ROY COOPER
*Governor*

MICHAEL S. REGAN
*Secretary*

NORTH CAROLINA
***Environmental Quality***

January 26, 2021

**Certified Mail** 7018 1830 0001 8036 5232
**Return Receipt Requested**

Ms. Dawn Hughes
The Chemours Company FC LLC
22828 NC Highway 87 W
Fayetteville, NC 28306-7332

Subject: **NOTICE OF VIOLATION & INTENT TO ASSESS CIVIL PENALTY AND STIPULATED PENALTY**
Tracking Number: NOV-2021-PC-0047
Chemours Company-Fayetteville Works
Bladen County

Dear Ms. Hughes:

In October and November 2020, Chemours notified the North Carolina Department of Environmental Quality (DEQ), Division of Water Resources (DWR) of process control and operational problems with its newly installed treatment system at Outfall 003. Based on Discharge Monitoring Reports, notifications, Operator in Responsible Charge (ORC) communications, correspondences, photos and onsite visits, the DEQ has determined that Chemours has violated:

(1) the requirements of the consent order entered by the Bladen County Superior Court on February 25, 2019 ("Consent Order"), including capture and treatment of dry weather flow, and
(2) conditions of NPDES Permit No. NC0089915 ("Permit"), including effluent limits, operation and maintenance requirements, and mitigation requirements.

## Background

Paragraph 12 of the Consent Order required that Chemours implement measures to reduce per- and polyfluoroalkyl substances (PFAS) loading from residual contamination at Chemours' Fayetteville Works facility ("Facility") by the maximum extent feasible on an accelerated basis. As part of these measures, the Consent Order required Chemours "to implement a system to capture dry weather flow" (~610 gpm) by September 30, 2020 at the heavily contaminated stream referred to as "Old Outfall 002." Consent Order ¶ 12(e). The Consent Order further

required that this treatment system "be at least 99% effective in controlling indicator parameters, GenX and PFMOAA." Consent Order ¶ 12(e).

On October 1, 2020, Chemours commenced operation of a treatment system to treat water from a stream referred to as "Old Outfall 002." The system pumps water from Old Outfall 002 and sends it first through settling tanks to settle out sediment. The water is then divided into two streams (Trains 1 and 2). Each stream is sent through ultrafiltration (UF) units to remove fine particles and then a series of three granulated activated carbon (GAC) filters to remove PFAS. After treatment, the water is discharged back to Old Outfall 002.

Between the beginning of October and the end of November 2020, DWR received information from Chemours detailing operational and performance problems. Specifically, the information communicated effluent monitoring results, operational issues, problems with the abatement and management of sediment/solids and PFAS wastes that coursed into the subject treatment system. DWR has conducted a review of the logs of the Operator in Responsible Charge and correspondence received from Chemours. In addition, DWR staff conducted site visits on September 30, 2020, November 6, 2020, November 17, 2020, and December 18, 2020. DWR's review has confirmed problems with Chemours' design of the treatment system, operation of the treatment system, failures to mitigate problems associated with the entrained sediment, and violation of an effluent limit in the Permit as described in greater detail below.

## Requirements of Consent Order and Permit Conditions

The **Consent Order** includes the below listed requirements:

> **Paragraph 12(e)**: This provision of the Consent Order required Chemours to implement a system to capture dry weather flow (~610 gpm) by September 30, 2020 at Old Outfall 002, and to treat the captured flow at a removal efficiency of at 99% for indicator parameters, GenX and PFMOAA.

The **NPDES Permit No. NC0089915** includes the below listed select discharge and treatment system conditions:

> **Part I, A. (1.) Effluent Limitations and Monitoring Requirements – Outfall 003**: This permit condition includes numeric effluent limits on concentrations of certain PFAS, including PFMOAA. The effluent limits for PFMOAA are 0.85 ug/L for a monthly average and 0.85 ug/L for a daily maximum.
>
> **Part I, A. (1.) Effluent Limitations and Monitoring Requirements – Outfall 003**: This permit condition also requires Chemours to "develop a Dam (collection system) Operation and Maintenance Plan (Plan) to ensure maximum dry weather flow (~ 610 gpm) in the channel is consistently captured and treated. Similar efforts shall be applied at the sumps/dams or other devices that will be used to capture water from the seeps."
>
> **Part II, C. (2.) Proper Operation and Maintenance**: This permit condition requires that the Permittee shall at all times "properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit."
>
> **Part II, B. (2.) Duty to Mitigate:** This permit condition requires that the Permittee "take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of

this permit which has a reasonable likelihood of adversely affecting human health or the environment."

## Consent Order Violation

While a treatment system was installed by September 30, 2020, the installed treatment system was not properly designed to meet the requirements of the Consent Order to capture dry weather flow and treat it to at least 99% removal efficiency for the indicator parameters, GenX and PFMOAA. This design failure is shown, for example, by the inability of the treatment system to properly manage sediment loading, resulting in multiple days where the system failed to capture dry weather flow and periods where the system was completely shut down. The failure to install a properly designed system by the date specified in the Consent Order constitutes a violation of paragraph 12(e) of Consent Order, and subjects Chemours to the stipulated penalty provisions in paragraph 31.

## Permit Violations

Based on DWR's investigation, DWR has determined that Chemours violated the Permit in the following ways:

1. **Violation of effluent limit**: Chemours has violated the effluent limit set forth in Part I, Condition A. (1.) of the Permit. The Discharge Monitoring Report (DMR) for October showed that on October 29, 2020, the concentration of PFMOAA was 1.2 ug/L, which is a violation of the daily limit for PFMOAA of .85 ug/L.[1]
2. **Failure to meet flow requirements**: Chemours has violated the treatment flow requirements set forth in Part I, Condition A. (1.) of the Permit by treating less than 610 gpm on at least October 14-21 and November 24-29.
3. **Improper operation and maintenance**: Chemours has violated the operation and maintenance requirements set forth in Part II, Condition C. (2.) of the Permit. In October and November, sediment loading to the treatment system resulted in operational problems, including causing the average daily flow rate to drop below 610 gpm on the following dates: October 14-21 and November 24-29. This sediment loading also resulted in the need to shut down the treatment system on November 11 and 12. Additionally, as explained in Chemours' correspondence and at DWR's November 17, 2020 site visit, the violation of the effluent limit and the increase in PFAS discharge occurred following Chemours' failure to fully change the activated carbon in GAC filters before placing them as the final filters in the Trains. In addition to failing to properly handle sediment that infiltrated the system to ensure that it did not interfere with proper system operations, Chemours did not adequately maintain the structural integrity of the area surrounding the treatment facility sufficient to prevent erosion and gullying of the slope upstream of the dam.
4. **Failure to mitigate**: Chemours has violated the mitigation requirements set forth in Part

[1] Three indicator parameters, GenX, PFMOAA, and PMPA, are used to monitor the removal efficiency of PFAS by the treatment system. The effluent limits for PFMOAA and GenX became effective on October 1, 2020, and the effluent limit for PMPA becomes effective on January 31, 2021.

II, Condition B. (2.) of the Permit. Between the storm event on October 11 and the end of November, Chemours failed to take the steps necessary to ensure that the treatment system would perform adequately during storm events.

These violations also constitute violations of 15A NCAC 2B .0216(4)(d) and NCGS § 143-215.1(a)(6).

## Request for Additional Information

DEQ requests that Chemours provide a written response to items 1-6 below within 30-days of receipt of this NOV/NOI:

1. Please detail how the design of the treatment system has been improved to ensure that it will consistently meet the requirements of the Consent Order. Clearly detail what measures have been modified/changed or have been installed to affect compliance with the requirements of this Consent Order from September 30, 2020 through to date of this Notice of Violation/Notice of Intent to Assess Civil Penalty and Stipulated Penalty ("NOV/NOI"). In addition, please provide a timeline identifying the dates on which all improvements to the design of the system were made (installed) to ensure that the system met the requirements of the Consent Order.
2. Identify all dates on which the average daily flow through the treatment system was below 610 gpm where the dry weather base flow was above 610 gpm. In your response, provide all data in your possession regarding influent and effluent flow rates associated with the system.
3. Please provide the operator's log for the timeframe of September 30, 2020 through the date of this NOV/NOI. (While DWR has records for periods within that timeframe, we lack records for the entire period.)
4. The system, as designed, has not functioned properly during rain events that cause increased turbidity and sediment load in the stream. The stream is in a highly erosive valley, and as such, continued delivery of large quantities of sediment to the intake structure can be expected in the future. Please detail how solids that enter into the treatment system will be removed from the system and provide a plan for how you intend to address the sediment loading to the facility during future rain events to ensure the facility will consistently operate properly. This account should address how the solids will be processed, de-watered, stored, sampled, managed onsite (to ensure out of bank flood waters from the Cape Fear River do not affect processing of the removed substances), and the final disposal of removed substances.
5. At the site inspection that occurred on November 17, 2020 by DWR staff, it was noted that the slope that had collapsed had only recently been matted and seeded. Other slopes on the site (located immediately downstream) had no such matting or seeding. Please provide a detailed log of the site grading (especially in proximity to the intake structure) that occurred while the facility was being constructed, and the sediment and erosion practices that were used to ensure the construction site was stabilized in a timely and appropriate manner. Please provide a stabilization plan for the slopes near the treatment system to reduce sedimentation and erosion during future rain events. Please also provide any self-inspection reports required under Chemours' Erosion and Sedimentation Control Plan and Stormwater permit NCG010000 for September 1 through November 30.

An NOV/NOI is being issued for the noted violations. A civil penalty of not more than twenty-five thousand dollars ($25,000.00) may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of any permit issued pursuant to G.S. 143-215.1. A stipulated penalty of $1,000/day for the first 7 days and $2,000/day thereafter may be assessed for Chemours' failure to properly design the treatment system to meet the requirements of the Consent Order.

If you wish to provide additional information beyond that requested above regarding the noted violations, request technical assistance, or discuss overall compliance please respond in writing within thirty (30) days of receipt of this NOV/NOI. A review of your response will be considered along with any additional information provided in determining if a civil penalty is warranted.

Remedial actions should have already been taken to correct this problem and prevent further occurrences in the future. The Division of Water Resources may pursue enforcement action for this and any additional violations of State law.

If you should have any questions, please do not hesitate to contact Sheila Holman at 919-707-8619 or Danny Smith at 919-707-9014.

Sincerely,

Sheila Holman
Assistant Secretary for the Environment

Danny Smith
Director, Division of Water Resources

cc:
Brian Long
Christel Compton
Kevin Garon
Joel Gross

Todd Coomes
David Shelton
John Savarese
Geoff Gisler
Kemp Burdette

North Carolina Department of Environmental Quality
217 West Jones Street | 1601 Mail Service Center | Raleigh, North Carolina 27699-1601
919.707.8600