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BY EMAIL AND FEDRAL EXPRESS

Scott G. Mandirola
Director
Division of Water and Waste Management
WVDEP
601 57th Street, SE
Charleston, WV 25304-2345

Re: Request For Information/Action Relating to GenX Materials Used at and Released From DuPont's/Chemours' Washington Works Facility in Wood County, West Virginia (NPDES Permit WV0001279/Consent Order No. 7418)

Dear Director Mandirola:

As noted in our previous correspondence to your office, we have been writing to the West Virginia Department of Environmental Protection ("WVDEP") for over sixteen years to try to focus your Agency's attention on the threats to human health and the environment posed by perfluorochemicals used by E. I. du Pont de Nemours and Company ("DuPont") and its successor, The Chemours Company, at the Washington Works Facility in Wood County (the "Plant"). (*See e.g.*, Ex. A). Those communications began in March of 2001 after we first began to learn of the dangers posed by DuPont's use of PFOA (a/k/a "C-8") and the resultant contamination of drinking water supplies for the community surrounding the Plant. The public disclosure and assessment of that information ultimately led to DuPont's decision to stop manufacturing or using PFOA in the United States, and to switch to a PFOA replacement referred to as "GenX." We now write seeking your assistance in clarifying the information your Agency possesses regarding the extent to which DuPont's/Chemours' use and release of this new GenX material might pose similar threats to human health or the environment, and to request that WVDEP take immediate action to protect community drinking water supplies from possible GenX contamination.

I. WVDEP's Public Representations Regarding GenX

On November 26, 2011, WVDEP ran a Public Notice in the Parkersburg newspaper indicating that WVDEP and DuPont were proposing to enter into a Consent Order that would allow DuPont to "begin construction activities in connection with necessary upgrades to the waste water treatment system and to commence commercial scale production using their new patented technology for a new processing aid for the production of high-performance fluoropolymers using a new compound" at the Plant. (Ex. B.) The Public Notice made no mention of any potential releases of any new chemicals into the environment from the plant, including into the Ohio River, and did not reveal the identity of the "new processing aid." (*Id.*) The actual proposed Consent Order had to be obtained from WVDEP and any comments had to submitted to WVDEP within 30 days. (*Id.*) WVDEP promised, however, that all "[c]omments received within this period will be considered prior to" WVDEP taking any action on the proposed Order, and that it would consider holding a public hearing on the matter if "there is a significant degree of public interest." (*Id.*)

In the actual proposed Consent Order, WVDEP revealed that the new processing aid to be used at the Plant was something called "C3 Dimer Acid/Salt (CAS # 13252-13-6 and CAS # 62037-80-3)" (hereinafter "GenX"). (Ex. C at 2.) Although no Material Safety Data Sheets ("MSDSs") or similar documents were included, the proposed Consent Order indicated that DuPont had provided "toxicity data" to WVDEP in March and August of 2011, that DuPont had represented to WVDEP that the new material "is a sustainable solution ... with a favorable toxicological profile and rapid bioelimination," and that DuPont had further represented to WVDEP that it "will utilize environmental control technologies that reduce environmental release and exposure." (*Id.*) The proposed Consent Order also indicated that US EPA already had "granted DuPont approval ... to commercially manufacture, process, and distribute[]" the new material under the terms of a separate Consent Order entered between DuPont and US EPA on January 28, 2009. (*Id.*) Following review of the data supplied and representations made by DuPont, WVDEP stated that it was proposing to allow DuPont to begin using the GenX material at the Plant and to begin releasing it into the Ohio River, subject to certain new monitoring requirements and discharge limits. (*Id.* at 3-5.)

Based upon a review of "the toxicological information provided" to WVDEP by DuPont "and all other information available" at that time, WVDEP's proposed Consent Order included daily maximum and weekly average limits for GenX at two of the Plant's outfalls to the Ohio River (Outlets 002 and 005). (*Id.*) WVDEP stated that the outfall-specific limits were necessary to insure compliance with the state's "narrative water quality standards," taking applicable dilution factors into account. (*Id.* at 4.) For Outlet 002, WVDEP proposed that GenX be limited to no more than 112 parts per billion ("ppb"/"ug/l") at the point of discharge on any one day, and no more than 77 ppb as a weekly average. (*Id.*) For Outlet 005, WVDEP proposed that GenX be limited to no more than 278 ppb at the point of discharge on any one day, and no more than 191 ppb as a weekly average. (*Id.*) WVDEP provided no explanation for how these proposed

discharge limits were calculated, other than to state: "WVDEP has determined that a concentration of no more than 17.5 ug/l [ppb] of the New Compound in the receiving stream outside of an applicable mixing zone will be protective of West Virginia's narrative water quality standards found in 47 CSR 2, Section 3 of the West Virginia Legislative Rules. To this end, WVDEP has established the discharge limitations for the New Compound as set forth [in the proposed Consent Order]." (*Id.*) WVDEP provided none of the calculations supporting how this 17.5 ppb number (or any of the proposed discharge limits) were actually derived in the proposed Consent Order materials made available to the public during the public comment period.

Although members of the community submitted comments objecting to the proposed Consent Order, including objections to the lack of explanation as to how the new discharge limits were derived, (Exs. D-F), WVDEP overruled and rejected all such objections through a single form letter sent on January 31, 2012, (Exs. G-I). With respect to concerns that sufficient information had not been provided regarding the potential adverse effects of GenX on human health and the environment, WVDEP noted that its proposed permit limits and calculations had been based on the limited amount of toxicology data that had been provided to WVDEP by DuPont, which did not yet include long-term toxicity studies, as those were still to be completed by DuPont under the terms of the 2009 Consent Order with US EPA. (*Id.*) WVDEP promised, however, that it would "revisit and revise, as necessary" the numbers calculated by WVDEP in its proposed Consent Order "[a]s the requisite chronic [long-term toxicity] studies are completed in the future." (*Id* at 2.) WVDEP also stated for the first time in its response to the public comments that the calculation of a limit of no more than 17.5 ppb GenX in water after mixing was the equivalent of a "risk-based Drinking Water Equivalent Level (DWEL) for the new compound." (*Id.*) In support, WVDEP attached a copy of a January 31, 2012, memo signed by a WVDEP toxicologist purporting to explain the derivation of the 17.5 ppb DWEL. (*Id.* at attached Memo. from L.P. Sirinek, Ph.D.).) That memo revealed that WVDEP's new 17.5 ppb GenX DWEL was purportedly derived from information "provided by DuPont" and used a sub-chronic (short-term) rat study that "DuPont indicates" found a No Observable Adverse Effect Level ("NOAEL") of 10 mg/kg/day. (*Id.*) WVDEP represented that, "[b]ased upon the information provided by DuPont," the 17.5 ppb DWEL should be adequate to "protect both human health and the environment," but noted that "[a]dditional consideration should be made when the results of the chronic study are provided" by DuPont. (*Id.* at 2.)

In addition to dismissing the public concerns regarding whether sufficient information existed to allow DuPont to begin releasing GenX into the Ohio River, WVDEP denied the public's request for a public hearing to discuss the issue. (Exs. G-I at 3.) According to WVDEP, a public hearing was "not warranted," because only three letters had been received objecting to the proposed Consent Order. As of today's date, we are not aware of any further public statement by WVDEP regarding any aspect of DuPont's or Chemours's use or release of GenX at the Plant since the Consent Order was entered on January 31, 2012. (*See* Ex. J.)

II. WVDEP's Actual Knowledge Regarding GenX

Based upon our review of records recently obtained in response to our July 6, 2017, public records request to WVDEP (and the numerous documents in our files relating to GenX obtained directly from DuPont during our last 17 years of litigation in connection with perfluorochemical issues[1]), we seek clarification from WVDEP as to the nature and extent of the information actually available to and considered by the Agency in connection with its assessment and evaluation of DuPont's/Chemours' use and release of GenX at the Plant. As discussed below, the information we have received and reviewed appears to indicate significant inconsistencies between the information that has been or should have been available to WVDEP on GenX and the information made available to date to the community surrounding the Plant.

A. Timing of WVDEP's Approval to Release GenX into the Ohio River

It is not clear when WVDEP first allowed DuPont to begin releasing GenX into the Ohio River. In the draft GenX Consent Order with WVDEP released to the public in November of 2011, WVDEP noted that WVDEP had issued a WV/NPDES Permit (No. WV0001279) to DuPont in 2003 that authorized "the Plant's point source discharges into the Ohio River." (Ex. C (Draft Permit at 1).) Although that permit was set to expire on June 20, 2007, WVDEP "administratively extended" the expiration date of the permit until December 31, 2011, after DuPont had applied to renew the permit on December 20, 2007. (*Id.* (Draft Permit at 1-2).) Because WVDEP "cannot modify a WV/NPDES permit that has been administratively extended beyond its original expiration date," WVDEP acknowledged that it "cannot currently modify the Permit to authorize DuPont to scale up the use of the New Compound [or] to discharge the New Compound." (*Id.*) Thus, as far as the public was aware, DuPont had not been (and would not be) allowed to begin releasing GenX into the Ohio River from the Plant and would only be permitted to do so moving forward, if WVDEP signed and entered the final Consent Order at the conclusion of the public comment period.

Yet, according to documents recently obtained from WVDEP, it appears that WVDEP had allowed DuPont to begin using and discharging GenX before the GenX Consent Order was signed and entered by WVDEP on January 31, 2012. More than a month earlier, on December 14, 2011, WVDEP notified DuPont that it had granted DuPont's request "to initiate full scale production tests" of GenX at the Fine Powder area of the Plant and to begin releasing the material into the Ohio River through Outlets 002 and 005. (Ex. K.) Although WVDEP indicated that DuPont's request had been sent on December 9, 2011, it appears to have actually been sent on November 28, 2011.

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[1] During the course of that litigation, DuPont has stamped many such documents relating to GenX "confidential" under the terms of one or more protective orders, precluding us from attaching or revealing the contents of those documents without either DuPont's agreement or other legal grounds allowed under the terms of those orders. None of the information contained in this letter or attached hereto has been designated "confidential" by DuPont under any of those Orders.

(*See* Ex. L.) On December 16, 2011, DuPont sent a similar request for authorization to begin using and releasing GenX from an additional area (Granular) at the Plant, (Ex. M), which WVDEP similarly approved on January 6, 2012, (Ex. N). WVDEP approved these earlier requests to begin using and releasing GenX at the Plant, even though WVDEP knew that the production would result in at least a portion of the wastewater containing GenX being discharged through Outlet 005 into the Ohio River without first receiving any treatment by activated carbon filtration. (Exs. L & M at 1 ("This wastewater source is not located in the vicinity of one of the treatment processes and will discharge via outfall 005.").) The discharge limits referenced in WVDEP's December 14 and January 6 authorization letters were the same ones set forth in the draft GenX Consent Order that was purportedly still out for public review and comment before being approved. (*Compare* Ex. C *with* Exs. K & N.) It seems those limits and Consent Order terms already had been discussed with and signed off on by DuPont even weeks before that, on November 18, 2011. (*See* Ex. C (Draft Permit at 6).) That sign off had occurred months before the January 31, 2012, memo from WVDEP's toxicologist was prepared describing how WVDEP purportedly derived those numbers. It is not clear how DuPont was able to sign off on a Consent Order with WVDEP on November 18, 2011, that would purportedly grant DuPont's requests to begin releasing GenX into the Ohio River, when DuPont apparently did not even submit those requests until weeks later. Nevertheless, it is clear that DuPont was actively discharging GenX from the Plant by no later than December 16, 2011. (*See* Ex. O.)

Given the inconsistencies in the dates referenced above with respect to WVDEP's actual approval of DuPont's discharge of GenX into the Ohio River, we request that WVDEP clarify the following and produce all documents relating to such issues:

1. When did DuPont first actually request permission to begin discharging any amount of GenX into the Ohio River?

2. Who first proposed the idea of entering into a Consent Order to allow DuPont's GenX releases to the Ohio River and who generated the first draft of the Consent Order and the proposed GenX discharge limits?[2]

3. When did WVDEP first authorize any discharge of any amount of GenX into the Ohio River?

4. When did DuPont first begin discharging GenX into the Ohio River?

5. When did DuPont begin filtering or otherwise treating all the GenX wastewater streams flowing to the Ohio River through Outlets 002 and 005 to remove the GenX?

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[2] The earliest-dated document we could find in WVDEP's public records on this issue is a November 21, 2011, letter from one of DuPont's attorneys forwarding *to WVDEP* a November 18, 2011, draft GenX Consent Order (already signed by DuPont on November 18, 2011), which already contained all of the same GenX permit limits and 17.5 ppb DWEL that ended up in the final Consent Order.

B. Timing of WVDEP's Receipt of GenX Toxicity Information

It is also not clear what information WVDEP actually has received and reviewed regarding the toxicity and potential adverse impact of GenX on human health or the environment in the context of allowing DuPont to release GenX into the Ohio River. In its 2012 GenX Consent Order, WVDEP references having received "toxicity data" from DuPont in March and August of 2011, in addition to "ongoing dialog and additional information shared between the parties." (Ex. J at 2.) Although it is unclear exactly which studies and data WVDEP actually received or when those discussions first began between DuPont and WVDEP, it is clear that, by at least December 15, 2009, DuPont had secured US EPA's permission to share with WVDEP whatever information DuPont had shared with US EPA to secure that agency's approval to begin producing GenX under its 2009 Consent Order. (*See* Ex. P.) By at least the summer of 2010, DuPont had prepared a "backgrounder" discussing its transition from PFOA to GenX "intended as a leave-behind for use with regulatory and government audiences" to be "handed out in the context of a face-to-face meeting," (Ex. Q at 1), and had met with at least one other state agency on the topic in North Carolina, (Ex. R). Yet, regardless of when WVDEP first began those discussions with DuPont, it is clear that, by at least the time WVDEP finalized its GenX Consent Order with DuPont in January of 2012, WVDEP was well-aware that the long-term, chronic toxicity studies DuPont had promised to complete under its 2009 Consent Order with US EPA (including analysis of GenX's potential to cause cancer) had still not been completed. (*See* Ex. J at 2.)

Available documents confirm that, in addition to whatever toxicity studies WVDEP had received by 2012, WVDEP also apparently had received from DuPont "Material Safety Data Sheets (MSDS) for the new compound." (Exs. L & M at 2.) Although it is not clear which specific MSDSs were provided (as no copies were found within the documents made available by WVDEP pursuant to our public records request), it is clear that DuPont possessed its own MSDSs for at least some of the GenX materials at that time. For example, by at least October 3, 2005, DuPont had prepared its own MSDS for "HFPO Dimer Acid (2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoic acid," which it confirmed at that time was manufactured by DuPont at its facility in Fayetteville, North Carolina. (Ex. S at 1.) This MSDS referred to the chemical as having the same Chemical Abstract Services (CAS) Number as the C3 Dimer Acid referenced by WVDEP in its 2012 Consent Order documents for GenX: CAS No. 13252-13-6. (*Compare id. with* Ex. J at 2.) This MSDS revealed that DuPont had, by at least 2005, set its own, internal guideline (Acceptable Exposure Limit ("AEL")) to limit employee exposure to the chemical, even though there apparently were no such federal standards for the chemical at the time. (Ex. S at 1.)

DuPont apparently had set a guideline to limit employee exposure to the GenX material based on its understanding that the available data indicated the following potential hazards:

POTENTIAL HEALTH EFFECTS

EYES: May cause eye corrosion or ulceration-blindness may result

SKIN: Untested. May cause skin corrosion or ulceration.

INGESTION: Immediate effects may include severe irritation of the digestive track with stomach pain. Delayed effects may include vomiting, effects to liver and kidneys.

INHALATION: May cause pulmonary edema. Vapor pressure believed to be considerably below value that could cause injury.

ACUTE HEALTH HAZARDS: See above for effects.

CHRONIC HEALTH HAZARDS: Liver enlargement by actual tests. Acute effects Haskell MR697, Report 2.63

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Unknown.

(*Id.* at 1-2.) Based on the foregoing hazards, DuPont recommended the following if someone actually ingested the chemical: "If swallowed, immediately give two glasses of water and induce vomiting. ... Call a physician." (*Id.* at 2.) DuPont also recommended: "Keep away from areas where product may come into contact with food or pharmaceuticals." (*Id.*) Given these hazards and concerns, DuPont recommended in its 2005 MSDS that the material be disposed of by "Incineration with a scrubber equipped discharge." (*Id.* at 3.) Based on this 2005 MSDS from DuPont, it is not clear what MSDSs DuPont gave WVDEP that supported a decision by WVDEP to allow DuPont to discharge this material directly into the Ohio River, which is used as a source of drinking water for so many people.

What is clear, however, is that WVDEP did receive significant, new toxicity data on GenX from DuPont approximately one year after the 2012 Consent Order was entered. Based on documents recently obtained from WVDEP's files, we understand that DuPont notified WVDEP in April 2013 of the results of the long-term, chronic toxicity/cancer study that DuPont had earlier promised to perform under the terms of its 2009 Consent Order with US EPA. (*See* Ex. T.) Through the documents DuPont submitted to WVDEP at that time (and the discussions that apparently occurred with DuPont's counsel), WVDEP was made aware that this new study had confirmed a number of adverse effects among the lab animals with long-term, chronic exposure to the GenX material, including the same triad of tumors (liver, pancreatic, and testicular) that had been found among animals with long-term exposure to PFOA. (*See id.*at attached Jan. 8, 2013 DuPont Letter).) Moreover, the chronic, long-term/cancer study had indicated a NOAEL at a significantly lower dose level (1 mg/kg/day) than in the

short-term, sub-chronic study WVDEP had used to approve a 17.5 ppb DWEL for GenX a year earlier (NOAEL of 10 mg/kg/day). (*See id.* at 3-4.)

We have found nothing within the files made available to us to date by WVDEP in response to our public records request indicating that WVDEP has ever gone back and reevaluated its earlier decision to allow DuPont to continue to release GenX into the Ohio River at the levels originally specified in the 2012 Consent Order.[3] This is particularly concerning given the fact that current data (as confirmed recently by Dutch regulatory authorities) suggests that the toxicity and persistence profile of GenX may be as bad as the PFOA it is supposed to be replacing. (*See* Ex. U (Excerpts of Report) at Sections 4.3- 4.4.). In addition, North Carolina recently reviewed this information and dramatically lowered its drinking water guideline for GenX to 0.140 ppb (*over 100 times lower* than WVDEP's 2012 DWEL). (*See* Ex. BB.)

Based on the foregoing, we request that WVDEP clarify the following and produce all documents relating to such issues:

1. What specific toxicity data did DuPont provide to WVDEP (which specific studies/data were provided), including data supporting DuPont's claim of GenX being "a sustainable solution ... with a favorable toxicological profile"?

2. What MSDSs were provided to WVDEP with respect to any of the GenX material?

3. What specific data/information (particularly any human blood testing/monitoring/sample results) was provided to WVDEP supporting DuPont's claim of GenX having "rapid bioelimination"?

4. Who first proposed the 17.5 ppb DWEL and GenX permit limits that were eventually incorporated into WVDEP's 2012 GenX Consent Order and when were those calculations first made?

5. What documents/data/studies were provided to WVDEP relating to GenX that are being withheld from WVDEP's public files on any claim of confidentiality or confidential business information ("CBI")?

6. What steps are being taken by WVDEP to revise/reevaluate the 2012 Consent Order terms based on the new toxicity data on GenX generated after the Consent Order was entered?

7. What other state or federal agencies did WVDEP have any discussions with or exchange any information regarding GenX?

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[3] Likewise, we have not located any documents indicating that US EPA went back and reevaluated its initial 2009 Consent Order that allowed DuPont to begin limited use of GenX, after US EPA received the results of the chronic, long-term cancer study on GenX back in January of 2013.

8. What information did WVDEP receive or provide to any other state or federal agencies regarding GenX?

C. WVDEP's Knowledge of Excessive GenX Releases From the Plant

Although WVDEP represented to the public through its 2012 GenX Consent Order materials that it would limit emissions of GenX into the Ohio River, pursuant to the limits specified in that Order, currently available information does not indicate that those requirements have been enforced. Under the 2012 Consent Order, DuPont was required to submit to WVDEP monthly reports confirming the extent to which its GenX emissions were in compliance with the discharge limits specified in the Consent Order. (*See* Ex. J at 4-5.) Yet, for *over a year*, DuPont failed to even submit a single such report. (*See* Ex. V.) In fact, it appears that DuPont did not submit a single such report to WVDEP until shortly after DuPont revealed the disturbing results of its long-term chronic/cancer study on GenX to WVDEP in April 2013. (*See id.*) We found nothing in the records made available to us to date by WVDEP indicating any action taken by WVDEP in response to DuPont's failure to submit those GenX monitoring reports for over a year.

Moreover, even after DuPont began submitting the required monthly GenX reports, we found nothing in WVDEP's files indicating any action ever having been taken by the Agency when those reports revealed exceedances of the discharge limits specified in the 2012 Consent Order. For example, DuPont (and later Chemours) reported several violations of those GenX limits – *sometimes as high as 3 -5 times the daily limits* – between November of 2013 and September of 2015, but there is no indication WVDEP issued any notices of violation or took any action in response. (*See* Exs. W-Z.) This apparent lack of action is particularly concerning given the revelation by researchers during a scientific conference just last month that GenX has now been detected in the community outside the Plant. (*See* Ex. AA.(Excerpts).)

Based on the foregoing, we request that WVDEP clarify the following and produce all documents relating to such issues:

1. What action did WVDEP take in response to DuPont's failure to submit required GenX discharge monitoring reports for over a year?

2. What action has WVDEP taken to insure GenX releases from the Plant do not exceed Consent Order requirements?

III. WVDEP Should Take Immediate Action to Protect Community Drinking Water From GenX Contamination

Based on the information referenced above, we request that WVDEP clarify what actions it has taken and plans to take to investigate the extent to which the community outside the Plant has been exposed to GenX, and the steps that will be taken to address and abate any potential threat to human health or the environment posed by

such exposure. As WVDEP is aware, US EPA recently revised its own Consent Order with DuPont/Chemours that requires the company to investigate and address excessive PFOA contamination in water supplies outside the Plant. (*See* Ex. CC.) By copy of this letter to US EPA, we request that US EPA expand that Consent Order to address and incorporate the Plant's GenX releases.

Thank you.

Very truly yours,

Robert A. Bilott

Encls. (Exs. A -CC)

cc: Mary B. Coe, Esq. US EPA Region III Regional Counsel) (w/encls.)