Submissions to the State of North Carolina and Cape Fear River Watch

The following table identifies submissions made by Chemours pursuant to the Consent Order and Addendum (COA) for the period of January 1, 2021 through the end of the first quarter on March 31, 2021.[1]

CO Section	Title	Submitted Date
8	CY2020 Annual GenX Compounds Emissions 99% Facility-Wide Reduction Report	02/16/2021
12 / COA 1b	Cape Fear River PFAS Mass Loading Assessment - Fourth Quarter 2020 Report	03/31/2021
12 / COA 2a	Interim Seep Remediation Operation and Maintenance Report #1	03/31/2021
28	Quarterly Progress Report	01/26/2021

[1] Consent Order submissions by Chemours from lodging of the Proposed Consent Order in November 2018 through March 31, 2019 were presented in the 2019 1st quarter report, April 1, 2019 through June 30, 2019 in the 2019 2nd quarter report, July 1, 2019 through September 30, 2019 in the 2019 3rd quarter report, October 1, 2019 through December 31, 2019 in the 2019 4th quarter report, January 1, 2020 through March 31, 2020 in the 2020 1st quarter report, April 1, 2020 through June 30, 2020 in the 2020 2nd quarter report, July 1, 2020 through September 30, 2020, in the 2020 3rd quarter report, and October 1, 2020 through December 31, 2020 in the 2020 4th quarter report.

2021 First Quarter Residential Summary

Item	Cumberland County (East of River)	Cumberland County (West of River)	Bladen County (East of River)	Bladen County (West of River)	Robeson County	Total
Total Number of Residences Sampled	204	257	22	5	40	528
Residences Exceeding GAC Criteria (GenX >= 140 ng/L)	1	3	0	1	0	5
Residences Exceeding RO Criteria (∑PFAS >= 70 ng/L)	61	42	6	3	9	121
Residences Exceeding RO Criteria (PFAS >= 10 ng/L)	57	70	4	0	19	150
Residences Drinking Water Well Detections (Results < 10 ng/L)	29	70	4	0	6	109
Residences Drinking Water Well Non-Detections	56	72	8	1	6	143

Replacement Drinking Water Actions

(Replacement drinking water actions from November 2018[2] - March 31, 2021)

Summary		Number of residents on bottled water	GAC Systems On-line & Confirmation Sampling Complete	Number of Homes Where RO Systems Installed
	Total	2418	98	2137

Bottled Water		Residences Eligible for Bottled Water	Already connected to Public Water	Eligible Residences Receiving Bottled Water
	Q1 2021	312	0	348
	Total	2434	145	2418

GAC		Residences Eligible for GAC	Already connected to Public Water	Public Water Readily Available	Public Water Feasible	Residents Declined GAC System	GAC Systems to Install	Number of Residences Responded to GAC Offer (Interview Conducted or Declined Offer)
	Q1 2021	7	0	Data Not Available	Data Not Available	1	7	8
	Total	263	23	Data Not Available	Data Not Available	8	129	134
		Number of GAC Systems to Install but Resident has Not Responded to Offer	System On-line	Confirmation Sampling Complete	GAC Offer Letters Sent to Residents	Call Log Interactions with GAC Residents	GAC Residence Response Rate	
	Q1 2021	Not Applicable	2	4	12	344	Not Applicable	
	Total	105	98	98	289	3446	50%	

RO		Residences Eligible for RO (includes homes with shared wells)	Number of Residences Responded to RO Offer	Residents Declined RO	Homes/Buildings where RO Systems to be Installed but Resident has Not Responded	RO Residence Response Rate
	Q1 2021	328	505	15	145	Not Applicable
	Total	4544	2954	105	1424	65%
		Number of Homes where RO Systems Installed	Homes/Buildings where RO Systems are to be Installed	Number of RO Offer Letters Sent to Residences	Call Log Interactions with RO Residents	
	Q1 2021	479	306	330	2881	
	Total	2137	2095	4614	18749	

[2] The date the proposed Consent Order was lodged.

Consent Order Progress Details

This section summarizes the activities that have been undertaken by Chemours pursuant to the Consent Order Compliance Measures and Addendum for the period from January 1, 2021 through the end of the first quarter of 2021 (March 31, 2021). On August 13, 2020, Chemours signed the Addendum to Consent Order Paragraph 12, and the Addendum was entered by the Bladen County Superior Court on October 12, 2020.

Section 7 Control Technology Improvements

The thermal oxidizer (see photo at right) continues to control process emissions at an average PFAS destruction efficiency exceeding 99.99%.

Section 8 GenX Emissions Reductions Milestones

A report was submitted on February 16, 2021 to demonstrate compliance with the requirement for 99% facility-wide reduction from 2017 total reported emissions of GenX Compounds.

Section 10 No Discharge of Process Wastewater from Chemours' Manufacturing Areas

Chemours does not discharge its process wastewater and instead collects and ships its process wastewater offsite for disposal. Chemours is recycling treated water internally within several manufacturing processes.

Section 11 Characterization of PFAS in Process and Non-Process Wastewater and Stormwater at the Facility

During the first quarter of 2021, one sampling event was conducted during February 18 - 19, 2021 (the February 2021 event). Samples were collected from 30 locations during the Feburary 2021 event. Results from this sampling event will be reported in the first semi-annual report of Paragraph 11(d) ongoing sampling, which Chemours plans to submit by September 30, 2021.

Section 12 Accelerated Reduction of PFAS Contamination in the Cape Fear River and Downstream Water Intakes, and Addendum to Consent Order Paragraph 12

During the first quarter of 2021, Chemours continued operation of the treatment system for the Old Outfall (Outfall 003) pursuant to Consent Order Paragraph 12(e) and a NPDES permit issued by NCDEQ.

As noted above, the Addendum to Consent Order Paragraph 12 was signed in the third quarter of 2020 and entered by the Court during the fourth quarter of 2020. Chemours' Addendum implementation activities during the first quarter of 2021 included:

Consent Order Addendum Paragraph 1

On March 31, 2021, Chemours submitted to NCDEQ and Cape Fear River Watch the Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2020 Report pursuant to Consent Order Addendum Paragraph 1(b). The report describes sampling activities and mass loading results for the Cape Fear River and PFAS loading pathways from the fourth quarter of 2020. This submission was also pursuant to quarterly reporting of mass loading sampling outlined in the Corrective Action Plan (Paragraph 16). In each of January, February, and March 2021, Chemours conducted monthly mass loading sampling required by Consent Order Addendum Paragraph 1.

Consent Order Addendum Paragraph 2

During the first quarter of 2021, Chemours operated and maintained the Seep C flow-through cell, i.e., the interim remediation system at Seep C. The flow-through cell has been operational since December 16, 2020. On March 31, 2021, Chemours submitted the Interim Seep Remediation Operation and Maintenance Report #1, describing the operations and maintenance activities at the Seep C flow-through cell over the reporting period of December 16, 2020 through February 28, 2021. The report also evaluated the capability of the flow-through cell to capture and treat seep base flow. As detailed in the report, it is estimated that over the reporting period the Seep C flow-through cell captured approximately 6.8 million gallons of water and prevented approximately 7.7 pounds of PFAS from being discharged to the Cape Fear River.

Construction of flow-through cells at the remaining seeps (A, B, and D) also proceeded in sequence in the first quarter of 2021. The flow-through cells at Seeps A, B, and D are anticipated to be complete and operational in the second quarter of 2021.

Consent Order Addendum Paragraph 3

As required by the Addendum, during the first quarter of 2021 the Black Creek Aquifer interim measure system to extract groundwater from the seven existing Black Creek Aquifer monitoring wells (BCA-01, BCA-02, PW-11, PW-14, PW-15R, PIW-9D, and PIW-10DR) continues to operate as designed. Beginning in mid-March, the system was transitioned from operating continuously based on groundwater levels to timer-based operation (4-hour pumping followed by 2-hour rest period). This change allows the motors to cool and prevents premature motor failure due to overheating and has resulted in significant run-time improvements. During the first quarter of 2021, the system extracted 219,262 gallons of water for a total of 374,969 gallons since startup on November 30, 2020. Due to technical issues, the pumps at wells PW-15R and BCA-02 have been operated intermittently since March 5, 2021. Chemours' contractor Parsons is working with the manufacturer to resolve the issues causing the pumps to shut down prematurely. The remaining wells have continued to operate as designed with only minor, routine shutdowns for maintenance or freeze protection.

On March 23, 2021, for the barrier wall and groundwater extraction and treatment system, Chemours submitted the pre-design investigation summary report regarding investigation work completed at the site to facilitate preparing the 60% design submittal package by August 15, 2021 to NCDEQ pursuant to Consent Order Addendum Paragraph 3.

Consent Order Addendum Paragraph 4

During the first quarter of 2021, Chemours continued the stormwater and non-contact cooling water separation efforts in the Monomers IXM area that were initiated during the annual facility turn-around in October 2020. The water types are being separated to facilitate the treatment of stormwater pursuant to Consent Order Addendum Paragraphs 4(a) through (c). As of the end of the first quarter of

2021, separation efforts were mostly complete with a few tie-ins remaining. Design of the east and west sumps and pump stations and design of the conveyance system to the treatment system were also completed during the first quarter of 2021. Construction on the east and west sump and pump stations and the conveyance system is anticipated to start in April 2021. Chemours also bid and selected a vendor (Evoqua) to design and install the stormwater treatment system.

Chemours submitted a revised Stormwater Engineering Report on January 29, 2021 in response to comments received by NCDEQ. Chemours also submitted the following to NCDEQ: 1) the design drawings for the sumps and conveyance system on March 3, 2021, 2) a description of the stormwater treatment system including a process flow diagram on March 12, 2021, and 3) the Operations, Monitoring and Maintenance Manual for the stormwater treatment system on March 31, 2021. Chemours is awaiting feedback from NCDEQ on the Stormwater Sampling Plan submitted pursuant to Consent Order Addendum Paragraph 4(b).

Section 14 Toxicity Studies

Chemours has all five Consent Order Attachment B substances synthesized. One substance required additional purification; that purification is currently on-going and expected to finish in the second quarter of 2021. The rat and mouse pilot study in-life phase was completed for four of the five substances and the reports for the studies are completed. The analytical development for the dose analysis method for the mammalian Consent Order studies is completed. This will be submitted when the final protocols are approved by NCDEQ. The draft protocols for the aquatic toxicology work were submitted for approval to NCDEQ in December 2020. Chemours received comments back from NCDEQ in March 2021 and is addressing the points raised in the comments. NCDEQ also provided the OECD guideline number for the sediment toxicity study required by the Consent Order. Chemours has instructed the contract lab to begin developing the protocol based on this guideline.

Section 16 Groundwater Remediation

On March 31, 2021, Chemours submitted to NCDEQ and Cape Fear River Watch the Cape Fear River PFAS Mass Loading Assessment – Fourth Quarter 2020 Report pursuant to Consent Order Addendum Paragraph 1(b). This submission was also pursuant to quarterly reporting of mass loading sampling outlined in the Corrective Action Plan (Paragraph 16). On-going groundwater remediation activities are being conducted pursuant to Consent Order Addendum Paragraph 3 and are described earlier in this document under that paragraph.

Section 18 Onsite and Offsite Assessment

Chemours submitted to NCDEQ the 2020 Annual Onsite and Offsite Groundwater Monitoring Report on February 24, 2021. During the first quarter of 2021, Chemours began preparing responses to the Paragraph 18 comment letter sent to Chemours from NCDEQ on December 23, 2020. Chemours conducted a teleconference with NCDEQ on March 26, 2021 to review NCDEQ's comments.

Sections 19 and 20 Provision of Public Water Supplies, Whole Building Filtration Systems, and Reverse Osmosis Drinking Water Systems

As shown in the summary tables above, Chemours continues to make significant progress in implementing the Consent Order requirements of Paragraphs 19 and 20. Since resuming RO installations in June 2020, following the COVID-19 postponement period, the pace of RO acceptance rates and installations has been on the rise. O&M activities for installed GAC systems continues

uninterrupted. Bottled water services continue uninterrupted for 2,418 homes. Chemours continues discussions with both Bladen and Cumberland Counties regarding public water options.

Section 21 Private Well Testing

To date, 9,415 residences have been identified within the current study area, of which 6,259 residences have been sampled and 2,868 residences have received at least one initial sample offer letter. Results of sampling that occurred throughout the first quarter of 2021 (528 residences) are presented at the beginning of this progress report. Current Step-out and Infill distance intervals range from 2.5 miles to 14.5 miles from the Site. There are several sectors where the delineation pursuant to the Consent Order is near completion.

Section 22 Provision of Sampling Results

Chemours provided (and continues to provide) sampling results to NCDEQ and residents as required under the Consent Order. Chemours has provided sampling results to NCDEQ by sending a courtesy email notification and by uploading sampling results to the state Equis database. Chemours has also provided final lab reports to NCDEQ. Chemours has provided sampling results to residents by including preliminary results with water filtration system initial offer letters and sending the final lab reports to residents within the following 30 days. Chemours has also provided non-detect sampling results to residents.

Section 23 Interim Replacement of Private Drinking Water Supplies

All residences eligible to receive the interim replacement drinking water supplies have received the supplies (i.e., bottled water or voucher card for bottled water). As of March 31, 2021, there are 2,418 residences receiving bottled water services.

Section 26 Total Organic Fluorine

Please see Appendix A for the quarterly progress report from Dr. Susan D. Richardson.

Section 28 Reporting

Chemours submitted the Consent Order 4th quarter 2020 progress report on January 26, 2021.

Sections 29 and 30 Public Information

Chemours has continued to post its Consent Order submissions at https://www.chemours.com/Fayetteville-Works/en-us/c3-dimer-acid/compliance-testing/.

Appendix A

6th Progress Report
Development of a Total Organic Fluorine (TOF) Method for the Analysis of Process Wastewater Streams and Air from Fayetteville Works (NC)
Susan D. Richardson, Alexandria L. Forster, Danielle C. Westerman, University of South Carolina
March 30, 2021

Since the last progress report on December 20, 2020, there have been several updates to the Adsorbable Organic Fluorine (AOF) extraction technique, including a large focus on removing inorganic fluorine as discussed in the recent project extension request. Other experiments have included optimizing: sample volume, dilution factor, the rinsing solution, combustion time, and the absorption solution of the combustion off gasses. A fresh set of standards from SynQuest labs and Chemours have also been obtained.

1. Inorganic Fluorine Removal

As mentioned in the project extension, a large push on the method optimization over the last couple months has been focused on insuring an accurate separation between inorganic and organic fluorine, so that inorganic fluorine is not captured along with organic fluorine in the final analysis with combustion-IC. This optimization has included testing several sample pretreatment steps and optimizing the rinsing solution for composition, concentration, pH, and volume.

2. Sample Volume

In order to minimize breakthrough of the target analyte from the carbons and into waste and to understand the maximum capacity for organic compounds onto the carbons, several sample volumes have been tested. Experiments conducted on the sample volume have also included

utilizing several dilution factors at varying volumes to also optimize for potential matrix effects and inorganic fluoride removal.

3. Combustion

Experiments have been conducted to understand the optimal combustion time for converting organically bonded fluorine into gas. After combustion the gas is bubbled into an absorption solution; and since the last progress report, the absorption solution has been optimized for composition, concentration, and pH.

4. Liquid Chromatography Mass Spectrometry (LC-MS)

Optimization experiments have been paired with LC-MS quantification to help capture a more complete picture of how each optimization step effects different PFAS compounds.