:45	829	5,581,201	1.16	0
12/6/2023 10:00	841	5,661,990	1.17	0
12/6/2023 10:15	829	5,581,201	1.16	0
12/6/2023 10:30	841	5,661,990	1.17	0
12/6/2023 10:45	817	5,500,412	1.15	0
12/6/2023 11:00	865	5,823,569	1.19	0
12/6/2023 11:15	853	5,742,780	1.18	0
12/6/2023 11:30	865	5,823,569	1.19	0
12/6/2023 11:45	889	5,985,148	1.21	0
12/6/2023 12:00	877	5,904,359	1.2	0
12/6/2023 12:15	877	5,904,359	1.2	0
12/6/2023 12:30	865	5,823,569	1.19	0
12/6/2023 12:45	889	5,985,148	1.21	0
12/6/2023 13:00	865	5,823,569	1.19	0
12/6/2023 13:15	853	5,742,780	1.18	0
12/6/2023 13:30	865	5,823,569	1.19	0
12/6/2023 13:45	853	5,742,780	1.18	0
12/6/2023 14:00	829	5,581,201	1.16	0
12/6/2023 14:15	829	5,581,201	1.16	0
12/6/2023 14:30	829	5,581,201	1.16	0
12/6/2023 14:45	829	5,581,201	1.16	0
12/6/2023 15:00	829	5,581,201	1.16	0
12/6/2023 15:15	865	5,823,569	1.19	0
12/6/2023 15:30	829	5,581,201	1.16	0

TABLE B4
FLOW DATA FOR W.O'HUSKE LOCK NR TAR HEEL, NC
Chemours Fayetteville Works, North Carolina

Date and Time	Flow Rate (ft ³ /sec)	Flow Volume (gal)	Gage Height (ft)	Precipitation (in) ¹
12/6/2023 15:45	805	5,419,622	1.14	0
12/6/2023 16:00	817	5,500,412	1.15	0
12/6/2023 16:15	805	5,419,622	1.14	0
12/6/2023 16:30	793	5,338,833	1.13	0
12/6/2023 16:45	793	5,338,833	1.13	0
12/6/2023 17:00	793	5,338,833	1.13	0
12/6/2023 17:15	805	5,419,622	1.14	0
12/6/2023 17:30	793	5,338,833	1.13	0
12/6/2023 17:45	793	5,338,833	1.13	0
12/6/2023 18:00	782	5,264,776	1.12	0
12/6/2023 18:15	793	5,338,833	1.13	0
12/6/2023 18:30	793	5,338,833	1.13	0
12/6/2023 18:45	793	5,338,833	1.13	0
12/6/2023 19:00	793	5,338,833	1.13	0
12/6/2023 19:15	793	5,338,833	1.13	0
12/6/2023 19:30	793	5,338,833	1.13	0
12/6/2023 19:45	793	5,338,833	1.13	0
12/6/2023 20:00	793	5,338,833	1.13	0
12/6/2023 20:15	793	5,338,833	1.13	0
12/6/2023 20:30	793	5,338,833	1.13	0
12/6/2023 20:45	793	5,338,833	1.13	0
12/6/2023 21:00	793	5,338,833	1.13	0
12/6/2023 21:15	793	5,338,833	1.13	0
12/6/2023 21:30	793	5,338,833	1.13	0
12/6/2023 21:45	793	5,338,833	1.13	0
12/6/2023 22:00	793	5,338,833	1.13	0
12/6/2023 22:15	793	5,338,833	1.13	0
12/6/2023 22:30	793	5,338,833	1.13	0
12/6/2023 22:45	793	5,338,833	1.13	0
12/6/2023 23:00	793	5,338,833	1.13	0
12/6/2023 23:15	793	5,338,833	1.13	0
12/6/2023 23:30	793	5,338,833	1.13	0
12/6/2023 23:45	805	5,419,622	1.14	0

Notes

Measurements are recorded from the USGS flow gauging station at the W.O. Huske Dam, ID 02105500 (USGS, 2021).

1 - The minimum value recorded by a USGS raingage is 0.01 inches. Anything detected below this threshold is recorded as zero inches.

ft³/sec - cubic feet per second

ft - feet

gal - gallons

in - inches

USGS - United States Geological Survey

TABLE B5
FLOW DATA FOR LOCK #1 NR KELLY, NC
Chemours Fayetteville Works, North Carolina

Date	Time	Discharge (cubic ft/sec)	Seconds	Volume (gal)
12/14/2023	0:00	3830	900	25,785,283
12/14/2023	0:15	3830	900	25,785,284
12/14/2023	0:30	3860	900	25,987,257
12/14/2023	0:45	3860	900	25,987,257
12/14/2023	1:00	3860	900	25,987,257
12/14/2023	1:15	3860	900	25,987,257
12/14/2023	1:30	3880	900	26,121,906
12/14/2023	1:45	3880	900	26,121,906
12/14/2023	2:00	3910	900	26,323,879
12/14/2023	2:15	3910	900	26,323,879
12/14/2023	2:30	3910	900	26,323,880
12/14/2023	2:45	3930	900	26,458,528
12/14/2023	3:00	3960	900	26,660,502
12/14/2023	3:15	3960	900	26,660,502
12/14/2023	3:30	3930	900	26,458,528
12/14/2023	3:45	3960	900	26,660,502
12/14/2023	4:00	3960	900	26,660,502
12/14/2023	4:15	3960	900	26,660,502
12/14/2023	4:30	3960	900	26,660,502
12/14/2023	4:45	3960	900	26,660,502
12/14/2023	5:00	3980	900	26,795,151
12/14/2023	5:15	3980	900	26,795,151
12/14/2023	5:30	4000	900	26,929,800
12/14/2023	5:45	4000	900	26,929,800
12/14/2023	6:00	4000	900	26,929,800
12/14/2023	6:15	4000	900	26,929,800
12/14/2023	6:30	4000	900	26,929,800
12/14/2023	6:45	4000	900	26,929,800
12/14/2023	7:00	4000	900	26,929,800
12/14/2023	7:15	3980	900	26,795,151
12/14/2023	7:30	4000	900	26,929,800
12/14/2023	7:45	4000	900	26,929,800
12/14/2023	8:00	4000	900	26,929,800
12/14/2023	8:15	4000	900	26,929,800
12/14/2023	8:30	4000	900	26,929,800
12/14/2023	8:45	4000	900	26,929,800
12/14/2023	9:00	3980	900	26,795,151
12/14/2023	9:15	4000	900	26,929,800
12/14/2023	9:30	4000	900	26,929,800
12/14/2023	9:45	4000	900	26,929,800
12/14/2023	10:00	3980	900	26,795,151
12/14/2023	10:15	4000	900	26,929,800
12/14/2023	10:30	3980	900	26,795,151
12/14/2023	10:45	3980	900	26,795,151
12/14/2023	11:00	3980	900	26,795,151
12/14/2023	11:15	3980	900	26,795,151
12/14/2023	11:30	4000	900	26,929,800
12/14/2023	11:45	3980	900	26,795,151
12/14/2023	12:00	3960	900	26,660,502
12/14/2023	12:15	3960	900	26,660,502
12/14/2023	12:30	3960	900	26,660,502

TABLE B5
FLOW DATA FOR LOCK #1 NR KELLY, NC
Chemours Fayetteville Works, North Carolina

Date	Time	Discharge (cubic ft/sec)	Seconds	Volume (gal)
12/14/2023	12:45	3980	900	26,795,151
12/14/2023	13:00	3930	900	26,458,529
12/14/2023	13:15	3960	900	26,660,502
12/14/2023	13:30	3930	900	26,458,528
12/14/2023	13:45	3910	900	26,323,880
12/14/2023	14:00	3930	900	26,458,528
12/14/2023	14:15	3930	900	26,458,528
12/14/2023	14:30	3930	900	26,458,529
12/14/2023	14:45	3880	900	26,121,906
12/14/2023	15:00	3880	900	26,121,906
12/14/2023	15:15	3860	900	25,987,257
12/14/2023	15:30	3880	900	26,121,906
12/14/2023	15:45	3880	900	26,121,906
12/14/2023	16:00	3860	900	25,987,257
12/14/2023	16:15	3860	900	25,987,257
12/14/2023	16:30	3860	900	25,987,257
12/14/2023	16:45	3830	900	25,785,284
12/14/2023	17:00	3830	900	25,785,283
12/14/2023	17:15	3810	900	25,650,634
12/14/2023	17:30	3810	900	25,650,635
12/14/2023	17:45	3780	900	25,448,661
12/14/2023	18:00	3780	900	25,448,661
12/14/2023	18:15	3760	900	25,314,012
12/14/2023	18:30	3760	900	25,314,012
12/14/2023	18:45	3760	900	25,314,012
12/14/2023	19:00	3760	900	25,314,012
12/14/2023	19:15	3760	900	25,314,012
12/14/2023	19:30	3740	900	25,179,363
12/14/2023	19:45	3710	900	24,977,390
12/14/2023	20:00	3710	900	24,977,389
12/14/2023	20:15	3710	900	24,977,389
12/14/2023	20:30	3690	900	24,842,741
12/14/2023	20:45	3660	900	24,640,767
12/14/2023	21:00	3660	900	24,640,767
12/14/2023	21:15	3660	900	24,640,767
12/14/2023	21:30	3640	900	24,506,118
12/14/2023	21:45	3640	900	24,506,118
12/14/2023	22:00	3640	900	24,506,118
12/14/2023	22:15	3620	900	24,371,469
12/14/2023	22:30	3590	900	24,169,495
12/14/2023	22:45	3590	900	24,169,496
12/14/2023	23:00	3570	900	24,034,846
12/14/2023	23:15	3570	900	24,034,846
12/14/2023	23:30	3550	900	23,900,198
12/14/2023	23:45	3520	900	23,698,224

Notes

Measurements are recorded from the USGS flow gauging station at Lock #1 near Kelly, ID 02105769 (USGS, 2021).

ft³/sec - cubic feet per second

ft - feet

gal - gallons

USGS - United States Geological Survey

TABLE B6
TABLE 3+ PFAS MASS DISCHARGE AT DOWNSTREAM LOCATIONS
Chemours Fayetteville Works, North Carolina

Pathway Number	--	--	--	--
Pathway Name	Tar Heel Ferry Road Bridge ^{1,2}	Tar Heel Ferry Road Bridge ¹	Bladen Bluff ²	Kings Bluff ²
Flow (MG)	--	1,780	--	--
Instantaneous Flow (ft ³ /sec)	793	--	793	3,960
Program	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23	CAP SW Sampling 4Q23
Location ID	CFR-TARHEEL	CFR-TARHEEL	CFR-BLADEN	CFR-KINGS
Field Sample ID	CAP4Q23-CFR-TARHEEL-120623	CAP4Q23-TARHEEL-24-112423	CAP4Q23-CFR-BLADEN-120623	CAP4Q23-CFR-KINGS-121423
Sample Date and Time ¹	12/6/2023	11/24/2023	12/6/2023	12/14/2023
Sample Delivery Group (SDG)	320-107896-1	320-107480-1	320-107896-1	320-108081-1
Lab Sample ID	320-107896-2	320-107480-8	320-107896-1	320-108081-1
Sample Type	Grab	Composite	Grab	Grab
Table 3+ Mass Discharge³ (mg/s)				
HFPO-DA	0.17	0.62	0.17	0.78
PFMOAA	0.40	0.86	0.45	1.23
PFO2HxA	0.20	0.76	0.20	1.10
PFO3OA	0.05	0.19	0.06	0.36
PFO4DA	ND	ND	ND	ND
PFO5DA	ND	ND	ND	ND
PMPA	0.25	0.94	0.25	1.46
PEPA	ND	0.21	0.049	ND
PS Acid	ND	ND	ND	ND
Hydro-PS Acid	ND	ND	ND	ND
R-PSDA	0.07	0.16	0.07	1.68
Hydrolyzed PSDA	0.06	ND	0.07	0.52
R-PSDCA	ND	ND	ND	ND
NVHOS, Acid Form	ND	ND	ND	ND
EVE Acid	ND	ND	ND	ND
Hydro-EVE Acid	ND	ND	ND	ND
R-EVE	ND	ND	0.04	3.14
PES	ND	ND	ND	ND
PFECA B	ND	ND	ND	ND
PFECA-G	ND	ND	ND	ND
PFPrA	0.72	1.95	0.696	3.140
Total Attachment C Mass Discharge^{4,5}	1.08	3.59	1.17	4.93
Total Table 3+ Mass Discharge (17 compounds)^{4,6}	1.08	3.59	1.17	4.93
Total Table 3+ Mass Discharge (18 compounds)^{4,7}	1.80	5.54	1.86	8.07
Total Table 3+ Mass Discharge (21 compounds)⁴	1.93	5.69	2.04	13.46

Notes:

- 1 - A paired composite sample was collected at Tar Heel Ferry Road Bridge on July 27, 2023.
- 2 - Mass discharge values for grab samples collected at Tar Heel Ferry Road Bridge, Bladen Bluff, and Kings Bluff are determined based on instantaneous flow rates.
- 3 - Mass discharge by analyte is calculated based on Table 3+ concentrations in Table 3, and 24-hour flow volumes reported in Table B5.
- 4 - Total PFAS mass discharge is based on the summed Total PFAS concentrations reported in Table 3, which are rounded to two significant figures.
- 5 - Total Attachment C does not include Perfluoroheptanoic acid (PFHpA).
- 6 - Total Table 3+ (17 compounds) does not include Perfluoroheptanoic acid (PFHpA), R-PSDA, Hydrolyzed PSDA, R-EVE, and PFPrA.
- 7 - Total Table 3+ (18 compounds) does not include Perfluoroheptanoic acid (PFHpA), R-PSDA, Hydrolyzed PSDA, and R-EVE.

Bold - Analyte detected above associated reporting limit

SOP - Standard Operating Procedure

mg/s - milligrams per second

ND - Analyte not detected above associated reporting limit.

Appendix C

Field Forms

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

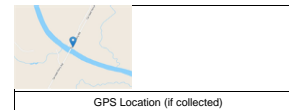
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-100223	10-02-2023	23:01	10-02-2023	12:10	7.60	7.60	99.80	7.98	219.90	28.42	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

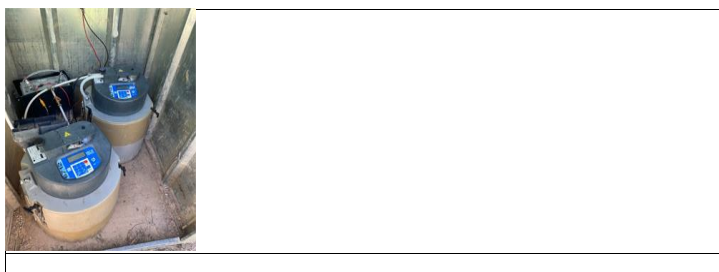
WEATHER CONDITIONS	
Temperature (F):	78.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	8

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

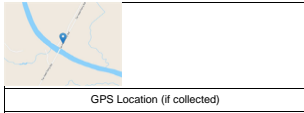
Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-100523	10-05-2023	23:01	10-06-2023	11:13	7.53	7.90	45.50	38.90	264.81	24.16	Clear with particulates	No	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

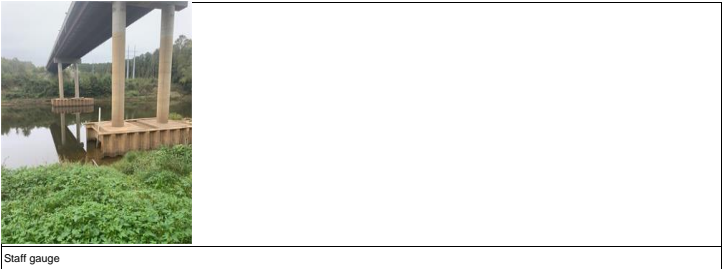
WEATHER CONDITIONS	
Temperature (F):	71.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	3

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
--		0	--	--	--	--	--	--	--	--	--	--	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	62.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-101023	10/10/2023	23:01	10-10-2023	09:50	7.89	8.04	16.20	15.50	250.23	18.82	Clear	No	DUP/MS/MSD

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	8

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:

SURFACE WATER SAMPLING RECORD

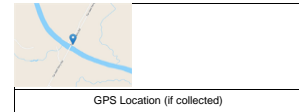
Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-101223	10-12-2023	23:01	10-13-2023	09:51	7.73	7.30	73.80	25.10	358.34	18.65	Clear	No	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	61.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	4

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

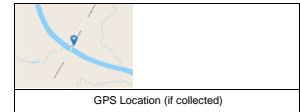
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-102623	10-26-2023	23:01	10-17-2023	11:00	7.76	7.88	30.00	6.86	381.17	17.55	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	59.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	S

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



Staff Gauge



ISCO setup

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

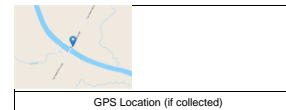
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-101923	10-19-2023	23:01	10-20-2023	09:58	7.61	8.43	36.50	7.46	295.65	17.29	Clear	None	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	62.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

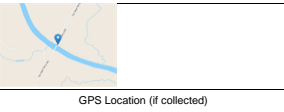
Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-102323	10-23-2023	23:01	10-24-2023	15:30	7.12	8.29	101.40	84.35	357.85	22.05	Cloudy	No	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	72.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	4

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Chemours Fayetteville Location ID: CFR-TARHEEL Project Manager: Tracy Ovbey
 Samplers: DEBORAH AYERS|SAIRA BOHAM Sampling Event: Weekly River Event Type: Sampling
 Date: 10-27-2023 Time: 09:05

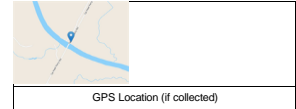
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-102623	10-26-2023	23:01	10-27-2023	09:11	8.09	8.47	-8.60	8.61	240.42	17.71	Clear	No	--

Sampling Data

Sampling Method: ISCO Composite Multi Meter Used: In Situ Aqua Troll
 ISCO Start Date and Time: 10-26-2023 00:01 Multi Meter ID: 706720
 ISCO End Date and Time: 10-26-2023 23:01

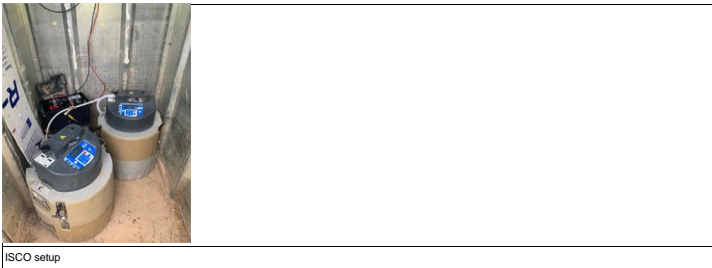
WEATHER CONDITIONS	
Temperature (F):	56.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	0

Latitude: 34.7449741826294
 Longitude: -78.785134716176
 Staff Gauge Water Level Reading (ft): 0.5
 Temperature Reading (degrees C): 16
 Rain Reading (mm): 0



General Comment: Collected CFR-TARHEEL-24-102423, CFR-TARHEEL-24-102523, CFR-TARHEEL-24-102623; no errors

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-103023	10-30-2023	23:01	10-31-2023	10:15	8.05	7.99	1.70	8.50	328.62	18.11	Clear	None	--

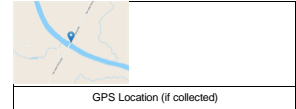
Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	58.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	11

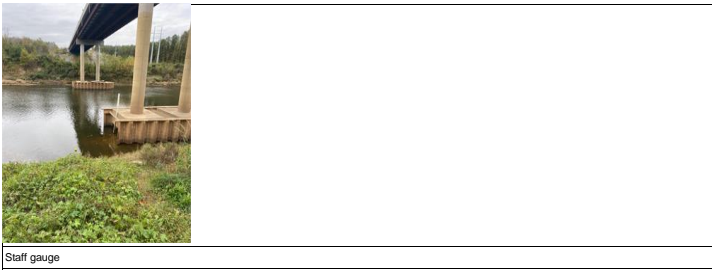
ARHEEL-24-102823, CFR-TARHEEL-24-103023
 Longitude:

 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

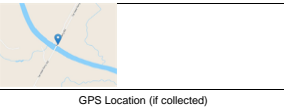
Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-110223	11-02-2023	23:01	11-03-2023	09:13	8.04	10.44	41.20	5.94	358.81	8.55	Clear	No odor	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	37.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-110623	11-06-2023	23:01	11-07-2023	10:30	7.79	0.00	49.60	6.28	729720.00	20.27	Clear	No	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

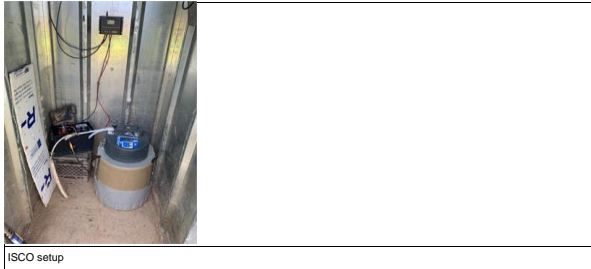
WEATHER CONDITIONS	
Temperature (F):	67.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	8

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-110923	11-09-2023	23:01	11-14-2023	09:08	7.79	8.61	2.20	3.96	361.96	17.39	Clear	None	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	56.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



GPS Location (if collected)

General Comment:

Sampling Comments:



Staff gauge

SURFACE WATER SAMPLING RECORD

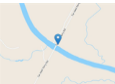
Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-111323	11-13-2023	23:01	11-14-2023	09:19	7.79	8.61	2.20	3.96	361.96	17.39	Clear	None	DDP[MS]M SN

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	50.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



GPS Location (if collected)

General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-111623	11-16-2023	23:01	11-17-2023	10:01	7.88	7.89	-14.30	4.59	420.60	21.37	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	65.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



GPS Location (if collected)

General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

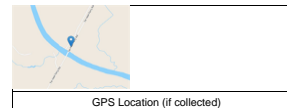
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-112023	11-20-2023	23:01	11-21-2023	10:05	7.84	8.53	-20.10	7.03	990.40	18.99	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

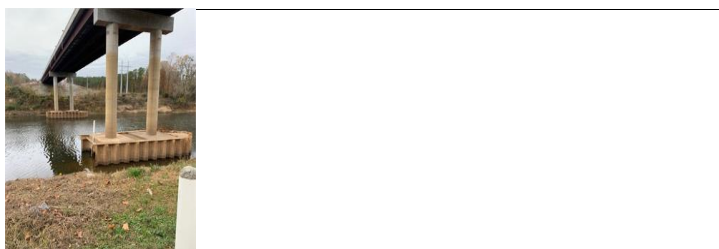
WEATHER CONDITIONS	
Temperature (F):	54.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	5

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



Staff gauge



ISCO setup

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-112123	11-21-2023	23:01	11-22-2023	13:08	7.53	9.63	96.70	20.45	347.53	17.63	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):

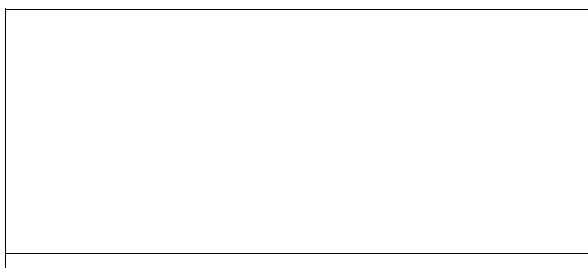


General Comment:

Sampling Comments:



ISCO setup



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-112723	11-27-2023	23:01	11-28-2023	08:41	8.17	9.44	-13.10	7.08	365.61	9.66	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

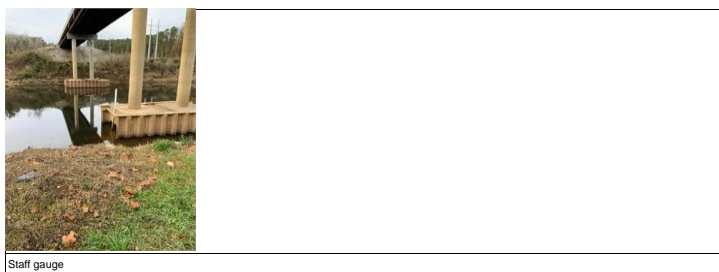
WEATHER CONDITIONS	
Temperature (F):	36.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-113023	11-30-2023	23:01	12-01-2023	14:08	7.74	8.71	26.80	6.50	195.33	15.58	Clear	None	--

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

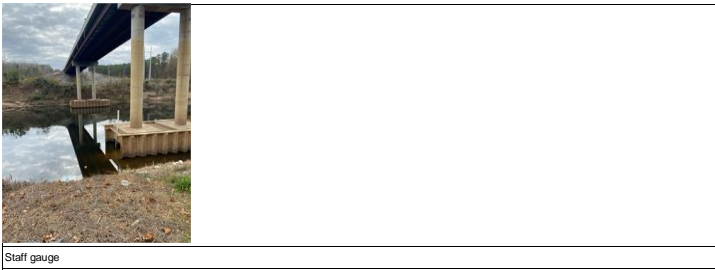
WEATHER CONDITIONS	
Temperature (F):	66.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	8

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

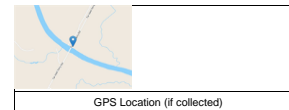
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-120423	23-04-2023	23:01	12-05-2023	10:50	7.55	8.16	54.90	6.15	228.41	15.99	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

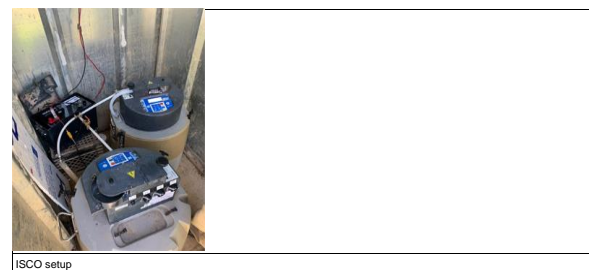
WEATHER CONDITIONS	
Temperature (F):	52.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	0

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

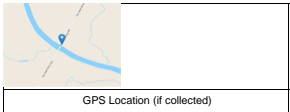
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-120723	12-07-2023	23:01	12-08-2023	08:50	6.90	9.58	80.20	5.79	218.71	10.98	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

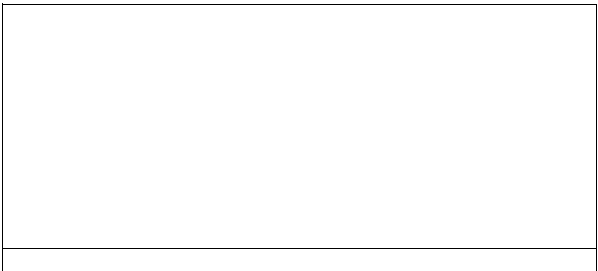
WEATHER CONDITIONS	
Temperature (F):	42.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	47.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-121123	12-11-2023	23:01	12-12-2023	09:36	7.69	9.74	44.80	8.56	204.48	11.27	Clear	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

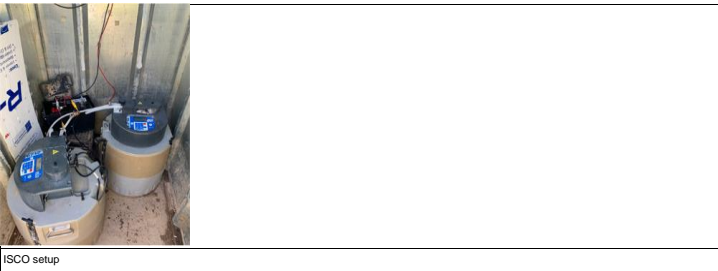
WEATHER CONDITIONS	
Temperature (F):	37.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-121223	12-12-2023	23:01	12-13-2023	09:03	7.32	9.66	53.80	33.00	197.71	10.90	Clear	No	DUP MS MSD

Sampling Data
 Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

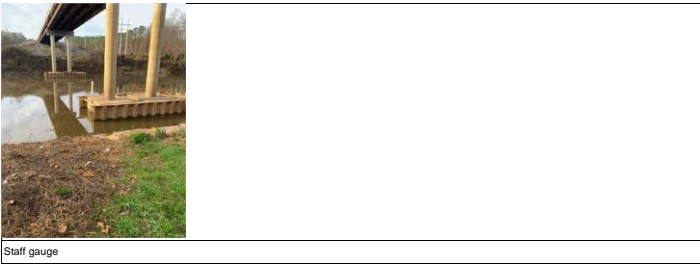
WEATHER CONDITIONS	
Temperature (F):	34.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	0

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-121423	12-14-2023	23:01	12-15-2023	09:38	7.32	9.66	53.80	20.30	197.71	10.90	Clear with particulates	No	--

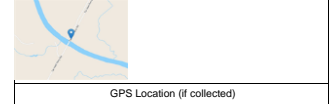
Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS

Temperature (F):	41.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

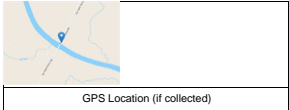
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-121823	12/18/2023	10:17	12-18-2023	10:19	7.59	9.06	104.90	184.00	162.88	15.10	Murky	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

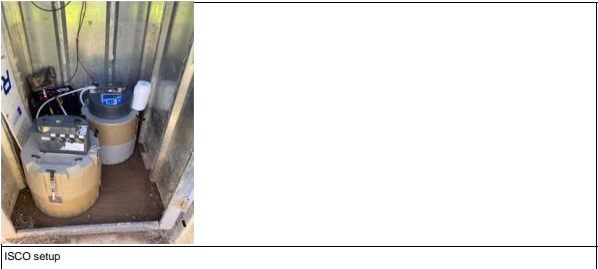
WEATHER CONDITIONS	
Temperature (F):	53.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	13

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

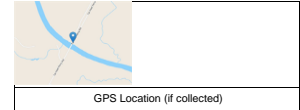
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-121923	12-19-2023	09:50	12-19-2023	09:50	7.25	9.43	44.30	154.00	113.61	10.26	Murky	None	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	36.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	11

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



Staff gauge under water

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-122023	12-20-2023	09:40	12-20-2023	09:40	7.07	10.25	126.70	331.00	85.46	8.29	Murky	None	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	33.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



GPS Location (if collected)

General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-122123	12-21-2023	10:05	12-21-2023	10:05	7.36	9.66	107.80	207.00	117.76	10.73	Murky	None	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

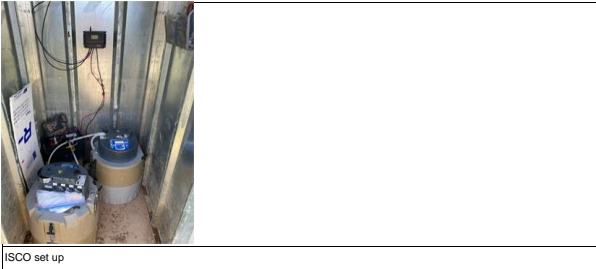
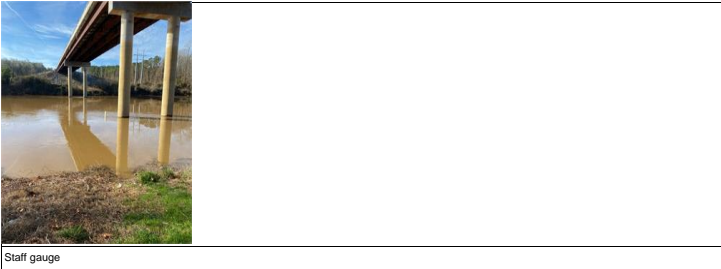
WEATHER CONDITIONS	
Temperature (F):	40.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	2

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-122523	12-25-2023	23:01	12-26-2023	12:25	7.37	8.26	39.10	46.50	153.31	16.31	Cloudy	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	68.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	11

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



Staff gauge



ISCO setup

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

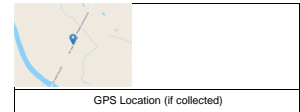
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-24-122723	12-27-2023	23:01	12-28-2023	11:37	7.79	9.14	39.00	105.00	102.86	12.94	Cloudy	No	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	52.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	9

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

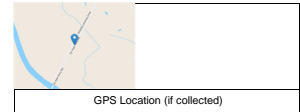
Spl ID	Spl Date	Time	Parameters		pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
			Date	Time									
CFR-TARHEEL-122923	12-29-2023	11:13	12-29-2023	11:13	7.79	8.38	20.60	164.00	318.32	13.69	Cloudy	No	-

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	50.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:
 Staff Gauge Water Level Reading (ft):
 Temperature Reading (degrees C):
 Rain Reading (mm):



General Comment:

Sampling Comments:



SURFACE WATER SAMPLING RECORD

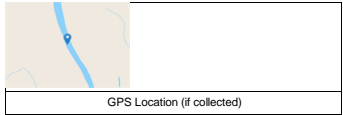
Site Name: Chemours Fayetteville Location ID: CFR-BLADEN Project Manager: Tracy Ovbey
 Samplers: BRANDON WEIDNER; DEBORAH AYERS; SAIRA BOHAMI Sampling Event: Quarterly CAP Event Type: Sampling
 Date: 12-06-2023 Time: 10:59

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-CFR-BLADEN-120623	12-06-2023	11:25	6.54	11.29	180.60	4.93	156.76	11.86	Clear	None	--

Sampling Data
 Sampling Method: Peri Pump Grab Tubing Depth (ft): 6.15 Distance to River Right: 17
 Sampling Location: Thalweg Multi Meter Used: Insitu Aqua Troll Distance to River Left: 53
 Total Depth to Bottom of Channel (ft): 13.2 Multi Meter ID: 706682 Distance to River (Right/Left) Units: m

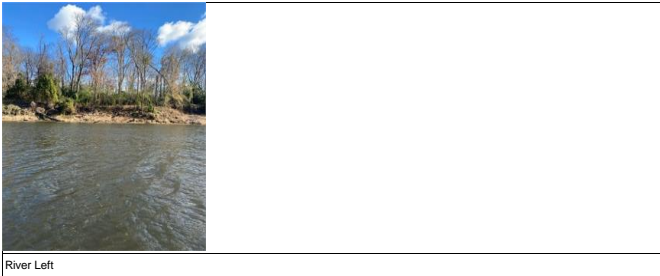
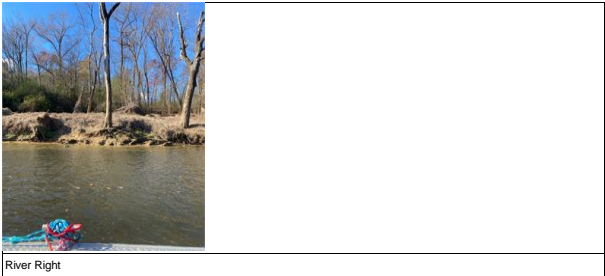
WEATHER CONDITIONS	
Temperature (F):	50.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	14

Latitude: 34.7726629506369
 Longitude: -78.7984264217339



General Comments:

Sample Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-CFR-KINGS-121423	12-14-2023	12:15	7.27	9.46	43.10	7.96	204.66	11.84	Clear with particulates	No	--

Sampling Data

Sampling Method: Tubing Depth (ft): Distance to River Right:
 Sampling Location: Multi Meter Used: Distance to River Left:
 Total Depth to Bottom of Channel (ft): Multi Meter ID: Distance to River (Right/Left) Units:

WEATHER CONDITIONS

Temperature (F):	<input type="text" value="50.00"/>
Sky:	<input type="text" value="Sunny"/>
Precipitation:	<input type="text" value="None"/>
Wind (mph)	<input type="text" value="11"/>

Latitude:
 Longitude:



GPS Location (if collected)

General Comments:

Sample Comments:



River Right



River Left

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4O23-CFR-RM-76-112223	11-22-2023	09:10	7.96	8.30	-34.60	11.10	374.93	15.71	Clear	No	--

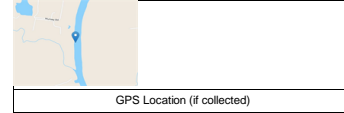
Sampling Data

Sampling Method: Tubing Depth (ft): Distance to River Right:
 Sampling Location: Multi Meter Used: Distance to River Left:
 Total Depth to Bottom of Channel (ft): Multi Meter ID: Distance to River (Right/Left) Units:

WEATHER CONDITIONS

Temperature (F):	62.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	3

Latitude:
 Longitude:



General Comments:

Sample Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-CFR-TARHEEL-120623	12/6/2023	16:38	6.42	10.79	180.90	8.51	209.07	12.91	Clear	No	--

Sampling Data

Sampling Method: Tubing Depth (ft): Distance to River Right:
 Sampling Location: Multi Meter Used: Distance to River Left:
 Total Depth to Bottom of Channel (ft): Multi Meter ID: Distance to River (Right/Left) Units:

WEATHER CONDITIONS

Temperature (F):	49.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

Latitude:
 Longitude:



GPS Location (if collected)

General Comments:

Sample Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

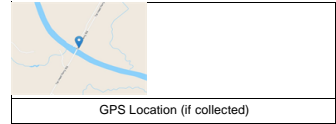
Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-CFR-TARHEEL-24-112423	11-24-2023	04:36	5.09	9.45	122.40	41.75	92.16	16.36	Murky	None	

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	62.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:



General Comments:

Sample Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
RIVER-WATER-INTAKE2-24-112323	11-23-2023	07:00	7.11	8.34	316.60	11.00	169.24	17.31	Clear	None	--

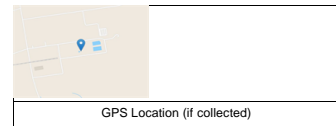
Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS

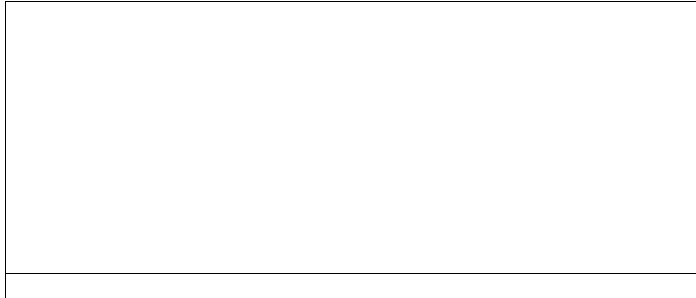
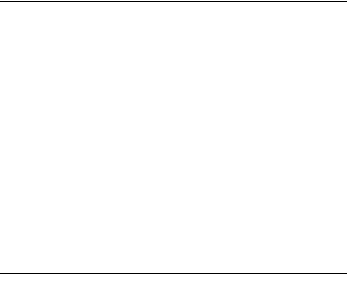
Temperature (F):	62.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	8

Latitude:
 Longitude:



General Comments:

Sample Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-GBC-1-112223	11-22-2023	14:25	5.09	9.41	122.40	41.75	92.16	16.36	Murky	None	

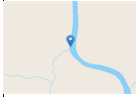
Sampling Data

Sampling Method: Multi Meter Used: Flow Rate:
 Water Quality Condition: Multi Meter ID: Flow Rate Units:

WEATHER CONDITIONS

Temperature (F):	62.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:



GPS Location (if collected)

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General Comments:

Sampling Comments:

SURFACE WATER SAMPLING RECORD


Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q1123-LOCK-DAM-NORTH -112223	11-22-2023	11:45	7.06	3.72	70.50	218.45	419.15	19.00	Clear with sediment	None	--

Sampling Data
 Sampling Method: Multi Meter Used: Flow Rate:
 Water Quality Condition: Multi Meter ID: Flow Rate Units:

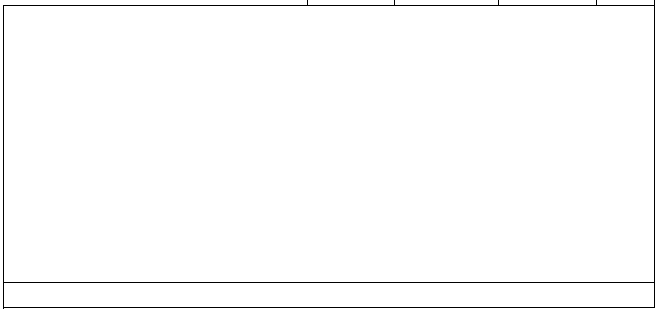
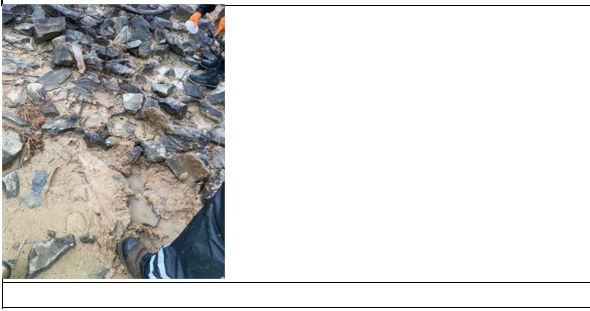
WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:



GPS Location (if collected)

--	--	--	--



General Comments:

Sampling Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

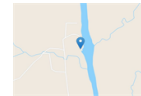
Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q1123-LOCK-DAM-SEEP-112223	11-22-2023	11:35	7.66	3.05	17.90	213.34	636.24	17.93	Light Tan	Yes	DUP MS MSD

Sampling Data

Sampling Method: Multi Meter Used: Flow Rate:
 Water Quality Condition: Multi Meter ID: Flow Rate Units:

WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	3

Latitude:
 Longitude:



GPS Location (if collected)

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General Comments:

Sampling Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Chemours Fayetteville Location ID: OLDOF-1 Project Manager: Tracy Ovbey
 Samplers: BRANDON WEIDNER Sampling Event: Quarterly CAP Event Type: Sampling
 Date: 11-22-2023 Time: 11:37

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-OLDOF-1-24-112323	11-23-2023	10:44	6.56	7.77	81.40	18.00	141.79	20.49	Clear	None	--

Sampling Data

Sampling Method: ISCO Composite Multi Meter Used: Insitu Aqua Troll
 ISCO Start Date and Time: 11-22-2023 11:44 Multi Meter ID: 766679
 ISCO End Date and Time: 11-23-2023 10:44

WEATHER CONDITIONS

Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	6

Latitude: --
 Longitude: --

GPS Location (if collected)

General Comments:

Sample Comments:

SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

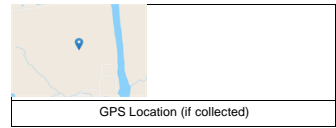
Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-OUTFALL 002-24-112323	11-23-2023	09:12	7.57	8.64	70.00	21.20	144.76	20.53	Clear	None	--

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

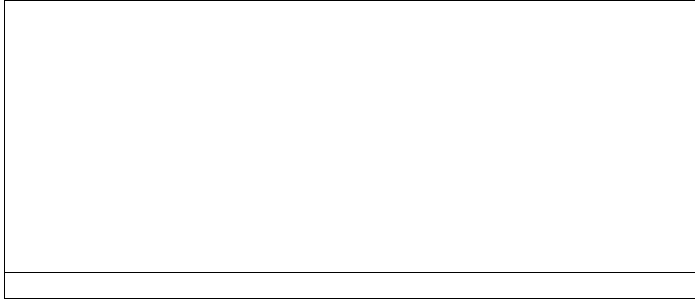
WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	6

Latitude:
 Longitude:



General Comments:

Sample Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Chemours Fayetteville Location ID: SEEP-C Project Manager: Tracy Ovbey
 Samplers: BRANDON WEIDNER Sampling Event: Quarterly CAP Event Type: Sampling
 Date: 11-22-2023 Time: 12:27

Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-SEEP-C-24-112323	11-23-2023	09:30	9.06	7.28	69.10	279.00	201.85	20.69	Murky	None	--

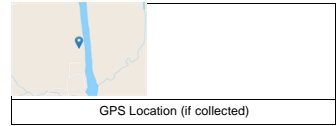
Sampling Data

Sampling Method: ISCO Composite Multi Meter Used: Insitu Aqua Troll
 ISCO Start Date and Time: 11-22-2023 10:30 Multi Meter ID: 766679
 ISCO End Date and Time: 11-23-2023 09:30

WEATHER CONDITIONS

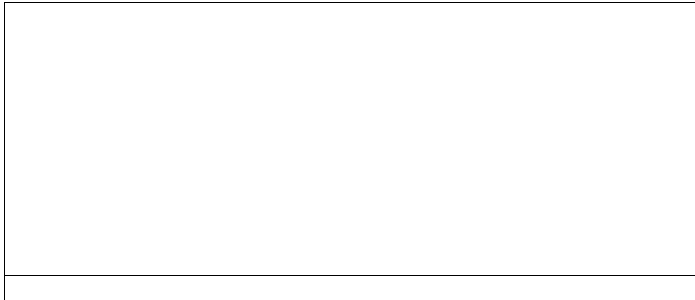
Temperature (F):	62.00
Sky:	Cloudy
Precipitation:	None
Wind (mph)	7

Latitude: 34.8383952433128
 Longitude: -78.8244147806821



General Comments:

Sample Comments:



SURFACE WATER SAMPLING RECORD

Site Name: Location ID: Project Manager:
 Samplers: Sampling Event: Event Type:
 Date: Time:

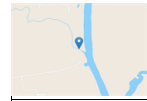
Spl ID	Spl Date	Time	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	QA/QC
				mg/L	mV	NTU	µS/cm	°C			
CAP4Q23-WC-1-24-112323	11-23-2023	07:00	6.14	8.02	109.70	78.70	171.91	19.64	Murky	None	DUPI(MS) MSD

Sampling Data

Sampling Method: Multi Meter Used:
 ISCO Start Date and Time: Multi Meter ID:
 ISCO End Date and Time:

WEATHER CONDITIONS	
Temperature (F):	63.00
Sky:	Cloudy
Precipitation:	Rain
Wind (mph)	6

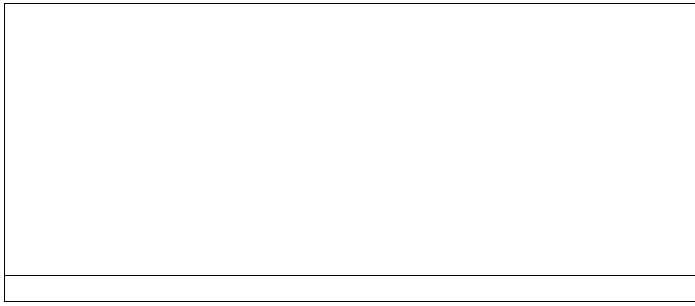
Latitude:
 Longitude:



GPS Location (if collected)

General Comments:

Sample Comments:



RECORD OF WELL SAMPLING

Site Name:

Well ID:

Well Diameter: Inches

Samplers:

Event:

Project Manager:

Purging Data

Pump Depth:

Pump Loc:

Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	4.446		
Initial Depth to Water (ft.):	19.64	Depth to Well Bottom (ft.):	47.43

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
09:53	20.01	160.00	2880.00	5.96	1.75	4.40	43.60	69.37	13.76	Slightly hazy	Yes	
09:58	20.01	160.00	800.00	5.95	1.77	-5.60	31.30	68.84	13.71	Clear	Yes	
10:03	20.01	160.00	800.00	5.96	1.60	-10.20	37.30	68.52	13.25	Clear	Yes	
10:08	20.01	160.00	800.00	5.95	1.30	-15.00	22.30	67.93	13.02	Clear	Yes	
10:13	20.01	160.00	800.00	5.93	1.26	-20.40	28.60	68.06	13.58	Clear	Yes	
10:18	20.01	160.00	800.00	5.94	1.71	-13.50	29.60	67.67	13.64	Clear	Yes	
10:23	20.01	160.00	800.00	5.93	1.47	-11.60	23.80	68.03	13.74	Clear	Yes	
10:28	20.01	160.00	800.00	5.93	1.33	-14.70	21.30	67.78	13.98	Clear	Yes	
10:33	20.01	160.00	800.00	5.92	1.02	-16.70	18.00	67.48	14.03	Clear	Yes	
10:38	20.01	160.00	800.00	5.91	0.69	-22.10	12.20	67.13	14.18	Clear	Yes	
10:43	20.01	160.00	800.00	5.92	1.06	-20.70	19.60	67.06	13.57	Clear	Yes	
10:48	20.01	160.00	800.00	5.91	1.05	-12.10	13.70	67.14	14.13	Clear	Yes	
10:53	20.01	160.00	800.00	5.92	1.04	-15.90	17.70	67.40	14.03	Clear	Yes	
10:58	20.01	160.00	800.00	5.91	0.52	-12.60	10.10	67.79	14.13	Clear	Yes	
11:03	20.01	160.00	800.00	5.92	0.56	-14.50	9.06	67.32	14.10	Clear	Yes	
11:08	20.01	160.00	800.00	5.92	0.76	-16.70	11.80	67.16	13.93	Clear	Yes	
11:13	20.01	160.00	800.00	5.9	0.76	-16.40	9.80	67.19	13.82	Clear	Yes	
11:18	20.01	160.00	800.00	5.91	0.75	-15.80	14.70	67.15	14.04	Clear	Yes	

Screen Interval:

Sampling Data

Method:

Date: Time:

Purge Start Time:

Field Filtered:

Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	5.91
Spec. Cond. (µS/cm)	67.15
Turbidity (NTU)	14.70
Temp. (°C)	14.04
DO (mg/L)	0.75
ORP (mV)	-15.80

Sample ID:
 Duplicate ID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	43.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	8

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	1.57	
Initial Depth to Water (ft.):	19.11	Depth to Well Bottom (ft.): 28.92

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
10:50	20.15	200.00	1000.00	3.69	1.15	193.90	37.20	11.49	17.17	Clearish	Yes	
10:55	20.12	200.00	1000.00	3.65	3.71	216.10	16.50	111.39	15.90	Clearish	Yes	
11:00	20.12	200.00	1000.00	3.63	3.70	232.20	8.52	111.79	15.93	Clear	Yes	
11:05	20.12	200.00	1000.00	3.66	3.53	246.10	8.07	112.28	16.45	Clear	Yes	
11:10	20.12	200.00	1000.00	3.67	3.39	255.90	7.64	112.21	16.36	Clear	Yes	
11:15	20.12	200.00	1000.00	3.63	3.30	265.40	6.22	112.38	16.55	Clear	Yes	
11:20	20.12	200.00	1000.00	3.69	3.37	271.80	3.92	111.74	16.70	Clear	Yes	
11:25	20.12	200.00	1000.00	3.67	3.28	279.70	4.16	111.48	16.59	Clear	Yes	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	3.67
Spec. Cond. (µS/cm)	111.48
Turbidity (NTU)	4.16
Temp. (°C)	16.59
DO (mg/L)	3.28
ORP (mV)	279.70

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	43.00
Sky:	Partly Sunny
Precipitation:	None
Wind (mph)	5

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	4.323	
Initial Depth to Water (ft.):	13.64	Depth to Well Bottom (ft.): 40.66

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
11:20	13.70	160.00	960.00	5.11	2.36	70.00	3.11	84.28	16.37	Clear	No	
11:25	13.70	160.00	800.00	4.89	1.61	102.00	3.81	75.06	16.73	Clear	No	
11:30	13.71	160.00	800.00	4.86	1.11	132.10	4.51	72.69	16.88	Clear	No	
11:35	13.71	160.00	800.00	4.84	0.67	156.40	4.23	71.98	16.78	Clear	No	
11:40	13.71	160.00	960.00	4.82	0.35	172.80	4.14	71.82	16.73	Clear	No	
11:45	13.71	160.00	800.00	4.83	0.26	180.00	4.69	71.06	16.67	Clear	No	
11:50	13.71	160.00	800.00	4.9	0.26	183.80	3.18	72.66	16.84	Clear	No	
11:55	13.71	160.00	800.00	4.96	0.26	173.00	4.16	75.60	16.95	Clear	No	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	4.96
Spec. Cond. (µS/cm)	75.60
Turbidity (NTU)	4.16
Temp. (°C)	16.95
DO (mg/L)	0.26
ORP (mV)	173.00

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	44.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville
 Samplers: HERBERT WATTS|SAIRA BOHAM

Well ID: LTW-03
 Event: Quarterly CAP

Well Diameter: 2 Inches
 Project Manager: Tracy Ovbey

Purging Data

Pump Depth: 30
 Pump Loc: within screen
 Method: Peristaltic Pump Date: 11-13-2023 Time: 10:16

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	2.664		
Initial Depth to Water (ft.):	16.3	Depth to Well Bottom (ft.):	32.95

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
10:35	17.01	310.00	0.00	7.76	8.22	1.80	5.53	0.07	20.27	Cloudy	No	
10:40	17.09	310.00	1550.00	7.93	7.41	-4.70	3.38	0.01	20.15	Clear	No	
10:45	17.14	310.00	1550.00	8.01	6.74	-13.10	2.06	0.61	19.98	Clear	No	
10:50	17.21	310.00	1550.00	7.1	6.06	44.30	1.75	0.06	20.04	Cloudy	No	
10:55	17.25	310.00	1550.00	7	5.40	24.60	1.48	0.06	20.00	Clear	No	
11:00	17.26	310.00	1550.00	6.9	4.78	24.80	1.07	0.06	19.93	Clear	No	
11:05	17.30	310.00	1550.00	6.9	4.30	33.20	1.08	0.07	20.01	Clear	No	
11:10	17.30	310.00	1550.00	6.85	3.77	38.70	1.23	0.06	20.04	Clear	No	
11:15	17.30	310.00	1550.00	6.91	3.41	37.40	1.20	0.06	20.08	Clear	No	
11:20	17.30	310.00	1550.00	6.87	3.07	34.20	1.01	0.06	20.02	Cloudy	No	
11:25	17.30	310.00	1550.00	6.8	2.74	40.80	1.07	0.06	20.09	Cloudy	No	
11:30	17.30	310.00	1550.00	6.8	2.48	37.60	0.89	0.06	20.03	Cloudy	No	
11:35	17.30	310.00	1550.00	6.83	2.22	35.10	1.07	0.06	20.04	Clear	No	
11:40	17.30	310.00	1550.00	6.86	2.03	28.90	0.71	0.06	20.01	Clear	No	
11:45	17.30	310.00	1550.00	6.81	1.84	25.60	1.20	0.06	20.10	Clear	No	
11:50	17.30	310.00	1550.00	6.83	1.68	25.00	0.85	0.09	20.10	Cloudy	No	
11:55	17.30	310.00	1550.00	6.81	1.53	25.60	1.08	0.09	20.11	Clear	No	
12:00	17.30	310.00	1550.00	6.84	1.40	25.40	0.72	0.06	20.17	Clear	No	
12:05	17.30	310.00	1860.00	6.81	1.17	17.20	0.99	0.06	20.12	Clear	No	
12:10	17.30	310.00	3100.00	6.82	1.13	17.20	0.87	0.06	20.10	Clear	No	
12:15	17.30	310.00	3100.00	6.83	1.02	15.20	0.61	0.06	20.18	Clear	No	
12:20	17.30	310.00	1550.00	6.89	0.88	15.50	0.69	0.06	20.13	Clear	No	
12:25	17.30	310.00	1550.00	6.89	0.85	15.00	0.66	0.06	20.14	Clear	No	
12:30	17.30	310.00	1550.00	6.92	0.76	15.20	0.74	0.06	20.46	Clear	No	
12:35	17.30	310.00	1550.00	6.87	0.75	15.20	0.64	0.06	20.61	Clear	No	
12:40	17.30	310.00	1550.00	6.81	0.72	15.60	0.80	0.06	21.77	Clear	No	

Screen Interval: 15.0-30.0

Sampling Data

Method: Low Flow Date: 11-13-2023 Time: 12:40
 Field Filtered: No

Purge Start Time: 10:35
 Total Volume Purged (mL): 42160

Field Parameters

STABILIZED PARAMETERS	
pH	6.81
Spec. Cond.(µS/cm)	0.06
Turbidity (NTU)	0.80
Temp.(°C)	21.77
DO (mg/L)	0.72
ORP (mV)	15.60

Sample ID: CAP4Q23-LTW-03-111323
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	51.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	3

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville Well ID: LTW-04 Well Diameter: 2 Inches
 Samplers: BROCK SHATTUCK/FELIPE SILVA Event: Quarterly CAP Project Manager: Tracy Ovbey

Purging Data
 Pump Depth: 26
 Pump Loc: within screen
 Method: Peristaltic Pump Date: 11-02-2023 Time: 12:47

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	2.387	
Initial Depth to Water (ft.):	13.53	Depth to Well Bottom (ft.): 28.45

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
13:05	15.33	260.00	2600.00	4.72	0.25	239.80	86.50	82.42	17.48	Hazy	No	
13:10	16.96	260.00	1300.00	4.8	0.47	234.40	124.00	81.87	17.37	Slight haze	No	
13:15	17.72	260.00	1300.00	4.84	0.30	221.70	137.00	82.75	17.25	Slight haze	No	
13:20	18.70	260.00	1300.00	4.79	0.28	221.60	137.00	82.33	17.13	Slight haze	No	
13:25	19.00	260.00	1300.00	4.87	0.36	242.50	74.00	80.08	16.90	Slight haze	No	
13:30	19.50	260.00	1300.00	4.88	0.25	227.50	72.80	80.04	17.32	Slight haze	No	
13:35	19.54	150.00	750.00	4.95	0.24	220.30	57.10	78.30	17.29	Slight haze	No	Reduced flow rate due to dropping water level
13:40	19.44	150.00	750.00	4.92	0.11	216.30	51.40	79.14	17.09	Slight haze	No	
13:45	19.30	150.00	750.00	4.95	0.11	212.00	49.60	78.50	16.80	Slight haze	No	
13:50	19.20	150.00	750.00	4.98	0.26	211.50	57.30	78.09	16.98	Slight haze	No	
13:55	19.16	150.00	750.00	5	0.27	206.40	54.40	78.36	17.14	Slight haze	No	
14:00	19.15	150.00	750.00	5.01	0.37	208.30	47.00	78.38	17.36	Slight haze	No	
14:05	19.15	150.00	750.00	5.04	0.41	207.30	41.40	78.33	17.58	Slight haze	No	
14:10	19.15	150.00	750.00	5.03	0.42	208.20	36.10	78.56	17.44	Slight haze	No	
14:15	19.15	150.00	750.00	5.03	0.26	208.40	32.00	78.29	17.03	Clear	No	
14:20	19.15	150.00	750.00	5.04	0.34	207.40	27.10	77.83	16.73	Clear	No	
14:25	19.15	150.00	750.00	5.04	0.30	206.40	22.00	78.13	17.39	Clear	No	
14:30	19.15	150.00	750.00	5.03	0.30	207.10	19.90	78.40	17.65	Clear	No	
14:35	19.15	150.00	750.00	5.05	0.30	206.20	16.70	78.45	17.49	Clear	No	
14:40	19.15	150.00	750.00	5.04	0.30	206.10	14.80	78.22	17.26	Clear	No	

Screen Interval: 12.0-27.0

Sampling Data
 Method: Low Flow Date: 11-02-2023 Time: 14:40 Purge Start Time: 12:55
 Field Filtered: No Total Volume Purged (mL): 19600

Field Parameters

STABILIZED PARAMETERS	
pH	5.04
Spec. Cond. (µS/cm)	78.22
Turbidity (NTU)	14.80
Temp. (°C)	17.26
DO (mg/L)	0.30
ORP (mV)	206.10

Sample ID: CAP4Q23-LTW-04-110223
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	51.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville Well ID: LTW-05 Well Diameter: 2 Inches
 Samplers: ERIN JANIGA/ZACHARY TOMEK Event: Quarterly CAP Project Manager: Tracy Ovbey

Purging Data
 Pump Depth: --
 Pump Loc: within screen
 Method: Peristaltic Pump Date: 11-02-2023 Time: 09:21

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	5.355	
Initial Depth to Water (ft.):	13.81	Depth to Well Bottom (ft.): 47.28

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
09:45	13.90	180.00	1800.00	4.31	0.27	22.30	11.40	104.46	14.33	Almost clear	No	
09:50	13.90	180.00	900.00	4.2	0.17	89.30	19.50	106.19	14.21	Clear	No	
09:55	13.90	180.00	900.00	4.21	0.14	123.30	15.50	105.60	14.51	Clear	No	
10:00	13.90	180.00	900.00	4.21	0.12	180.00	17.20	105.35	14.20	Clear	No	
10:05	13.90	180.00	900.00	4.18	0.11	217.60	18.50	105.84	15.16	Clear	No	
10:10	13.90	180.00	900.00	4.21	0.10	232.80	19.79	105.20	14.67	Clear	No	
10:15	13.90	180.00	900.00	4.21	0.10	237.60	25.25	104.80	15.20	Clear	No	
10:20	13.90	180.00	900.00	4.21	0.09	236.80	26.30	103.81	15.09	Clear	No	
10:25	13.90	180.00	900.00	4.23	0.09	232.10	26.63	104.15	15.42	Clear	No	
10:30	13.90	180.00	900.00	4.25	0.09	232.10	24.88	104.16	15.17	Clear	No	
10:35	13.90	180.00	900.00	4.24	0.80	236.80	16.60	104.32	15.24	Clear	No	
10:40	13.90	180.00	900.00	4.25	0.12	238.20	18.40	101.67	15.28	Clear	No	
10:45	13.90	180.00	900.00	4.25	0.12	237.50	18.60	103.50	15.02	Clear	No	
10:50	13.90	180.00	900.00	4.25	0.11	239.60	16.55	101.56	15.09	Clear	No	

Screen Interval: 29.0-44.0

Sampling Data
 Method: Low Flow Date: 11-02-2023 Time: 10:50 Purge Start Time: 09:35
 Field Filtered: No Total Volume Purged (mL): 13500

Field Parameters

STABILIZED PARAMETERS	
pH	4.25
Spec. Cond. (µS/cm)	101.56
Turbidity (NTU)	16.55
Temp. (°C)	15.09
DO (mg/L)	0.11
ORP (mV)	239.60

Sample ID: CAP4Q23-LTW-05-110223
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	45.00
Sky:	Partly Cloudy
Precipitation:	None
Wind (mph)	3

RECORD OF WELL SAMPLING

Site Name:
 Samplers:

Well ID:
 Event:

Well Diameter: Inches
 Project Manager:

Purging Data

Pump Depth:
 Pump Loc:

Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	-1.637	
Initial Depth to Water (ft.):	<input type="text" value="10.23"/>	Depth to Well Bottom (ft.):

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
11:40	10.75	380.00	2280.00	4.54	0.07	43.90	2.90	44.14	16.78	Clear	Yes	
11:45	10.76	380.00	1900.00	4.53	0.05	25.90	2.30	43.91	17.13	Clear	Yes	
11:50	10.77	380.00	1900.00	4.53	0.04	7.90	2.01	39.90	17.40	Clear	Yes	
11:55	10.77	380.00	1900.00	4.52	0.02	-10.20	1.74	47.36	17.17	Clear	Yes	
12:00	10.77	380.00	1900.00	4.53	0.02	-23.00	1.74	43.16	17.24	Clear	Yes	
12:05	10.79	380.00	1900.00	4.52	0.01	-37.80	1.82	43.08	17.28	Clear	Yes	
12:10	10.79	380.00	1900.00	4.52	0.01	-57.90	1.37	41.75	17.33	Clear	Yes	
12:15	10.79	380.00	1900.00	4.51	0.01	-72.80	1.21	41.16	17.33	Clear	Yes	

Screen Interval:

Sampling Data

Method:
 Field Filtered:

Date: Time:

Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	4.51
Spec. Cond. (µS/cm)	41.16
Turbidity (NTU)	1.21
Temp. (°C)	17.33
DO (mg/L)	0.01
ORP (mV)	-72.80

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	46.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	3.624	
Initial Depth to Water (ft.):	9.75	Depth to Well Bottom (ft.): 32.4

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
09:40	9.82	250.00	1250.00	4.5	0.14	100.20		61.11	17.36	Clear	Yes	No turbidity reader available
09:45	9.79	250.00	1250.00	4.45	0.12	102.60		57.40	16.99	Clear	Yes	No turbidity reader available
09:50	9.78	250.00	1250.00	4.48	0.09	106.00		57.40	16.33	Clear	Yes	No turbidity reader available
09:55	9.78	250.00	1250.00	4.5	0.08	110.50		57.48	16.80	Clear	Yes	No turbidity reader available
10:00	9.78	250.00	1250.00	4.53	0.08	113.70		57.36	17.27	Clear	Yes	No turbidity reader available
10:05	9.78	250.00	1250.00	4.54	0.07	113.90		57.31	17.30	Clear	Yes	No turbidity reader available
10:10	9.78	250.00	1250.00	4.54	0.06	114.20		57.08	16.99	Clear	No	No turbidity reader available
10:15	9.78	250.00	1250.00	4.55	0.08	112.90	4.12	57.32	16.57	Clear	Yes	
10:20	9.78	250.00	1250.00	4.54	0.08	113.80	3.20	57.25	17.06	Clear	Yes	
10:25	9.78	250.00	1250.00	4.54	0.08	113.20	2.21	57.25	17.15	Clear	Yes	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	4.54
Spec. Cond. (µS/cm)	57.25
Turbidity (NTU)	2.21
Temp. (°C)	17.15
DO (mg/L)	0.08
ORP (mV)	113.20

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	33.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	0

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville

Well ID: PIW-1D

Well Diameter: 2 Inches

Samplers: FELIPE SILVA|SAIRA BOHAM

Event: Quarterly CAP

Project Manager: Tracy Ovbey

Purging Data

Pump Depth: --

Pump Loc: within screen

Method: Peristaltic Pump Date: 11-07-2023 Time: 10:32

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Water Volume =	1.632	
Initial Depth to Water (ft.):	21.35	Depth to Well Bottom (ft.): 31.55

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
10:35	21.45	400.00	0.00	3.5	4.65	205.20	476.00	158.79	21.27	Cloudy brown	No	
10:45	21.41	220.00	2200.00	3.42	0.45	230.00	743.00	174.56	21.28	Cloudy brown	No	
10:50	21.41	220.00	1100.00	3.52	0.28	227.00	1000.00	171.44	21.39	Cloudy brown	No	
10:54	21.41	220.00	880.00	3.49	0.26	224.30	1000.00	171.61	21.51	Cloudy brown	No	
11:00	21.41	220.00	1320.00	3.61	5.00	234.30	236.00	145.23	21.64	Cloudy	No	
11:05	21.41	220.00	1100.00	3.57	5.82	265.60	187.00	150.73	21.90	Cloudy	No	
11:10	21.41	220.00	1100.00	3.51	1.93	283.10	192.00	167.80	21.77	Cloudy	No	
11:15	21.41	200.00	1000.00	3.5	0.37	268.80	690.00	170.81	21.64	Cloudy brown	No	
11:20	21.41	200.00	1000.00	3.52	0.32	260.30	783.00	170.34	21.67	Cloudy brown	No	
11:25	21.41	200.00	1000.00	3.52	0.33	253.90	707.00	170.25	22.15	Cloudy	No	
11:30	21.41	200.00	1000.00	3.56	0.34	259.60	592.00	170.47	22.06	Cloudy	No	
11:35	21.41	200.00	1000.00	3.52	0.35	269.50	552.00	170.43	21.90	Cloudy	No	
11:40	21.41	200.00	1000.00	3.55	0.34	275.10	456.00	170.90	21.98	Cloudy	No	
11:45	21.41	200.00	1000.00	3.54	0.34	280.60	400.00	171.29	22.31	Cloudy	No	
11:50	21.41	200.00	1000.00	3.61	0.34	284.60	339.00	171.33	22.60	Cloudy	No	
11:54	21.41	200.00	800.00	3.49	0.32	288.30	306.00	171.40	22.28	Cloudy	No	
11:59	21.41	200.00	1000.00	3.57	0.31	294.20	259.00	171.73	22.63	Cloudy	No	
12:07	21.41	200.00	1600.00	3.56	0.29	302.00	240.00	171.78	22.72	Cloudy	No	
12:10	21.41	200.00	600.00	3.53	0.29	304.10	206.00	171.91	22.62	Cloudy	No	
12:15	21.41	200.00	1000.00	3.51	0.29	287.40	189.00	171.88	22.78	Cloudy	No	
12:20	21.41	200.00	1000.00	3.56	0.27	299.80	182.00	172.00	23.10	Cloudy	No	
12:25	21.41	200.00	1000.00	3.55	0.27	310.40	157.00	171.88	23.01	Cloudy	No	
12:30	21.41	200.00	1000.00	3.55	0.28	312.50	135.00	171.98	23.47	Cloudy	No	
12:35	21.41	200.00	1000.00	3.54	0.27	312.30	129.00	172.03	23.48	Cloudy	No	
12:40	21.41	200.00	1000.00	3.61	0.27	315.30	113.00	172.08	23.50	Cloudy	No	
12:46	21.41	200.00	1200.00	3.59	0.27	320.40	99.40	172.11	24.03	Cloudy	No	
12:50	21.41	200.00	800.00	3.58	0.26	325.40	95.60	171.71	23.90	Cloudy	No	
12:55	21.41	200.00	1000.00	3.58	0.25	324.90	92.60	172.15	24.25	Cloudy	No	
13:00	21.41	200.00	1000.00	3.61	0.25	333.50	87.40	172.05	24.20	Cloudy	No	
13:04	21.41	200.00	800.00	3.61	0.24	336.60	83.10	172.05	24.18	Cloudy	No	
13:10	21.41	200.00	1200.00	3.59	0.24	341.50	74.80	172.33	24.40	Cloudy	No	

Screen Interval: --

Sampling Data

Method: 5 Well Volumes

Date: 11-07-2023 Time: 13:10

Purge Start Time: 10:35

Field Filtered: Yes

Total Volume Purged (mL): 31700

Field Parameters

STABILIZED PARAMETERS	
pH	3.59
Spec. Cond.(µS/cm)	172.33
Turbidity (NTU)	74.80
Temp.(°C)	24.40
DO (mg/L)	0.24
ORP (mV)	341.50

Sample ID: CAP4Q23-PIW-1D-110723
 DuplicateID: CAP4Q23-PIW-1D-110723-Z
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	67.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	7



RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data

Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	0.043		
Initial Depth to Water (ft.):	21.68	Depth to Well Bottom (ft.):	21.95

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			

Screen Interval:

Sampling Data

Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	<input type="text"/>
Spec. Cond. (µS/cm)	<input type="text"/>
Turbidity (NTU)	<input type="text"/>
Temp. (°C)	<input type="text"/>
DO (mg/L)	<input type="text"/>
ORP (mV)	<input type="text"/>

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	72.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	10

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	1.096	
Initial Depth to Water (ft.):	19.95	Depth to Well Bottom (ft.): 26.8

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
09:20	20.20	220.00	1100.00	4.43	0.12	-10.60	11.00	59.20	17.05	Clear	No	
09:25	20.20	220.00	1100.00	4.5	0.08	-15.50	8.43	57.54	17.34	Clear	No	
09:30	20.20	220.00	1100.00	4.67	0.05	-25.30	10.80	65.98	66.39	Clear	No	
09:35	20.20	220.00	1100.00	4.86	0.04	-37.30	11.60	73.77	17.20	Clear	No	
09:40	20.20	220.00	1100.00	4.94	0.03	-44.10	9.09	79.93	16.95	Clear	No	
09:45	20.20	220.00	1100.00	5.13	0.01	-46.90	6.40	82.15	17.39	Clear	No	
09:50	20.20	220.00	1100.00	5.33	0.01	-53.00	5.35	88.44	17.62	Clear	No	
09:55	20.20	220.00	1100.00	5.33	0.01	-54.00	3.08	89.75	17.40	Clear	No	
10:00	20.20	220.00	1100.00	5.34	0.01	-55.00	2.38	88.96	17.64	Clear	No	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	5.34
Spec. Cond. (µS/cm)	88.96
Turbidity (NTU)	2.38
Temp. (°C)	17.64
DO (mg/L)	0.01
ORP (mV)	-55.00

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	38.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	4.163	
Initial Depth to Water (ft.):	11.08	Depth to Well Bottom (ft.): 37.1

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
13:35	11.10	220.00	0.00	5.71	0.07	-98.50	7.04	70.07	17.62	Clearish	Yes	
13:40	11.10	220.00	1100.00	5.72	0.40	-101.20	7.07	69.48	17.43	Clearish	Yes	
13:45	11.10	220.00	1100.00	5.72	0.03	-101.70	9.19	69.36	17.40	Clear	Yes	
13:50	11.10	220.00	1100.00	5.7	0.01	-100.30	11.00	68.86	16.92	Clear	Yes	
13:55	11.10	220.00	1100.00	5.66	0.01	-99.20	14.70	68.51	17.23	Clear	Yes	
14:00	11.10	220.00	1100.00	5.45	0.01	-90.80	18.80	69.20	16.78	Clear	Yes	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	5.45
Spec. Cond.(µS/cm)	69.20
Turbidity (NTU)	18.80
Temp.(°C)	16.78
DO (mg/L)	0.01
ORP (mV)	-90.80

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	55.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	-4.462		
Initial Depth to Water (ft.):	27.89	Depth to Well Bottom (ft.):	

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
11:54	27.84		0.00	3.1	0.94	164.20	1.15	370.19	24.13	Clear	No	
09:53	27.85		1645.00	2.96	2.66	272.40	12.10	346.21	21.75	Clear	No	
16:24	27.90		1500.00	3.67	1.21	340.90	10.40	197.29	22.07	Clear	No	
09:17	27.91		1870.00	3.31	3.77	245.10	1000.00	410.50	21.39	Cloudy	No	Turbidity could not read , it was too high
09:20	27.93		0.00	3.4	2.51	195.70	1000.00	424.01	19.99	Dark gray	None	Well was purged dry, 5 times, will start collecting sample on next visit

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	3.40
Spec. Cond. (µS/cm)	424.01
Turbidity (NTU)	1000.00
Temp. (°C)	19.99
DO (mg/L)	2.51
ORP (mV)	195.70

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	70.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	0

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	1.851		
Initial Depth to Water (ft.):	21.27	Depth to Well Bottom (ft.):	32.84

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
12:25	22.75	400.00	1200.00	4.35	6.21	173.80	2.70	19.98	19.26	Clear	No	
12:30	22.85	360.00	1800.00	4.3	5.32	226.90	2.40	22.08	19.15	Clear	No	
12:35	22.85	360.00	1800.00	4.33	5.04	277.80	1.25	23.00	19.19	Clear	No	
12:40	22.90	360.00	1800.00	4.32	4.71	287.30	1.08	23.92	19.19	Clear	No	
12:45	22.90	360.00	1800.00	4.33	4.53	293.20	0.81	24.33	19.12	Clear	No	
12:50	22.90	360.00	1800.00	4.33	4.40	298.10	0.54	24.63	19.16	Clear	No	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	4.33
Spec. Cond. (µS/cm)	24.63
Turbidity (NTU)	0.54
Temp. (°C)	19.16
DO (mg/L)	4.40
ORP (mV)	298.10

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	72.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	6

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville

Well ID: PW-07

Well Diameter: 2 Inches

Samplers: FELIPE SILVA|SAIRA BOHAM

Event: Quarterly CAP

Project Manager: Tracy Ovbey

Purging Data

Pump Depth: bottom of well

Pump Loc: bottom of well

Method: Bailer Date: 11-06-2023 Time: 10:42

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Water Volume =	0.136		
Initial Depth to Water (ft.):	40.94	Depth to Well Bottom (ft.):	41.79

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
11:35	41.62		0.00									Original depth to water 40.94. Bailed the well and waited 15 minutes. Last depth to water was 41.62. considered dry.

Screen Interval: 90-100

Sampling Data

Method:

Date: Time:

Purge Start Time:

Field Filtered:

Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	
Spec. Cond. (µS/cm)	
Turbidity (NTU)	
Temp. (°C)	
DO (mg/L)	
ORP (mV)	

Sample ID:
DuplicateID:
QA/QC:

WEATHER CONDITIONS	
Temperature (F):	65.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	0

RECORD OF WELL SAMPLING

Site Name:

Well ID:

Well Diameter: Inches

Samplers:

Event:

Project Manager:

Purging Data

Pump Depth:

Pump Loc:

Method: Date: Time:

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	5.134	
Initial Depth to Water (ft.):	25.6	Depth to Well Bottom (ft.): 57.69

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
15:05	27.55	200.00	1400.00	11	4.94	-38.90	10.90	408.47	20.61	Clear	No	
15:09	28.50	200.00	800.00	10.91	4.38	-31.20	11.70	396.44	20.57	Clear	No	
15:15	28.52	200.00	1200.00	10.96	2.86	-33.20	22.90	306.36	20.51	Clear	No	
15:19	28.45	200.00	800.00	10.62	0.82	-43.10	36.30	228.07	20.52	Clear	No	
15:25	28.50	200.00	1200.00	9.84	0.70	-50.30	48.80	151.32	20.48	Clear	No	
15:29	28.50	200.00	800.00	9.91	0.73	-61.10	42.10	153.68	20.46	Cloudy	No	
15:35	28.50	200.00	1200.00	9.44	0.48	-73.10	37.90	129.90	20.36	Cloudy	No	
15:39	28.50	200.00	800.00	9.22	0.60	-76.60	36.90	121.28	20.35	Cloudy	No	
15:45	28.50	200.00	1200.00	9.07	0.62	-82.80	35.40	115.55	20.31	Cloudy	No	
15:49	28.50	200.00	800.00	8.69	0.39	-116.50	35.50	108.90	20.31	Cloudy	No	
15:55	28.50	200.00	1200.00	8.37	0.47	-149.80	31.90	104.69	20.35	Cloudy	No	Shut down and ill continue Pumping tomorrow

Screen Interval:

Sampling Data

Method:

Date: Time:

Purge Start Time:
Total Volume Purged (mL):

Field Filtered:

Field Parameters

STABILIZED PARAMETERS	
pH	--
Spec. Cond. (µS/cm)	--
Turbidity (NTU)	--
Temp. (°C)	--
DO (mg/L)	--
ORP (mV)	--

Sample ID:
DuplicateID:
QA/QC:

WEATHER CONDITIONS	
Temperature (F):	79.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	2

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville

Well ID: PW-09

Well Diameter: 2 Inches

Samplers: BRANDON WEIDNER|SAIRA BOHAM

Event: Quarterly CAP

Project Manager: Tracy Ovbey

Purging Data

Pump Depth: --

Pump Loc: bottom of well

Method: Double valve pump Date: 11-08-2023 Time: 10:00

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	5.118	
Initial Depth to Water (ft.):	25.7	Depth to Well Bottom (ft.): 57.69

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
10:10	25.85	600.00	0.00	9.27	2.04	13.90	145.00	122.06	20.01	Cloudy	None	Continue purge
10:15	28.57	600.00	3000.00	9.36	3.80	13.20	29.80	122.83	20.01	Cloudy	None	
10:20	30.89	600.00	3000.00	8.3	2.70	-20.70	49.30	103.21	20.01	Cloudy	None	
10:25	33.42	600.00	3000.00	7.38	1.99	-75.80	49.60	94.80	20.04	Cloudy	None	
10:30	34.25	600.00	3000.00	7	1.37	-65.00	51.70	89.32	20.03	Cloudy	NO	
10:35	34.50	600.00	3000.00	6.72	1.09	-59.60	39.90	84.27	20.05	Cloudy	No	
10:40	34.80	600.00	3000.00	6.7	0.91	-66.30	41.60	81.31	20.07	Cloudy	No	
10:45	35.00	600.00	3000.00	6.62	0.68	-69.40	43.40	78.84	20.06	Cloudy	No	
10:50	35.10	600.00	3000.00	6.4	0.61	-65.60	42.20	77.16	20.12	Clearly	No	
10:55	35.25	600.00	3000.00	6.7	0.46	-76.80	41.20	75.43	20.11	Cloudy	No	
11:00	35.30	600.00	3000.00	6.37	0.44	-75.00	42.90	73.89	20.07	Cloudy	No	
11:05	35.30	600.00	3000.00	6.36	0.47	-74.70	40.10	73.43	20.10	Cloudy	No	
11:10	35.31	600.00	3000.00	6.52	0.44	-82.80	36.60	72.96	20.10	Cloudy	No	
11:15	35.25	600.00	3000.00	6.47	0.36	-80.04	39.60	72.07	20.03	Cloudy	No	
11:20	35.20	600.00	3000.00	6.35	0.42	-80.20	38.50	71.45	20.04	Cloudy	No	
11:25	35.35	600.00	3000.00	6.3	0.47	-76.50	36.80	71.00	20.06	Cloudy	No	
11:30	35.30	600.00	3000.00	6.38	0.39	-82.40	34.00	70.82	20.03	Cloudy	No	
11:35	35.20	600.00	3000.00	6.36	0.38	-81.70	31.90	70.20	20.08	Cloudy	No	
11:40	35.20	600.00	3000.00	6.26	0.41	-74.50	31.60	69.89	20.10	Cloudy	No	
11:45	35.20	600.00	3000.00	6.42	0.41	-83.40	30.60	69.62	20.07	Cloudy	No	
11:50	35.20	600.00	3000.00	6.28	0.38	-77.60	34.00	69.36	20.12	Cloudy	No	
11:55	35.20	600.00	3000.00	6.26	0.43	-74.30	29.10	68.86	20.03	Cloudy	No	
12:00	35.20	600.00	3000.00	6.27	0.34	-76.80	29.00	68.74	20.02	Cloudy	No	
12:05	35.20	600.00	3000.00	6.25	0.44	-76.30	27.80	68.62	20.05	Cloudy	No	
12:10	0.40	600.00	3000.00	6.38	0.40	-80.80	28.20	68.26	20.07	Cloudy	No	
12:15	35.20	600.00	3000.00	6.29	0.50	-72.30	22.90	68.10	20.08	Cloudy	No	
12:20	35.20	600.00	3000.00	6.3	0.49	-74.00	23.30	67.92	20.08	Cloudy	No	
12:25	35.20	600.00	3000.00	6.22	0.38	-70.60	24.40	67.76	20.13	Cloudy	No	
12:30	35.20	600.00	3000.00	6.31	0.37	-78.50	24.90	67.66	20.07	Cloudy	No	
12:35	35.20	600.00	3000.00	6.37	0.42	-80.30	23.70	67.49	20.03	Cloudy	No	
12:40	35.20	600.00	3000.00	6.25	0.28	-75.10	25.10	67.31	20.11	Cloudy	No	

Screen Interval: 11 - 21

Sampling Data

Method: Five Well Volume

Date: 11-08-2023 Time: 12:40

Purge Start Time: 10:10
Total Volume Purged (mL): 90000

Field Filtered: Yes

Field Parameters

STABILIZED PARAMETERS	
pH	6.25
Spec. Cond.(µS/cm)	67.31
Turbidity (NTU)	25.10
Temp.(°C)	20.11
DO (mg/L)	0.28

Sample ID: CAP4Q23-PW-09-110823
DuplicateID: CAP4Q23-PW-09-110823-Z
QA/QC:

WEATHER CONDITIONS	
Temperature (F):	68.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	4

ORP (mV)

-75.10

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville Well ID: PZ-22 Well Diameter: .75 Inches
 Samplers: BROCK SHATTUCK/FELIPE SILVA Event: Quarterly CAP Project Manager: Tracy Ovbey

Purging Data
 Pump Depth: 45
 Pump Loc: bottom of well
 Method: Peristaltic Pump Date: 11-02-2023 Time: 14:50

WATER VOLUME CALCULATION		
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot		
Water Volume =	0.341	
Initial Depth to Water (ft.):	12.85	Depth to Well Bottom (ft.): 50.73

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
15:00		200.00	1000.00	4.82	0.27	206.00	49.80	91.78	16.50	Slight haze	Yes	Unable to take well depths during reading collection due to size of casing
15:05		200.00	1000.00	4.8	0.20	159.00	36.00	92.48	17.05	Clear	Yes	Unable to take well depths during reading collection due to size of casing
15:10		200.00	1000.00	4.75	0.18	147.20	18.10	92.57	16.86	Clear	Yes	Unable to take well depths during reading collection due to size of casing
15:15		200.00	1000.00	4.73	0.14	135.70	11.90	92.67	16.80	Clear	Yes	Unable to take well depths during reading collection due to size of casing
15:20		200.00	1000.00	4.71	0.14	128.60	7.29	93.03	16.69	Clear	Yes	Unable to take well depths during reading collection due to size of casing
15:25		200.00	1000.00	4.7	0.14	127.40	4.94	92.78	17.03	Clear	Yes	Unable to take well depths during reading collection due to size of casing

Screen Interval: 10.2-15.2

Sampling Data
 Method: Low Flow Date: 11-02-2023 Time: 15:25 Purge Start Time: 14:55
 Field Filtered: No Total Volume Purged (mL): 6000

Field Parameters

STABILIZED PARAMETERS	
pH	4.70
Spec. Cond.(µS/cm)	92.78
Turbidity (NTU)	4.94
Temp.(°C)	17.03
DO (mg/L)	0.14
ORP (mV)	127.40

Sample ID: CAP4Q23-PZ-22-110223
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	57.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	8

RECORD OF WELL SAMPLING

Site Name: Chemours Fayetteville Well ID: SMW-10 Well Diameter: 2 Inches
 Samplers: DEBORAH AYERSIKEN STUART Event: Quarterly CAP Project Manager: Tracy Ovbey

Purging Data
 Pump Depth: 46
 Pump Loc: within screen
 Method: Double valve pump Date: 11-16-2023 Time: 12:35

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	3.544		
Initial Depth to Water (ft.):	29.95	Depth to Well Bottom (ft.):	52.1

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
12:44	29.93	125.00	750.00	5.56	0.22	-96.00	11.30	132.31	21.00	Clear	Yes- sulfur	
12:49	29.92	125.00	625.00	5.27	0.11	-89.90	8.18	108.24	20.92	Clear	No	
12:54	29.90	125.00	625.00	5.17	0.06	-30.70	7.77	97.32	20.85	Clear	No	
12:59	29.90	125.00	625.00	5.16	0.08	-64.70	8.31	94.81	20.88	Clear	No	
13:04	29.90	125.00	625.00	5.23	0.06	-67.80	7.04	94.98	20.93	Clear	No	
13:09	29.90	125.00	625.00	5.11	0.02	-70.80	5.93	93.25	20.89	Clear	No	
13:14	29.88	125.00	625.00	5.2	0.02	-76.80	5.70	94.00	20.95	Clear	No	
13:19	29.90	125.00	625.00	5	0.08	-61.90	5.50	93.50	20.97	Clear	No	
13:24	29.87	125.00	625.00	5.23	0.06	-60.60	5.17	93.86	20.94	Clear	No	
13:29	29.88	125.00	625.00	5.23	0.08	-65.90	4.42	94.19	20.92	Clear	Yes- sulfur	

Screen Interval: 45.0-60.0

Sampling Data
 Method: Low Flow Date: 11-16-2023 Time: 13:29 Purge Start Time: 12:38
 Field Filtered: No Total Volume Purged (mL): 6375

Field Parameters

STABILIZED PARAMETERS	
pH	5.23
Spec. Cond. (µS/cm)	94.19
Turbidity (NTU)	4.42
Temp. (°C)	20.92
DO (mg/L)	0.08
ORP (mV)	-65.90

Sample ID: CAP4Q23-SMW-10-111623
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	68.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	<input type="text" value="1.558"/>		
Initial Depth to Water (ft.):	<input type="text" value="16.06"/>	Depth to Well Bottom (ft.):	<input type="text" value="25.8"/>

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
15:15	16.12	275.00	3300.00	4.41	4.21	159.50	11.70	25306.00	19.26	Cloudy	No	
15:20	16.12	275.00	1375.00	4.42	4.29	192.70	3.29	25235.00	19.18	Clear	No	
15:25	16.12	275.00	1375.00	4.43	4.25	206.80	2.43	25260.00	19.17	Clear	No	
15:30	16.12	275.00	1375.00	4.43	4.21	217.40	1.91	25235.00	19.11	Clear	No	
15:35	16.12	275.00	1375.00	4.45	4.28	221.40	1.83	25261.00	19.04	Clear	No	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	<input type="text" value="4.45"/>
Spec. Cond. (µS/cm)	<input type="text" value="25261.00"/>
Turbidity (NTU)	<input type="text" value="1.83"/>
Temp. (°C)	<input type="text" value="19.04"/>
DO (mg/L)	<input type="text" value="4.28"/>
ORP (mV)	<input type="text" value="221.40"/>

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	<input type="text" value="79.00"/>
Sky:	<input type="text" value="Sunny"/>
Precipitation:	<input type="text" value="None"/>
Wind (mph)	<input type="text" value="10"/>

RECORD OF WELL SAMPLING

Site Name: Well ID: Well Diameter: Inches
 Samplers: Event: Project Manager:

Purging Data
 Pump Depth:
 Pump Loc:
 Method: Date: Time:

WATER VOLUME CALCULATION			
= (Total Depth of Well - Depth To Water) x Casing Volume per Foot			
Water Volume =	2,496		
Initial Depth to Water (ft.):	88.7	Depth to Well Bottom (ft.):	104.3

Time	DTW	Pump Rate	Vol.	pH	DO	Redox	Turbidity	Spec. Cond.	Temp.	Color	Odor	Comments
24 hr	ft	mL/min	mL	pH units	mg/L	mV	NTU	µS/cm	°C			
12:10	86.30	200.00	2000.00	3.95	0.54	108.60	300.00	191.67	20.12	Cloudy	No	
12:15	86.30	200.00	1000.00	3.91	0.33	120.30	151.00	189.02	19.79	Cloudy	No	
12:20	86.30	200.00	1000.00	3.89	0.22	146.60	82.20	188.15	19.89	Cloudy	No	
12:25	86.30	200.00	1000.00	3.89	0.22	158.80	61.40	188.12	19.74	Cloudy	No	
12:30	86.30	200.00	1000.00	3.88	0.31	167.70	41.30	187.09	19.71	Cloudy	No	
12:35	86.30	200.00	1000.00	3.89	0.42	171.30	29.00	186.65	19.58	Cloudy	No	
12:40	86.30	200.00	1000.00	3.9	0.56	175.90	22.90	186.70	19.56	Cloudy	No	
12:45	86.30	200.00	1000.00	3.9	0.63	181.20	16.20	186.73	19.68	Cloudy	No	
12:50	86.30	200.00	1000.00	3.91	0.75	190.80	13.50	187.28	19.36	Cloudy	No	
12:55	86.30	200.00	1000.00	3.91	0.81	198.00	10.70	186.56	19.46	Cloudy	No	
13:00	86.30	200.00	1000.00	3.91	0.83	203.20	9.69	186.78	19.46	Cloudy	No	
13:05	86.30	200.00	1000.00	3.91	0.84	205.70	8.82	186.21	19.30	Cloudy	No	

Screen Interval:

Sampling Data
 Method: Date: Time:
 Field Filtered: Purge Start Time:
 Total Volume Purged (mL):

Field Parameters

STABILIZED PARAMETERS	
pH	3.91
Spec. Cond. (µS/cm)	186.21
Turbidity (NTU)	8.82
Temp. (°C)	19.30
DO (mg/L)	0.84
ORP (mV)	205.70

Sample ID:
 DuplicateID:
 QA/QC:

WEATHER CONDITIONS	
Temperature (F):	74.00
Sky:	Sunny
Precipitation:	None
Wind (mph)	5

Appendix D

Laboratory Reports and DVM

Report

ADQM Data Review

Site: Chemours Fayetteville

Project: Tarheel Sampling 2023 (select lots)

Project Reviewer: Michael Aucoin

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CFR-TARHEEL-24-092823	320-105754-1	Surface Water	N	09/28/2023	23:01	FS
CFR-TARHEEL-24-100223	320-105754-2	Surface Water	N	10/02/2023	23:01	FS
CFR-TARHEEL-24-100523	320-105969-1	Surface Water	N	10/05/2023	23:01	FS
CFR-TARHEEL-24-101023	320-105969-2	Surface Water	N	10/10/2023	23:01	FS
CFR-TARHEEL-24-101023-D	320-105969-3	Surface Water	N	10/10/2023	23:01	DUP
CFR-TARHEEL-24-101223	320-106157-1	Surface Water	N	10/12/2023	23:01	FS
CFR-TARHEEL-24-101623	320-106157-2	Surface Water	N	10/16/2023	23:01	FS
CFR-TARHEEL-24-101923	320-106379-1	Surface Water	N	10/19/2023	23:01	FS
CFR-TARHEEL-24-102323	320-106379-2	Surface Water	N	10/23/2023	23:01	FS
CFR-TARHEEL-24-102623	320-106734-1	Surface Water	N	10/26/2023	23:01	FS
CFR-TARHEEL-24-103023	320-106734-2	Surface Water	N	10/30/2023	23:01	FS

* FS=Field Sample
 DUP=Field Duplicate
 FB=Field Blank
 EB=Equipment Blank
 TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	Tarheel Sampling
Eurofins Environ Testing Northern Cali	Cl. Spec. Table 3 Compound SOP	Per- and Polyfluorinated Alkyl Substances (PFAS)	Tarheel Sampling

ADQM Data Review Checklist

Item	Description	Yes	No*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X				
B	Were samples received by the laboratory in agreement with the associated chain of custody?	X				
C	Was the chain of custody properly completed by the laboratory and/or field team?	X				
D	Were samples prepped/analyzed by the laboratory within method holding times?	X				
E	Were data review criteria met for method blanks, LCSS/LCSDs, MSs/MSDs, PDSs, SDs, replicates, surrogates, sample results within calibration range, total/dissolved samples, field duplicates, field/equipment/trip blanks?		X	X		
F	Were all data usable and not R qualified?	X				
ER#	Description					
Other QA/QC Items to Note:						

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

The lab reports due to a large page count are stored on a network shared drive and are available to be posted on external shared drives, or on a flash drive.

Data Verification Module (DVM)

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

- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- Difference/RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference/percent difference between total and dissolved sample pairs
- Temperature upon laboratory receipt not to exceed 10 C (manual check)

There are two qualifier fields in EIM:

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

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

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

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

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

If the data have been validated by a third party, the field "**Validated By**" will be set to the validator (e.g., ESI for Environmental Standards, Inc

DVM Narrative Report

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	PPF Acid	0.019	UG/L	PQL		0.0050	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options:

LABSTATS

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-092823	09/28/2023	320-105754-1	R-PSDA	0.0033	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CFR-TARHEEL-24-092823	09/28/2023	320-105754-1	Hydrolyzed PSDA	0.0023	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CFR-TARHEEL-24-100223	10/02/2023	320-105754-2	R-PSDA	0.0044	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CFR-TARHEEL-24-100223	10/02/2023	320-105754-2	Hydrolyzed PSDA	0.0024	UG/L	PQL		0.0020	J	Cl. Spec. Table 3 Compound SOP		PFAS_DI_Prep
CFR-TARHEEL-24-101223	10/12/2023	320-106157-1	R-PSDA	0.0022	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-101623	10/16/2023	320-106157-2	R-PSDA	0.0029	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-101623	10/16/2023	320-106157-2	Hydrolyzed PSDA	0.0022	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-102323	10/23/2023	320-106379-2	R-PSDA	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-102623	10/26/2023	320-106734-1	R-PSDA	0.0047	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-102623	10/26/2023	320-106734-1	Hydrolyzed PSDA	0.0023	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	R-PSDA	0.0049	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	Hydrolyzed PSDA	0.0025	UG/L	PQL		0.0020	J	537 Modified		3535

ADQM Data Review

Site: Chemours Fayetteville

Project: Tarheel Sampling (select lots)

Project Reviewer: Bridget Gavaghan and Michael Aucoin

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CFR-TARHEEL-24-102623	320-106734-1	Surface Water	N	10/26/2023	23:01	FS
CFR-TARHEEL-24-103023	320-106734-2	Surface Water	N	10/30/2023	23:01	FS
CFR-TARHEEL-24-110223	320-106957-1	Surface Water	N	11/02/2023	23:01	FS
CFR-TARHEEL-24-110623	320-106957-2	Surface Water	N	11/06/2023	23:01	FS
CFR-TARHEEL-24-110923	320-107164-1	Surface Water	N	11/09/2023	23:01	FS
CFR-TARHEEL-24-111323	320-107164-2	Surface Water	N	11/13/2023	23:01	FS
CFR-TARHEEL-24-111323-D	320-107164-3	Surface Water	N	11/13/2023	23:01	DUP
CFR-TARHEEL-24-111623	320-107540-1	Surface Water	N	11/16/2023	23:01	FS
CFR-TARHEEL-24-112023	320-107540-2	Surface Water	N	11/20/2023	23:01	FS
CFR-TARHEEL-24-112123	320-107540-3	Surface Water	N	11/21/2023	23:01	FS
CFR-TARHEEL-24-112223	320-107540-4	Surface Water	N	11/22/2023	23:01	FS
CFR-TARHEEL-24-112723	320-107657-1	Surface Water	N	11/27/2023	23:01	FS
CFR-TARHEEL-24-113023	320-107657-2	Surface Water	N	11/30/2023	23:01	FS
CFR-TARHEEL-24-120423	320-107894-1	Surface Water	N	12/04/2023	23:01	FS
CFR-TARHEEL-24-120723	320-107894-2	Surface Water	N	12/07/2023	23:01	FS
CFR-TARHEEL-24-121123	320-108044-1	Surface Water	N	12/11/2023	23:01	FS
CFR-TARHEEL-24-121223	320-108044-2	Surface Water	N	12/12/2023	23:01	FS
CFR-TARHEEL-24-121223-D	320-108044-3	Surface Water	N	12/12/2023	23:01	DUP

* FS=Field Sample
 DUP=Field Duplicate
 FB=Field Blank
 EB=Equipment Blank
 TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	Tarheel Sampling

ADQM Data Review Checklist

Item	Description	Yes	No*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X				
B	Were samples received by the laboratory in agreement with the associated chain of custody?	X				
C	Was the chain of custody properly completed by the laboratory and/or field team?	X				
D	Were samples prepped/analyzed by the laboratory within method holding times?		X	X	X	
E	Were data review criteria met for method blanks, LCSS/LCSDs, MSs/MSDs, PDSs, SDs, replicates, surrogates, sample results within calibration range, total/dissolved samples, field duplicates, field/equipment/trip blanks?		X	X	X	
F	Were all data usable and not R qualified?	X				
ER#	Description					
Other QA/QC Items to Note:						

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

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- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- Difference/RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference/percent difference between total and dissolved sample pairs
- Temperature upon laboratory receipt not to exceed 10 C (manual check)

There are two qualifier fields in EIM:

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

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

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

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

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

If the data have been validated by a third party, the field “**Validated By**” will be set to the validator (e.g., ESI for Environmental Standards, Inc.).

DVM Narrative Report

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options:

LABSTATS

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options:

LABSTATS

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	R-EVE	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-121223	12/12/2023	320-108044-2	R-PSDA	0.0055	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323	11/13/2023	320-107164-2	R-PSDA	0.0068	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323	11/13/2023	320-107164-2	Hydrolyzed PSDA	0.0041	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323	11/13/2023	320-107164-2	R-EVE	0.0060	UG/L	PQL		0.0020	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

Validation Reason Code: High relative percent difference (RPD) observed between LCS and LCSD samples. The reported result may be imprecise.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-110223	11/02/2023	320-106957-1	R-PSDA	0.012	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110223	11/02/2023	320-106957-1	R-EVE	0.0033	UG/L	PQL		0.0020	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	PPF Acid	0.019	UG/L	PQL		0.0050	J	537 Modified		3535

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-120423	12/04/2023	320-107894-1	R-PSDA	0.0028	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-120423	12/04/2023	320-107894-1	Hydrolyzed PSDA	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-120723	12/07/2023	320-107894-2	R-PSDA	0.0029	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-120723	12/07/2023	320-107894-2	Hydrolyzed PSDA	0.0024	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121123	12/11/2023	320-108044-1	R-PSDA	0.0040	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121223-D	12/12/2023	320-108044-3	R-PSDA	0.0051	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-102623	10/26/2023	320-106734-1	R-PSDA	0.0047	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-102623	10/26/2023	320-106734-1	Hydrolyzed PSDA	0.0023	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	R-PSDA	0.0049	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-103023	10/30/2023	320-106734-2	Hydrolyzed PSDA	0.0025	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110223	11/02/2023	320-106957-1	Hydrolyzed PSDA	0.0034	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110623	11/06/2023	320-106957-2	R-PSDA	0.0030	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110623	11/06/2023	320-106957-2	Hydrolyzed PSDA	0.0032	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110923	11/09/2023	320-107164-1	R-PSDA	0.0039	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110923	11/09/2023	320-107164-1	Hydrolyzed PSDA	0.0038	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-110923	11/09/2023	320-107164-1	R-EVE	0.0041	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323-D	11/13/2023	320-107164-3	R-PSDA	0.0072	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323-D	11/13/2023	320-107164-3	Hydrolyzed PSDA	0.0041	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111323-D	11/13/2023	320-107164-3	R-EVE	0.0067	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111623	11/16/2023	320-107540-1	R-PSDA	0.0022	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-111623	11/16/2023	320-107540-1	Hydrolyzed PSDA	0.0024	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112023	11/20/2023	320-107540-2	R-PSDA	0.0042	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112023	11/20/2023	320-107540-2	Hydrolyzed PSDA	0.0022	UG/L	PQL		0.0020	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-112023	11/20/2023	320-107540-2	R-EVE	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112123	11/21/2023	320-107540-3	R-PSDA	0.0025	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112123	11/21/2023	320-107540-3	Hydrolyzed PSDA	0.0025	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112223	11/22/2023	320-107540-4	Hydrolyzed PSDA	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PEPA	0.0029	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PPF Acid	0.032	UG/L	PQL		0.0050	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFMOAA	0.020	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Perfluoroheptanoic Acid	0.0052	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFO2HxA	0.010	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PFO3OA	0.0027	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	R-PSDA	0.0034	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Hydrolyzed PSDA	0.0021	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	R-EVE	0.0023	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PEPA	0.0030	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PPF Acid	0.033	UG/L	PQL		0.0050	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFMOAA	0.021	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	PMPA	0.016	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-113023	11/30/2023	320-107657-2	Hfpo Dimer Acid	0.0096	UG/L	PQL		0.0040	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Perfluoroheptanoic Acid	0.0061	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFO2HxA	0.012	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PFO3OA	0.0042	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	R-PSDA	0.0040	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Hydrolyzed PSDA	0.0020	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	PMPA	0.016	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-112723	11/27/2023	320-107657-1	Hfpo Dimer Acid	0.014	UG/L	PQL		0.0040	J	537 Modified		3535

ADQM Data Review

Site: Chemours Fayetteville

Project: Tarheel Sampling (select lots)

Project Reviewer: Michael Aucoin

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CFR-TARHEEL-24-121123	320-108044-1	Surface Water	N	12/11/2023	23:01	FS
CFR-TARHEEL-24-121223	320-108044-2	Surface Water	N	12/12/2023	23:01	FS
CFR-TARHEEL-24-121223-D	320-108044-3	Surface Water	N	12/12/2023	23:01	DUP
CFR-TARHEEL-24-121723	320-108237-1	Surface Water	N	12/17/2023	23:01	FS
CFR-TARHEEL-121823	320-108237-2	Surface Water	N	12/18/2023	10:17	FS
CFR-TARHEEL-121923	320-108237-3	Surface Water	N	12/19/2023	09:50	FS
CFR-TARHEEL-24-122523	320-108425-1	Surface Water	N	12/25/2023	23:01	FS
CFR-TARHEEL-24-122723	320-108425-2	Surface Water	N	12/27/2023	23:01	FS

* FS=Field Sample
 DUP=Field Duplicate
 FB=Field Blank
 EB=Equipment Blank
 TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	Tarheel Sampling

ADQM Data Review Checklist

Item	Description	Yes	No*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X				
B	Were samples received by the laboratory in agreement with the associated chain of custody?	X				
C	Was the chain of custody properly completed by the laboratory and/or field team?	X				
D	Were samples prepped/analyzed by the laboratory within method holding times?		X	X	X	
E	Were data review criteria met for method blanks, LCSS/LCSDs, MSs/MSDs, PDSs, SDs, replicates, surrogates, sample results within calibration range, total/dissolved samples, field duplicates, field/equipment/trip blanks?		X	X	X	
F	Were all data usable and not R qualified?	X				
ER#	Description					
Other QA/QC Items to Note:						

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

The lab reports due to a large page count are stored on a network shared drive and are available to be posted on external shared drives, or on a flash drive.

Data Verification Module (DVM)

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

- Field and laboratory blank contamination
- US EPA hold time criteria
- Missing Quality Control (QC) samples
- Matrix spike (MS)/matrix spike duplicate (MSD) recoveries and the relative percent differences (RPDs) between these spikes
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) recoveries and the RPD between these spikes
- Surrogate spike recoveries for organic analyses
- Difference/RPD between field duplicate sample pairs
- RPD between laboratory replicates for inorganic analyses
- Difference/percent difference between total and dissolved sample pairs
- Temperature upon laboratory receipt not to exceed 10 C (manual check)

There are two qualifier fields in EIM:

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

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

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

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

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

If the data have been validated by a third party, the field “**Validated By**” will be set to the validator (e.g., ESI for Environmental Standards, Inc.).

DVM Narrative Report

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options:

LABSTATS

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Hydrolyzed PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	R-EVE	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	R-PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Hydrolyzed PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	R-EVE	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PEPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFO3OA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options:

LABSTATS

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-121223	12/12/2023	320-108044-2	R-PSDA	0.0055	UG/L	PQL		0.0020	J	537 Modified		3535

Site: Fayetteville

Sampling Program: Tarheel Sampling

Validation Options: LABSTATS

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-24-121123	12/11/2023	320-108044-1	R-PSDA	0.0040	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121223-D	12/12/2023	320-108044-3	R-PSDA	0.0051	UG/L	PQL		0.0020	J	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CFR-TARHEEL-121823	12/18/2023	320-108237-2	R-PSDA	0.0034	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PPF Acid	0.015	UG/L	PQL		0.0050	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFMOAA	0.011	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Perfluoroheptanoic Acid	0.0051	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PFO2HxA	0.0051	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	PMPA	0.0065	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-24-121723	12/17/2023	320-108237-1	Hfpo Dimer Acid	0.0042	UG/L	PQL		0.0040	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PPF Acid	0.024	UG/L	PQL		0.0050	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFMOAA	0.0057	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Perfluoroheptanoic Acid	0.0031	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFO2HxA	0.0082	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PFO3OA	0.0028	ug/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PEPA	0.0020	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	PMPA	0.018	UG/L	PQL		0.0020	J	537 Modified		3535
CFR-TARHEEL-121823	12/18/2023	320-108237-2	Hfpo Dimer Acid	0.0071	UG/L	PQL		0.0040	J	537 Modified		3535

ADQM Data Review

Site: Chemours Fayetteville

Project: CAP GW 4Q23, CAP MW 4Q23, CAP SW 4Q23

Project Reviewer: Bridget Gavaghan

Sample Summary

Field Sample ID	Lab Sample ID	Sample Matrix	Filtered	Sample Date	Sample Time	Sample Purpose
CAP4Q23-LTW-05-110223	320-106772-1	Groundwater	N	11/02/2023	10:50	FS
CAP4Q23-PIW-7S-110223	320-106772-2	Groundwater	N	11/02/2023	15:50	FS
CAP4Q23-PIW-7D-110223	320-106772-3	Groundwater	N	11/02/2023	14:00	FS
CAP4Q23-PZ-22-110223	320-106772-4	Groundwater	N	11/02/2023	15:25	FS
CAP4Q23-LTW-04-110223	320-106772-5	Groundwater	N	11/02/2023	14:40	FS
CAP4Q23-OW-28-110223	320-106772-6	Groundwater	N	11/02/2023	12:15	FS
CAP4Q23-LTW-02-110323	320-106772-7	Groundwater	N	11/03/2023	11:55	FS
CAP4Q23-LTW-01-110323	320-106773-1	Groundwater	N	11/03/2023	11:25	FS
CAP4Q23-PIW-3D-110323	320-106773-2	Groundwater	N	11/03/2023	10:00	FS
CAP4Q23-OW-33-110223	320-106773-3	Groundwater	N	11/02/2023	10:25	FS
CAP4Q23-OW-33-110223-D	320-106773-4	Groundwater	N	11/02/2023	10:25	DUP
CAP4Q23-PW-06-110623	320-106773-5	Groundwater	N	11/06/2023	12:50	FS
CAP4Q23-PIW-1D-110723	320-106887-1	Groundwater	N	11/07/2023	13:10	FS
CAP4Q23-PIW-1D-110723-Z	320-106887-2	Groundwater	Y	11/07/2023	13:10	FS
CAP4Q23-SMW-11-110723	320-106887-3	Groundwater	N	11/07/2023	15:35	FS
CAP4Q23-PW-09-110823	320-106887-4	Groundwater	N	11/08/2023	12:40	FS
CAP4Q23-EQBLK-DV-110823-Z	320-106887-5	Blank Water	Y	11/08/2023	15:15	EB
CAP4Q23-EQBLK-DV-110823	320-106887-6	Blank Water	N	11/08/2023	15:15	EB
CAP4Q23-PW-09-110823-Z	320-106887-7	Groundwater	Y	11/08/2023	12:40	FS
CAP4Q23-EQBLK-PP-110823-Z	320-106887-8	Blank Water	Y	11/08/2023	15:00	EB
CAP4Q23-EQBLK-PP-110823	320-106887-9	Blank Water	N	11/08/2023	15:00	EB
CAP4Q23-PW-04-110923	320-107233-1	Groundwater	N	11/09/2023	09:20	FS
CAP4Q23-PW-04-110923-Z	320-107233-2	Groundwater	Y	11/09/2023	09:20	FS
CAP4Q23-LTW-03-111323	320-107233-3	Groundwater	N	11/13/2023	12:40	FS
CAP4Q23-SMW-12-110823	320-107233-4	Groundwater	N	11/08/2023	13:05	FS
CAP4Q23-SMW-10-111623	320-107233-5	Groundwater	N	11/16/2023	13:29	FS

CAP4Q23-EQBLK-BAILER-110923	320-107233-6	Blank Water	N	11/09/2023	09:00	EB
CAP4Q23-EQBLK-BAILER-110923-Z	320-107233-7	Blank Water	Y	11/09/2023	09:05	EB
CAP4Q23-WC-1-112323	320-107480-1	Surface Water	N	11/23/2023	07:00	FS
CAP4Q23-WC-2-112323	320-107480-2	Surface Water	N	11/23/2023	06:50	FS
CAP4Q23-WC-3-112323	320-107480-3	Surface Water	N	11/23/2023	07:00	FS
CAP4Q23-SEEP-C-112323	320-107480-4	Surface Water	N	11/23/2023	09:30	FS
RIVER-WATER-INTAKE2-24-112323	320-107480-5	Surface Water	N	11/23/2023	07:00	FS
CAP4Q23-OUTFALL-002-112323	320-107480-6	Surface Water	N	11/23/2023	09:12	FS
CAP4Q23-WC-1-112323-D	320-107480-7	Surface Water	N	11/23/2023	07:00	DUP
CAP4Q23-TARHEEL-24-112423	320-107480-8	Surface Water	N	11/24/2023	04:36	FS
CAP4Q23-OLDOF-1-24-112323	320-107480-9	Surface Water	N	11/23/2023	10:44	FS
CAP4Q23-CFR-RM-76-112223	320-107648-1	Surface Water	N	11/22/2023	09:10	FS
CAP4Q23-GBC-1-112223	320-107648-2	Surface Water	N	11/22/2023	14:25	FS
CAP4Q23-LOCK-DAM-SEEP-112223	320-107648-3	Surface Water	N	11/22/2023	11:35	FS
CAP4Q23-LOCK-DAM-SEEP-112223-D	320-107648-4	Surface Water	N	11/22/2023	11:35	DUP
CAP4Q23-LOCK-DAM-NORTH-112223	320-107648-5	Surface Water	N	11/22/2023	11:45	FS
CAP4Q23-CFR-BLADEN-120623	320-107896-1	Surface Water	N	12/06/2023	11:25	FS
CAP4Q23-CFR-TARHEEL-120623	320-107896-2	Surface Water	N	12/06/2023	16:38	FS
CAP4Q23-CFR-KINGS-121423	320-108081-1	Surface Water	N	12/14/2023	12:15	FS
CAP4Q23-BLADEN-1DR-010424	320-108551-1	Groundwater	N	01/04/2024	11:18	FS
CAP4Q23-EQBLK-PP-010424	320-108551-2	Blank Water	N	01/04/2024	07:15	EB

* FS=Field Sample
DUP=Field Duplicate
FB=Field Blank
EB=Equipment Blank
TB=Trip Blank

Analytical Protocol

Lab Name	Lab Method	Parameter Category	Sampling Program
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP GW Sampling 4Q23
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP SW Sampling 4Q23
Eurofins Environ Testing Northern Cali	537 Modified	Per- and Polyfluorinated Alkyl Substances (PFAS)	CAP MW Sampling 4Q23

ADQM Data Review Checklist

Item	Description	Yes	No*	DVM Narrative Report	Laboratory Report	Exception Report (ER) #
A	Did samples meet laboratory acceptability requirements upon receipt (i.e., intact, within temperature, properly preserved, and no headspace where applicable)?	X				
B	Were samples received by the laboratory in agreement with the associated chain of custody?		X		X	
C	Was the chain of custody properly completed by the laboratory and/or field team?	X				
D	Were samples prepped/analyzed by the laboratory within method holding times?		X	X	X	
E	Were data review criteria met for method blanks, LCSS/LCSDs, MSs/MSDs, PDSs, SDs, replicates, surrogates, sample results within calibration range, total/dissolved samples, field duplicates, field/equipment/trip blanks?		X	X	X	
F	Were all data usable and not R qualified?	X				
ER#	Description					
Other QA/QC Items to Note:						

* See DVM Narrative Report, Laboratory Report, and/or ER # for further details as indicated.

The electronic data submitted for this project were reviewed via the Data Verification Module (DVM) process. Overall, the data are acceptable for use without qualification, except as noted on the attached DVM Narrative Report.

The lab reports due to a large page count are stored on a network shared drive and are available to be posted on external shared drives, or on a flash drive.

Data Verification Module (DVM)

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

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

There are two qualifier fields in EIM:

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

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

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

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

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

If the data have been validated by a third party, the field "**Validated By**" will be set to the validator (e.g., ESI for Environmental Standards, Inc.).

DVM Narrative Report

Site: Fayetteville

Sampling Program: CAP MW Sampling 4Q23

Validation Options: LABSTATS

Validation Reason Code: Contamination detected in equipment blank(s). Sample result does not differ significantly from the analyte concentration detected in the associated equipment blank(s).

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-SMW-10-111623	11/16/2023	320-107233-5	Hydrolyzed PSDA	0.0025	UG/L	PQL		0.0020	B	537 Modified		3535
CAP4Q23-SMW-10-111623	11/16/2023	320-107233-5	PFO2HxA	0.022	ug/L	PQL		0.0020	B	537 Modified		3535
CAP4Q23-SMW-12-110823	11/08/2023	320-107233-4	R-PSDA	0.076	UG/L	PQL		0.028	B	537 Modified		3535

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	10:2 Fluorotelomer sulfonate	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluoroundecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	N-Methyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluoropentane Sulfonic Acid (PFPeS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorododecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorodecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorodecane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorobutanoic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorotetradecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorononanesulfonic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorotridecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	9Cl-PF3ONS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	11Cl-PF3OUdS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorododecane Sulfonic Acid (PFDoS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-WC-3-112323	11/23/2023	320-107480-3	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	DONA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP MW Sampling 4Q23

Validation Options: LABSTATS

Validation Reason Code: The preparation hold time for this sample was exceeded by a factor of 2. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-04-110923-Z	11/09/2023	320-107233-2	Perfluorooctadecanoic Acid	0.12	ug/L	PQL		0.12	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP GW Sampling 4Q23

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-OW-33-110223	11/02/2023	320-106773-3	Perfluorooctadecanoic Acid	0.094	ug/L	PQL		0.094	UJ	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoropentane Sulfonic Acid (PFPeS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	6:2 Fluorotelomer sulfonate	0.0050	ug/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	0.0040	ug/L	PQL		0.0040	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PEPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorododecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	N-methyl perfluoro-1-octanesulfonamide	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorodecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorodecane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoroheptane Sulfonic Acid (PFHpS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorononanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorotetradecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorohexadecanoic Acid (PFHxDA)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorononanesulfonic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorotridecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorooctane Sulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	9CI-PF3ONS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	11CI-PF3OUdS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorododecane Sulfonic Acid (PFDoS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	DONA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	N-ethylperfluoro-1-octanesulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-SMW-10-111623	11/16/2023	320-107233-5	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	10:2 Fluorotelomer sulfonate	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PMPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Hfpo Dimer Acid	0.0040	UG/L	PQL		0.0040	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFOS	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoroundecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	N-Methyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	R-PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Hydrolyzed PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	R-EVE	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535

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Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	0.0040	ug/L	PQL		0.0040	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PEPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoropentanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoropentane Sulfonic Acid (PFPeS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	6:2 Fluorotelomer sulfonate	0.0050	ug/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorohexanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorododecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	N-methyl perfluoro-1-octanesulfonamide	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFOA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorodecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorodecane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorohexane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorobutanoic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorobutane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoroheptanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluoroheptane Sulfonic Acid (PFHpS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorononanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorotetradecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFO2HxA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFO3OA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

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Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	N-ethylperfluoro-1-octanesulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PPF Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFMOAA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorohexadecanoic Acid (PFHxDA)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorononanesulfonic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorotridecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorooctane Sulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	9CI-PF3ONS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	11CI-PF3OUdS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	Perfluorododecane Sulfonic Acid (PFDoS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823	11/08/2023	320-106887-4	DONA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	10:2 Fluorotelomer sulfonate	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PMPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Hfpo Dimer Acid	0.0040	UG/L	PQL		0.0040	UJ	537 Modified		3535

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Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFOS	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoroundecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	N-Methyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	R-PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Hydrolyzed PSDA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	R-EVE	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	2-(N-methyl perfluoro-1-octanesulfonamido)-ethanol	0.0040	ug/L	PQL		0.0040	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PEPA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoropentanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoropentane Sulfonic Acid (PFPeS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	6:2 Fluorotelomer sulfonate	0.0050	ug/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PS Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorohexanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorododecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	N-methyl perfluoro-1-octanesulfonamide	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFOA	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorodecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorodecane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535

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Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorohexane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorobutanoic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorobutane Sulfonic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoroheptanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluoroheptane Sulfonic Acid (PFHpS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorononanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorotetradecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	1H,1H,2H,2H-perfluorodecanesulfonate (8:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFO2HxA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFO3OA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFO4DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFO5DA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	N-ethylperfluoro-1-octanesulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PPF Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFMOAA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorohexadecanoic Acid (PFHxDA)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorononanesulfonic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorotridecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Hydro-PS Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorooctane Sulfonamide	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	9CI-PF3ONS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	1H,1H,2H,2H-perfluorohexanesulfonate (4:2 FTS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reporting limit may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	11Cl-PF3OUdS	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Hydro-EVE Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	Perfluorododecane Sulfonic Acid (PFDoS)	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	NVHOS, Acid Form	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	PFECA-G	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-PW-09-110823-Z	11/08/2023	320-106887-7	DONA	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-OW-28-110223	11/02/2023	320-106772-6	Hydrolyzed PSDA	0.027	UG/L	PQL		0.027	UJ	537 Modified		3535
CAP4Q23-PW-06-110623	11/06/2023	320-106773-5	R-PSDA	0.028	UG/L	PQL		0.028	UJ	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	Perfluorooctadecanoic Acid	0.12	ug/L	PQL		0.12	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoro(2-ethoxyethane)sulfonic	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	10:2 Fluorotelomer sulfonate	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFECA B	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	2-(N-ethyl perfluoro-1-octanesulfonamido)-ethanol	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoroundecanoic Acid	0.0020	UG/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	N-Methyl Perfluorooctane Sulfonamidoacetic Acid	0.0050	UG/L	PQL		0.0050	UJ	537 Modified		3535
CAP4Q23-EQBLK-BAILER-110923	11/09/2023	320-107233-6	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-EQBLK-BAILER-110923-Z	11/09/2023	320-107233-7	Perfluorooctadecanoic Acid	0.0020	ug/L	PQL		0.0020	UJ	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	R-PSDCA	0.0030	UG/L	PQL		0.0030	UJ	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP MW Sampling 4Q23

Validation Options: LABSTATS

Validation Reason Code: Surrogates had relative percent recovery (RPR) values greater than the upper control limit. The reported result may be biased high.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	Hfpo Dimer Acid	5.8	UG/L	PQL		0.14	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP SW Sampling 4Q23

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	Hfpo Dimer Acid	0.089	UG/L	PQL		0.0040	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP SW Sampling 4Q23

Validation Options: LABSTATS

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-LOCK-DAM-SEEP-112223	11/22/2023	320-107648-3	PPF Acid	5.6	UG/L	PQL		0.23	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223-D	11/22/2023	320-107648-4	PPF Acid	10	UG/L	PQL		0.23	J	537 Modified		3535
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	PFO3OA	0.023	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	PFO4DA	0.0054	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323-D	11/23/2023	320-107480-7	PFO3OA	0.032	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323-D	11/23/2023	320-107480-7	PFO4DA	0.0081	ug/L	PQL		0.0020	J	537 Modified		3535

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

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	NVHOS, Acid Form	0.0057	UG/L	PQL		0.0030	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PFO2HxA	0.19	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PPF Acid	0.22	UG/L	PQL		0.0050	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PFMOAA	0.29	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluorobutane Sulfonic Acid	0.0047	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Hydrolyzed PSDA	0.020	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	R-EVE	0.0074	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PEPA	0.048	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	Perfluoropentanoic Acid	0.0051	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PMPA	0.23	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	PFOS	0.0020	UG/L	PQL		0.0020	J	537 Modified		3535

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PW-04-110923-Z	11/09/2023	320-107233-2	R-PSDA	0.14	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-PW-04-110923-Z	11/09/2023	320-107233-2	R-EVE	0.099	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-BLADEN-1DR-010424	01/04/2024	320-108551-1	R-PSDA	0.012	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-BLADEN-1DR-010424	01/04/2024	320-108551-1	R-EVE	0.0050	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-BLADEN-120623	12/06/2023	320-107896-1	R-PSDA	0.0030	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-BLADEN-120623	12/06/2023	320-107896-1	Hydrolyzed PSDA	0.0029	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-BLADEN-120623	12/06/2023	320-107896-1	R-EVE	0.0020	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	R-PSDA	0.87	UG/L	PQL		0.026	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	Hydrolyzed PSDA	6.5	UG/L	PQL		0.025	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	R-EVE	0.18	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-PW-04-110923	11/09/2023	320-107233-1	R-EVE	0.066	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-EQBLK-DV-110823	11/08/2023	320-106887-6	R-PSDA	0.0055	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-EQBLK-DV-110823	11/08/2023	320-106887-6	Hydrolyzed PSDA	0.036	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-EQBLK-DV-110823-Z	11/08/2023	320-106887-5	Hydrolyzed PSDA	0.0040	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-PIW-1D-110723	11/07/2023	320-106887-1	R-PSDA	0.32	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-PIW-1D-110723	11/07/2023	320-106887-1	R-EVE	0.22	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-PIW-1D-110723-Z	11/07/2023	320-106887-2	R-PSDA	0.19	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-PIW-1D-110723-Z	11/07/2023	320-106887-2	R-EVE	0.15	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-SMW-11-110723	11/07/2023	320-106887-3	R-PSDA	0.13	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-SMW-11-110723	11/07/2023	320-106887-3	Hydrolyzed PSDA	0.074	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-SMW-11-110723	11/07/2023	320-106887-3	R-EVE	0.10	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-WC-3-112323	11/23/2023	320-107480-3	R-PSDA	0.0043	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-3-112323	11/23/2023	320-107480-3	R-EVE	0.0027	UG/L	PQL		0.0020	J	537 Modified		3535

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
RIVER-WATER-INTAKE2-24-112323	11/23/2023	320-107480-5	R-PSDA	0.31	UG/L	PQL		0.0024	J	537 Modified		3535
RIVER-WATER-INTAKE2-24-112323	11/23/2023	320-107480-5	Hydrolyzed PSDA	0.14	UG/L	PQL		0.0020	J	537 Modified		3535
RIVER-WATER-INTAKE2-24-112323	11/23/2023	320-107480-5	R-EVE	0.25	UG/L	PQL		0.0027	J	537 Modified		3535
CAP4Q23-WC-2-112323	11/23/2023	320-107480-2	R-PSDA	0.0094	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-TARHEEL-120623	12/06/2023	320-107896-2	R-PSDA	0.0033	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-TARHEEL-120623	12/06/2023	320-107896-2	Hydrolyzed PSDA	0.0026	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-GBC-1-112223	11/22/2023	320-107648-2	R-PSDA	0.040	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-GBC-1-112223	11/22/2023	320-107648-2	R-EVE	0.020	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LOCK-DAM-NORTH-112223	11/22/2023	320-107648-5	R-PSDA	0.22	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LOCK-DAM-NORTH-112223	11/22/2023	320-107648-5	R-EVE	0.14	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223	11/22/2023	320-107648-3	R-PSDA	0.23	UG/L	PQL		0.0051	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223	11/22/2023	320-107648-3	Hydrolyzed PSDA	0.25	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223	11/22/2023	320-107648-3	R-EVE	0.095	UG/L	PQL		0.0057	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223-D	11/22/2023	320-107648-4	R-PSDA	0.27	UG/L	PQL		0.0052	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223-D	11/22/2023	320-107648-4	Hydrolyzed PSDA	0.25	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-LOCK-DAM-SEEP-112223-D	11/22/2023	320-107648-4	R-EVE	0.087	UG/L	PQL		0.0057	J	537 Modified		3535
CAP4Q23-OLDOF-1-24-112323	11/23/2023	320-107480-9	R-PSDA	0.019	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-OLDOF-1-24-112323	11/23/2023	320-107480-9	Hydrolyzed PSDA	0.029	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-OLDOF-1-24-112323	11/23/2023	320-107480-9	R-EVE	0.0090	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-OUTFALL-002-112323	11/23/2023	320-107480-6	R-PSDA	0.054	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-OUTFALL-002-112323	11/23/2023	320-107480-6	Hydrolyzed PSDA	0.042	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-OUTFALL-002-112323	11/23/2023	320-107480-6	R-EVE	0.044	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-SMW-12-110823	11/08/2023	320-107233-4	R-EVE	0.067	UG/L	PQL		0.031	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP SW Sampling 4Q23

Validation Options: LABSTATS

Validation Reason Code: Uncertainty around the analysis of R-PSDA, Hydrolyzed PSDA and R-EVE; J-qualifier added to all detects in the data set, even if there was no matrix spike analyzed for that particular sample.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-TARHEEL-24-112423	11/24/2023	320-107480-8	R-PSDA	0.0020	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	R-PSDA	0.011	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	Hydrolyzed PSDA	0.028	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323	11/23/2023	320-107480-1	R-EVE	0.0059	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323-D	11/23/2023	320-107480-7	R-PSDA	0.013	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323-D	11/23/2023	320-107480-7	Hydrolyzed PSDA	0.036	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-WC-1-112323-D	11/23/2023	320-107480-7	R-EVE	0.0066	UG/L	PQL		0.0020	J	537 Modified		3535

Site: Fayetteville

Sampling Program: CAP GW Sampling 4Q23

Validation Options: LABSTATS

Validation Reason Code: The ion ratio for the compound differed from the expected ion ratio by more than 50%. The reported positive result has been qualified "J" and should be considered estimated.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-LTW-01-110323	11/03/2023	320-106773-1	Perfluoroheptanoic Acid	0.047	UG/L	PQL		0.025	J	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	R-EVE	0.028	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	R-PSDA	0.015	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Hydrolyzed PSDA	0.0046	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFOS	0.0089	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PMPA	0.013	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Hfpo Dimer Acid	0.0070	UG/L	PQL		0.0040	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	PFO2HxA	24	ug/L	PQL		0.069	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	PPF Acid	38	UG/L	PQL		0.31	J	537 Modified		3535
CAP4Q23-LTW-03-111323	11/13/2023	320-107233-3	PFMOAA	110	ug/L	PQL		0.51	J	537 Modified		3535
CAP4Q23-OW-33-110223	11/02/2023	320-106773-3	R-PSDA	0.25	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-OW-33-110223	11/02/2023	320-106773-3	Hydrolyzed PSDA	0.061	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-OW-33-110223	11/02/2023	320-106773-3	R-EVE	0.17	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-OW-33-110223-D	11/02/2023	320-106773-4	R-PSDA	0.23	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-OW-33-110223-D	11/02/2023	320-106773-4	Hydrolyzed PSDA	0.048	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-OW-33-110223-D	11/02/2023	320-106773-4	R-EVE	0.17	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-PIW-3D-110323	11/03/2023	320-106773-2	R-PSDA	0.75	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-PIW-3D-110323	11/03/2023	320-106773-2	Hydrolyzed PSDA	0.30	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-PIW-3D-110323	11/03/2023	320-106773-2	R-EVE	0.42	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-OW-28-110223	11/02/2023	320-106772-6	R-EVE	0.14	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-PIW-7D-110223	11/02/2023	320-106772-3	R-PSDA	0.51	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-PIW-7D-110223	11/02/2023	320-106772-3	Hydrolyzed PSDA	1.1	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-PIW-7D-110223	11/02/2023	320-106772-3	R-EVE	0.68	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-PIW-7S-110223	11/02/2023	320-106772-2	R-PSDA	0.91	UG/L	PQL		0.028	J	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-PIW-7S-110223	11/02/2023	320-106772-2	Hydrolyzed PSDA	0.060	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-PIW-7S-110223	11/02/2023	320-106772-2	R-EVE	1.2	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-PZ-22-110223	11/02/2023	320-106772-4	R-PSDA	0.51	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-PZ-22-110223	11/02/2023	320-106772-4	Hydrolyzed PSDA	1.6	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-PZ-22-110223	11/02/2023	320-106772-4	R-EVE	0.42	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-LTW-01-110323	11/03/2023	320-106773-1	R-PSDA	0.79	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-LTW-01-110323	11/03/2023	320-106773-1	Hydrolyzed PSDA	0.59	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-LTW-01-110323	11/03/2023	320-106773-1	R-EVE	0.53	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-LTW-02-110323	11/03/2023	320-106772-7	R-PSDA	0.52	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-LTW-02-110323	11/03/2023	320-106772-7	Hydrolyzed PSDA	1.5	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-LTW-02-110323	11/03/2023	320-106772-7	R-EVE	0.41	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-LTW-04-110223	11/02/2023	320-106772-5	R-PSDA	1.7	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-LTW-04-110223	11/02/2023	320-106772-5	Hydrolyzed PSDA	3.8	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-LTW-04-110223	11/02/2023	320-106772-5	R-EVE	1.7	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-LTW-05-110223	11/02/2023	320-106772-1	R-PSDA	0.95	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-LTW-05-110223	11/02/2023	320-106772-1	Hydrolyzed PSDA	1.9	UG/L	PQL		0.027	J	537 Modified		3535
CAP4Q23-LTW-05-110223	11/02/2023	320-106772-1	R-EVE	1.2	UG/L	PQL		0.031	J	537 Modified		3535
CAP4Q23-OW-28-110223	11/02/2023	320-106772-6	R-PSDA	0.23	UG/L	PQL		0.028	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PPF Acid	0.028	UG/L	PQL		0.0050	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFMOAA	0.011	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFO2HxA	0.0098	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFO3OA	0.0032	ug/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorohexane Sulfonic Acid	0.0050	UG/L	PQL		0.0020	J	537 Modified		3535

Validation Reason Code: The preparation hold time for this sample was exceeded. The reported result may be biased low.

Field Sample ID	Date Sampled	Lab Sample ID	Analyte	Result	Units	Type	MDL	PQL	Validation Qualifier	Analytical Method	Pre-prep	Prep
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorobutanoic Acid	0.0051	UG/L	PQL		0.0050	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorobutane Sulfonic Acid	0.0088	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoroheptanoic Acid	0.0037	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	PFOA	0.0057	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluoropentanoic Acid	0.011	UG/L	PQL		0.0020	J	537 Modified		3535
CAP4Q23-CFR-KINGS-121423	12/14/2023	320-108081-1	Perfluorohexanoic Acid	0.011	UG/L	PQL		0.0020	J	537 Modified		3535