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December 17, 2018

Via email to: comments.chemours@ncdenr.gov

Via First Class Mail to:
Assistant Secretary Sheila Holman
N.C. Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

Re: Chemours Public Comments

Dear Assistant Secretary Holman:

This firm represents the Cape Fear Public Utility Authority ("CFPUA") with regards to the perfluoroalkyl and polyfluoroalkyl substances ("PFAS") contamination in the Cape Fear River. We write to provide comments on behalf of CFPUA to the proposed Consent Order published for comment in *DEQ v. The Chemours Company FC*, LLC, 17 CVS 580, Bladen County Superior Court (the "Enforcement Action").

CFPUA respectfully requests the Department of Environmental Quality ("DEQ") to reconsider the terms of the proposed Consent Order because CFPUA believes the proposed Consent Order is fundamentally flawed in a number of important respects. The proposed Consent Order: (i) fails to require adequate health studies of PFAS that The Chemours Company FC ("Chemours") is discharging and releasing into the Cape Fear River; (ii) is premised on unwarranted assumptions made by Chemours and apparently accepted by DEQ; (iii) imposes different standards of drinking water quality for residents of the lower Cape Fear River Basin; (iv) potentially allows Chemours to continue hiding PFAS releases from the public, under claims of confidentiality; (v) fails to address off-site PFAS contamination caused by the historic and ongoing activities of Chemours and E.I. du Pont de Nemours and Company ("DuPont"), which continue to impact the Cape Fear River; and (vi) establishes (or risks establishing) future permit conditions without allowing the requisite opportunity for public participation, including the opportunity to challenge such conditions in an administrative action. These and other flaws are summarized below.

A. Air Emissions Provisions (Paragraphs 7–9)

Control Technology Improvements. The proposed Consent Order provides insufficient detail on the types and effectiveness of the pollution control equipment Chemours intends to

install. A Scope of Work ("SOW") should be provided for each, showing equipment configurations, specifications, processes, effectiveness, and other details of implementation. Further, the proposed Consent Order fails to adequately identify: (i) the process streams at the Facility that result in PFAS emissions; and (ii) the absolute quantities of historic, current, and expected PFAS emissions from each of the process streams at the Facility. With respect to the Second Phase Scrubber and Vinyl Ethers North Adsorber Project, there is no apparent rationale for: (i) applying the efficiency standards to GenX Compounds only; and (ii) omitting similar requirements for the other process streams at the Facility that result in PFAS emissions. Finally, the proposed Consent Order appears to provide terms and conditions for a major modification to Chemours' Clean Air Act permit, without undergoing the requisite procedures—including opportunities for public participation.

GenX Emissions Reduction Milestones. As with the efficiency standards discussed in the preceding paragraph, there is no apparent rationale that the reduction milestones or the emissions reporting requirements should apply to GenX Compounds only. All PFAS emissions should be subject to reduction milestones, testing, and reporting. Finally, even if the milestones and dates for meeting them are reasonable, it is impossible for the public to adequately evaluate the proposed milestones without the SOWs that were not included with the proposed Consent Order.

Disclosure of PFAS emissions. CFPUA supports mandatory disclosure of all known historic and future PFAS emissions and emission rates, as well as analytical test methods and lab standards. However, the proposed Consent Order does not include an obligation for Chemours to investigate and identify all PFAS either in its ongoing emissions or in new processes that Chemours may undertake. Nor does the proposed Consent Order require Chemours to develop test methods and lab standards, or undertake health studies for all such identified PFAS. Chemours should be obligated to identify all PFAS in its air emissions, and establish safe levels of such emissions, prior to being permitted to continue emitting PFAS to the environment.

B. Surface Water Provisions (Paragraphs 10–15)

Characterization of PFAS in process and non-process wastewater and stormwater. CFPUA supports comprehensive characterization of PFAS in process and non-process wastewater and stormwater at Chemours, and development of test methods and lab standards for all PFAS identified. CFPUA believes the time period allowed in the proposed Consent Order (18 months beyond approval of the sampling plan) is not necessary to complete the required characterization. Regardless, DEQ should not issue an NPDES Permit authorizing discharge of process wastewater until all PFAS constituents are identified and adequate health studies conducted in order to determine safe levels of PFAS that ensure that discharges from Fayetteville Works will not cause violation of any state water quality standard in the Cape Fear River.

Prevention of PFAS Loading to Surface Waters. CFPUA supports maximum reductions in PFAS loading from the Facility to surface waters, including loading from contaminated stormwater, non-process wastewater, and groundwater. This provision, however, is flawed in several respects. *First*, a two year time frame (and up to five years) for implementation of loading reductions is excessive. Interim benchmarks should be established to ensure continuous progress in reduction of PFAS loading, even if two to five years is an appropriate time frame to implement

the complete remedy. *Second*, the concepts of economic and technological feasibility should be discarded. Technological feasibility is an inherent limitation of any plan, and economic feasibility ignores that: (i) Chemours is responsible for the contamination that it caused irrespective of cost to remediate; and (ii) Chemours is a $7 billion company, with $747 million in net income in 2017 alone. To the extent that such concepts are left in the final Consent Order, the questions of technological and economic feasibility should be expressly left to the reasonable discretion of DEQ, not Chemours, with disclosure and input from the public. *Third*, the plan to be developed by Chemours, including the supporting modeling, should be published for comment by the public, rather than just Cape Fear River Watch ("CFRW"). Moreover, SOWs should be provided for public review and comment.

Facility Site Visit. The site visit should include representatives of the downstream water utilities and municipal officials.

Health Studies. The proposed health studies are insufficient to provide adequate data from which DEQ can make an informed, reasoned decision regarding safe levels of PFAS discharges, emissions, and other releases to the environment. *First*, by agreeing not to require any studies for the vast majority of PFAS released by Chemours, DEQ abdicates its responsibility to ensure that constituents of Chemours' releases are safe for human health and the environment and ensure compliance with state water quality standards prior to approving their release. *Second*, as already noted by counsel for the putative class in *Carey v. E.I. du Pont de Nemours*, 7:17-CV-00189 (E.D.N.C.) in their December 6, 2018 letter to the Bladen County Superior Court, both epidemiological studies and toxicity testing to generate dose response data should be required. CFPUA supports the health study comments of the putative class counsel, and concurs that more comprehensive studies and greater detail about the protocol of such studies should be mandated, so that the public can meaningfully review and comment on the adequacy of such studies. Finally, Chemours should provide to DEQ and the public any health studies it has previously conducted on any PFAS that is a constituent of its process wastewater or its air emissions.

Notice to and Coordination with Water Utilities. CFPUA supports the requirement of immediate notice to downstream water utilities and notes that Chemours has never notified CFPUA of a PFAS release at the Facility that resulted in elevated concentrations discharged into the Cape Fear River. The requirements of this paragraph should therefore be subject to a substantial stipulated penalty, to encourage timely notice to the downstream water utilities.

C. Groundwater (Paragraphs 16–18)

Groundwater Remediation. CFPUA supports remediation of the groundwater at the Facility that complies with the requirements of the 2L Rules. However, especially given the longstanding RCRA investigation of groundwater contamination at the Facility, allowing Chemours until December 31, 2019 to submit a Corrective Action Plan, with no specified deadline for implementation of the plan, is an excessive time frame. Additionally, interim maximum allowable concentrations for PFAS that may affect the remediation required under this section should not be established absent adequate health studies to determine safe levels of PFAS concentrations. Although CFPUA supports specific requirements for reduction of PFAS loading to surface water, it is not clear whether a 75% reduction from baseline is adequate to protect health

and the environment. DEQ should require Chemours to provide information sufficient for the public to evaluate the adequacy of the reduction. Finally, while the Corrective Action Plan is required to account for all PFAS for which test methods have been developed, complete characterization of PFAS and development of test methods is not scheduled to be complete until after submission of the Plan. The proposed Consent Order should be revised to ensure that any newly identified PFAS are also accounted for in the groundwater remediation requirements.

D. Replacement of Drinking Water Supplies (Paragraphs 19–25)

PFAS levels in drinking water of all affected consumers should be addressed to ensure that no one is subject to unsafe levels of PFAS as a result of the contamination caused by Chemours and to ensure that the use of the Cape Fear River as a source of drinking water is not impaired. The proposed Consent Order does not accomplish these objectives.

DEQ has apparently determined that Chemours must provide reverse osmosis systems to owners of private wells contaminated with concentrations above certain thresholds of the PFAS listed on Attachment C, which are perfluoroalkyl ether carboxylic acids ("PFECAs"). The requirement is triggered at combined PFECA concentrations in groundwater above 70 ppt or individual concentrations above 10 ppt (the "PFECA Limit"). There are two critical errors with the proposed Consent Order's implementation of the PFECA Limit.

First, the PFECA Limit appears to accept Chemours' assertion that Chemours is only responsible for PFECA contaminants. Groundwater at the Fayetteville Works Facility is known to be contaminated with a broad range of PFAS—well beyond just the twelve PFECAs enumerated on Attachment C—and is further known to contribute to PFAS loading of the surface water of the Cape Fear River, as both DEQ and Chemours acknowledge. Furthermore, CFPUA is informed and believes the wastewaters generated by Chemours (before dilution by a factor of 20 from non-process river water) can contain additional PFAS compounds.

Second, the PFECA Limit excludes from its protections all downstream users of the Cape Fear River. DEQ has asserted that: "The way that the order is structured, it will mean that no one in the community will be drinking water with measurable PFAS concentrations above 10 parts per trillion."[1] DEQ's statement misconstrues the proposed Consent Order in its current form. While the PFECA Limit applies to the households with contaminated wells in the immediate area of the Fayetteville Works Facility, it does not apply to the 200,000 people served by CFPUA, along with the approximately 100,000 people served by Brunswick County, all of whom are provided drinking water from the Cape Fear River.

The proposed Consent Order effectively abandons the downstream users of the Cape Fear River, leaving them to fend for themselves in private litigation. Inexplicably, this appears to have been a strategic decision by the agency. In defending the proposed Consent Order, DEQ stated:

> You also have the complimentary efforts of the federal lawsuit that the local public utility has filed. That is intended to pursue damages. And then you have the class-

[1] *See* http://www.whqr.org/post/genx-deq-explains-proposed-consent-order#stream/0.

> action lawsuits that are occurring here as well, so the comprehensive nature of all of those actions are what we consider the right steps in protecting the people of Wilmington.[2]

Private litigation is not a substitute for DEQ's enforcement of its environmental laws. The agency's enforcement of the PFECA Limit exclusively for private well owners in the vicinity of the Facility is inconsistent with DEQ's responsibility to protect all of the citizens of this State, not just a select few.

Importantly, PFAS testing at the CFPUA water intake, and of the finished water, shows that CFPUA's water regularly exceeds the PFECA Limit that the proposed Consent Order apparently accepts as safe.

Apart from the errors described in this section of comments, it is unclear how the PFECA Limit was derived, whether it is based on the best available health information pertaining to PFECAs, or whether CFPUA should consider it a health advisory standard from the State. DEQ should disclose how the PFECA Limit was reached, including whether it accounts for the cumulative effect of exposure to numerous PFAS—not just PFECAs.

E. Other Compliance Measures (Paragraphs 26–28)

DEQ should identify the purpose of measuring the Total Organic Fluorine ("TOF"), including whether DEQ intends to use the measurement as a substitute for identifying and measuring PFAS in the air emissions and wastewater of Chemours. DEQ should develop requirements for TOF that: require Chemours to identify each substance that contributes to TOF in air emissions and wastewater discharges; complete independently peer-reviewed health and safety studies of each substance; and prohibit emission and discharge of each substance unless independently peer-reviewed health and safety studies provide reliable information that can be used to establish amounts and concentrations of the substance that can safely be discharged or emitted. With regard to discharges and the water quality of the Cape Fear River, the foregoing TOF requirements are essential to reasonably ensure compliance with the deleterious substance water quality standard established by 15A NCAC 2B .0211(12).

CFPUA supports the development of a PFAS fate and transport study. However, the study should be open to public participation, including review of study protocol and findings, to ensure the validity of its evaluation and conclusions. Further, the study of the fate and transport of identified PFAS is scheduled to be completed a year before complete characterization of PFAS being released from the Facility. Following final characterization, the proposed Consent Order should require that the study be updated to account for any newly identified PFAS.

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[2] *See* http://www.wect.com/2018/12/05/deq-secretary-proposed-chemours-consent-order-its-very-strong-first-step/.

F. Compliance Measures – Public Information (Paragraphs 29–30)

Disclosure of the identity, concentrations, and quantities of all PFAS that are or could be released to the environment by Chemours is essential. The proposed Consent Order does not impose this requirement. *First*, Paragraph 29 does not expressly require disclosure of the identity, concentrations, or quantity of PFAS being released. Rather, it requires public notice about a change in Facility operations. *Second*, Paragraph 29 is only triggered by a change in operations. If a previously undisclosed PFAS is continuing to be released into the environment as a result of the usual operations, there is no clear mandate for public disclosure. *Third*, references to the "production" of PFAS at Chemours should expressly include production of PFAS as a byproduct of any process at the Facility.

Most concerning, the proposed Consent Order appears to allow a blanket claim of confidential business information ("CBI") by Chemours, with little or no opportunity for public participation or knowledge. Chemours and its predecessor DuPont have a history of abusing CBI claims to withhold or hide from the public information about the use, toxicity, and release of PFAS. Chemours should not be offered another opportunity to continue the PFAS shell game that the two companies have played for years. To the extent any PFAS is released to the environment, it ceases being "confidential" and becomes a public concern. Chemours must provide comprehensive, accurate, and timely information to the public regarding the identity, use, quantity, and toxicity of all PFAS released into the environment from the Facility. Moreover, it is critical that such information is disclosed in advance, as part of any permit application submitted by Chemours, so that the public will have an adequate opportunity to review and meaningfully comment on the intended release.

G. Penalties and Investigative Costs (Paragraphs 31–33)

Stipulated penalties should include a substantial penalty for failure to provide timely notice to downstream water utilities of PFAS releases to the environment as described in Paragraph 15.

Even assuming that DEQ undertakes a separate enforcement action against DuPont, the $12,000,000 civil penalty proposed in the Consent Order is inadequate. *First*, it disregards the gravity of the violation—releasing untold quantities of undisclosed toxic substances into the Cape Fear River, exposing the entire population of the lower Cape Fear River basin to risk of negative health outcomes. Though Chemours' time operating the Facility is only a fraction of DuPont's, the facts remain that: (i) Chemours is a spinoff of DuPont, with many of the same officers in the same roles; and (ii) Chemours continued the same reckless and deceptive practices as DuPont, until it was caught.

Second, the relatively low penalty disregards the significant financial strength of Chemours—a $7 billion company with net income of $747 million in 2017 alone. A $12 million penalty is a pittance to a company of that magnitude. Such a small comparative amount incentivizes bad behavior. Even with the penalty, Chemours has assuredly profited off an environmental disaster of its own making. Stronger disincentives must be imposed to discourage similar conduct in the future.

Finally, DEQ should clarify whether it intends to separately impose civil or criminal penalties against DuPont. While a $12,000,000 penalty is low even for the past three years of PFAS releases, it would be an affront to the citizens of the entire lower Cape Fear River basin if it purported to account for DuPont's 35 years of hidden PFAS releases.

H. Release and Reservation of Rights

A fundamental problem of the proposed Consent Order is that it does not address the downstream PFAS contamination caused by Chemours and DuPont. Even if the PFAS "spigot" at Fayetteville Works is turned off completely, CFPUA will still be subject to large quantities of PFAS being released into the Cape Fear River from contaminated sediment, groundwater, previous deposition from air emissions, and stormwater.

Under these circumstances, the proposed Consent Order nonetheless purports to release Chemours from all claims "relating to the release of PFAS from the Facility that have been or could have been brought." The proposed Consent Order should not release Chemours from remediation of off-site PFAS contamination, and DEQ should clarify whether it intends to pursue further enforcement actions for downstream PFAS contamination, whether against Chemours, DuPont, or both. Lastly, the proposed Consent Order should expressly reserve the right to pursue all claims that may be available against DuPont.

I. Intervention of Cape Fear River Watch

The quarterly progress reports submitted to DEQ and CFRW should be submitted to the water utilities. Similarly, DEQ should make its staff available to the water utilities' staff to meet and discuss the information reflected in the quarterly reports.

J. Miscellaneous

Effect of this Order. The proposed Consent Order must not be construed to be a permit to release PFAS to the environment. The proposed Consent Order should be revised to specify that it does not obligate DEQ to incorporate any terms of the Order into a permit, nor does it preclude full public participation in any permit sought by Chemours under state or federal law, regardless of whether the terms of the permit are consistent with the Consent Order. The public should not, by virtue of the proposed Consent Order, lose the opportunity to challenge any term or condition of a permit that may be sought by or issued to Chemours.

Carbon Filtration Systems. CFPUA questions the purpose and need of this provision. As an initial matter, CFPUA has engaged in its own extensive pilot study of granular activated carbon ("GAC") systems, funded in part by appropriations from the General Assembly, the details of which have been made available to the public at large. CFPUA is surprised to learn that DEQ and Chemours have undertaken their own separate study of similar systems, without notifying, coordinating with, or sharing findings and data with CFPUA.

DEQ should disclose the full scope of details related to its "program" for testing the efficacy of GACs, including GAC design, test protocols, results, and projected cost, maintenance,

and lifespan information. Only after such disclosure can the public undertake a meaningful evaluation of the program as designed by DEQ and Chemours.

Finally, DEQ's and Chemours' joint "program," showing under "test conditions" that PFAS were reduced to non-detect, cannot support the assumption that installation of a similar system as part of Chemours' wastewater treatment plant will reduce to non-detect PFAS in its effluent being discharged to the Cape Fear River. Chemours cannot shirk its obligation to establish and meet safe PFAS concentrations in its effluent, simply by installing a GAC and making the assumption that PFAS levels have been adequately reduced. DEQ needs to impose science-based PFAS limits on the discharges of Chemours. In order for an NPDES Permit to be issued, Chemours must establish: (i) the identity and quantity of all PFAS in its effluent; (ii) safe levels of discharge for those PFAS; and (iii) the real-world ability to limit its PFAS discharges to safe levels. Installation of a GAC, while likely beneficial, does not prove any of those elements. DEQ has its own legal duty to enforce applicable water quality standards that require that deleterious substances may be discharged legally *only* in an amount that will not render the waters injurious to public health or impair the Cape Fear River for any of its designated uses, including its use as a source of drinking water.

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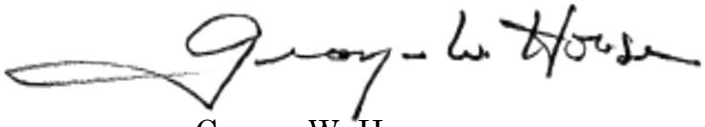
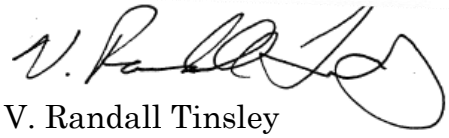
CFPUA appreciates the opportunity to comment on the proposed Consent Order, and reminds DEQ that it must fully consider and address the comments that it receives, in accord with its obligations as a North Carolina administrative agency subject to the Administrative Procedure Act. CFPUA further requests that DEQ provide the relevant information omitted from the proposed Consent Order, modify the proposed Consent Order to address the above concerns, and allow another opportunity for the public to review the supplemental information and modified Consent Order, so that DEQ has the benefit of a meaningful review and comment by the public.

Sincerely,



George W. House



V. Randall Tinsley

Joseph A. Ponzi

cc: Michael S. Regan, Secretary
Bill Lane, General Counsel