



NORTH CAROLINA  
Environmental Quality

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

MICHAEL SCOTT  
Director

July 24, 2019

Mr. Brian D. Long  
Plant Manager  
Chemours Fayetteville Works  
22828 NC Highway 87 W  
Fayetteville NC 28306

Re: Consent Order Paragraph 24 – Drinking Water Compliance Plan

Dear Mr. Long,

Please see the comments below regarding the drinking water compliance plan:

**Section 2.0 Private Well Testing (Third party laboratory approval)**

DEQ issued a conditional approval of the third-party lab and there are still steps to take to finalize the approval.

The CAS #s in Attachment C/Table 1 have changed and some analytes are not being analyzed for. Is it sufficient to look for one isomer only? DEQ requests clarification on these items.

**Section 2.1 Additional Drinking Water Well testing**

DEQ requests that Chemours add a minimum number of samples per square mile or per # of houses as the geographical area increases. See additional comment under Appendix A. How many times and in what ways will homeowners be contacted regarding well sampling?

Please clarify that the distance of 10.5 miles is intended to provide information on how far testing can extend by December 2019, and is not intended to indicate an outer perimeter of contamination since, as you state, the spatial extent of PFAS contamination is currently unknown. Upon the completion of the Adaptive Step Out sampling program, Chemours should evaluate whether the radial extent of sampling should increase beyond 10.5 miles and provide its justification to DEQ.

DEQ requests that Chemours conduct targeted sampling of private wells in close proximity of the river to determine the possible extent of impacted wells.

**Section 2.2 Re- Analysis of Previously Collected Groundwater Samples**

NC DEQ requests sufficient data to compare the original lab results for GenX and the recent reanalysis.

**Section 2.3 Annual Re-Testing (private wells)**



Paragraph 21 of the CO reads that “Chemours shall retest annually to determine the extent of PFAS contamination.” The current plan only includes a limited set of re-testing during the first 2 years. The plan only includes re-testing wells with no detections, but we suggest 3 categories for re-testing and 20 locations for each category: non-detects, 10-70 ng/L, and 70-140 ng/L GenX.

### **Section 3.3 On-going Interim Replacement of Private Drinking Water Supplies**

Chemours shall notify DEQ via email of each resident that declines bottled water delivery. This notification shall occur within 7 days of the resident declining delivery and must include the residents name, address and contact information. In addition, Chemours shall, in the quarterly reports required in CO Paragraph 28, provide a running list of the names, address and contact information for all the residents who have declined bottled water. Interim replacement water will be provided to the resident until NCDEQ agrees that interim replacement water delivery may cease for residents who decline a water filtration system.

Chemours shall notify DEQ via email of each resident that declines RO installation. This notification shall occur within 7 days of the resident declining installation and must include the residents name, address and contact information.

In addition, Chemours shall, in the quarterly reports required in CO Paragraph 28, provide a list of all residents eligible for RO, the status (contacted, scheduled, installed, declined), names, address, contact information and date of installation.

### **Section 4.0 Reverse Osmosis Drinking Water Systems**

The plan notes that some who qualify for RO maybe offered connection to public water supply systems. Please provide more detailed information on how this evaluation will occur, including the definition of “nearby.” Please also clarify that, when specified conditions are met, the resident will have the option to choose either RO or public water.

#### **Section 4.2.1: Reverse Osmosis System Quality Assurance**

The plan proposes to demonstrate treatment system effectiveness by collecting one sample each from 10 systems. DEQ requests that Chemours conduct initial sampling from a minimum of 10 % of systems and also conduct a pilot study to demonstrate the long-term RO maintenance that is needed to remain effective (see below). After collecting data regarding the effectiveness of the RO systems, DEQ will make this data public. DEQ requests that, following the publication of the data regarding the effectiveness of the RO Systems, Chemours conduct further sampling if requested by any household. DEQ notes that factors other than PFAS removal at the levels described in Chemours’ plan may be relevant to DEQ’s determination of whether a system is “functioning properly or effectively.” Such factors may include the effective of the system on water pressure, frequency of necessary maintenance or cartridge replacement, or other impacts indicating that the system is not functioning properly.

#### **Section 4.2.2 Long Term RO Maintenance**

The plan states that filters will be changed when residents report that systems experience a 75% reduction in flow. DEQ requests that Chemours develop a pilot study which will assess breakthrough levels and flow reduction rates. This study should be sufficient to determine the % flow reduction that is appropriate for triggering maintenance of the RO system. DEQ requests that the RO pilot study assess a minimum of 10% of systems, equally representing different raw water concentration levels (low, mid, high). In addition to residents contacting Kinetico for replacement cartridges or membranes, if a resident does not contact Kinetico, replacement cartridges and membranes should be provided a schedule determined by the pilot testing.



### **Section 4.2.2 Long-Term Reverse Osmosis System Maintenance**

DEQ requests that residents be put on a regular 1-year maintenance schedule for the sediment removal and carbon polishing cartridges rather than 1 to 1.5 years as indicated.

### **Section 5.0 Permanent Replacement of Drinking Water Supplies**

Chemours shall notify DEQ via email of each resident that declines GAC installation. This notification shall occur within 7 days of the resident declining installation and must include the residents name, address and contact information.

In addition, Chemours shall, in the quarterly reports required in CO Section 28, provide a list of all residents eligible for GAC, the status (contacted, scheduled, installed, declined or chose RO), names, address, contact information and date of installation.

To ensure proper access throughout this section provide a description of communications that will occur when the resident is not the homeowner.

### **Section 5.1 Public Water Supplies**

How will homes with exceedances found in the future be included in this calculation to determine feasibility of public water?

#### **Section 5.2.1. Initial GAC Qualification Notification**

Please clarify that the letter proposed would be sent only after the feasibility analysis is complete, and shows that a connection to public water is cost prohibitive. Otherwise, should connection to public water also be presented as an option?

#### **Section 5.2.2 In-Home Interview/Informational Visit**

DEQ requests a copy of the access agreement(s) presented to residents by Chemours.

#### **Section 5.2.4 GAC Permitting**

What would cause a home drinking water well to need to be reinstalled? What is the GAC installation timeline?

#### **Section 5.2.5 GAC Shed Installation**

Will homeowners have a key to the shed padlock? If not, recommend that printed permits be shared with all homeowners. For all Sections – how will residents be included in communications if the resident is different from homeowner?

#### **Section 5.2.6 GAC Plumbing Completion**

If the well pump etc. are upgraded, how will this be communicated to the homeowner? Prior to GAC installation the home should be evaluated for existing filters and water treatment units. If these existing systems are found, they should be flushed, and existing media should be replaced.

#### **Section 5.2.7 GAC Electrical Connection**

Who decides that a booster pump is needed and what are the criteria?

#### **Section 5.2.8 GAC System Sample Collection**

The plan proposes to change out filters when samples collected after the first GAC canister have any PFAS greater than 100 ng/L. We had previously discussed that filter changeout should be triggered when the samples collected after the first GAC canister have 70 ng/L or greater for any PFAS. Future changes to the GAC sampling and changeout schedule will need to be approved by DEQ.



**Section 5.2.10 GAC System Operations, Maintenance, and Monitoring (OM&M)**

Chemours indicates that if a 3<sup>rd</sup> GAC canister is needed breakthrough will be determined between the 2<sup>nd</sup> and the 3<sup>rd</sup> canister. Breakthrough should be determined after the first canister in every instance. There are a number of instances where Chemours indicates breakthrough of 100 ppt. The breakthrough threshold should be 70 ppt. What reductions in flow and increases in backpressure would trigger the installation of a booster pump?

**Appendix A – Adaptive Step Out and Infill Sampling Program**

3.1. If a resident declines the well testing when the contractor knocks on their door, and after consideration changes their mind, can they call for sampling? If not, how will they be informed that their decision is final?

3.2. Will Chemours use owner reported well and water system info or only that which is recorded on the well or elsewhere?

DEQ requests that Chemours provide a schedule to the best extent possible for each step out area and identify the area by sector number and distance. For example: Sector 1 – 4.5 to 5.5 May 2019, Sector 2 5.5 – 6.5 June 2019.

DEQ requests that Chemours provide a schedule for infill sampling those areas that are closer to the plant than the beginning areas identified on Figure 2.

Because the areas will become increasing larger as a function of distance from the facility a set of 10 initial samples is not sufficient for all of the areas. We suggest the Chemours use the following for initial sampling:

3.5 – 4.5	10 samples
4.5 – 5.5	12 samples
5.5 – 6.5	15 samples
6.5 – 7.5	18 samples
7.5 – 8.5	22 samples
8.5 – 9.5	27 samples
9.5 – 10.5	33 samples

**Appendix B and E**

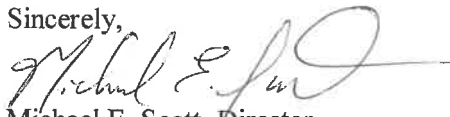
2-6 pm on Mondays is too limited a timeframe for supplemental bottle water availability. DEQ requests a second day/time be added, preferably on the weekend.

**Appendix H**

DEQ requests that Chemours add links to pilot data on Chemours website.

We look forward to discussing responses to these comments and the drinking water compliance plan in the near term.

Sincerely,



Michael E. Scott, Director  
Division of Waste Management

