west virginia department of environmental protection

Division of Water and Waste Management
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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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CONSENT ORDER
ISSUED UNDER THE
WATER POLLUTION CONTROL ACT
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 11

TO: E. I. du Pont de Nemours and Company
Washington Works
c/o Karl J. Boelter, Plant Manager
P. O. Box 1217
Washington, WV 26181-1217

DATE: ~~11/18/2011~~

ORDER NO.: 7418

INTRODUCTION

This Consent Order is issued by the Director of the Division of Water and Waste Management, Department of Environmental Protection, (hereinafter, the "Director") under the authority of Chapter 22, Article 11, Section 1, *et. seq.* of the Code of West Virginia to E. I. du Pont de Nemours and Company (hereinafter "DuPont").

FINDINGS OF FACT

In support of this Order, the Director hereby finds the following:

1. DuPont operates a multiple product line manufacturing facility and associated industrial wastewater treatment plant located in Washington, Wood County, West Virginia. This facility is known as the Washington Works Plant ("Facility" or the "Plant").

2. This Facility is permitted under WV/NPDES Permit No. WV0001279 (the "Permit"), issued August 4, 2003 to authorize the Plant's point source discharges into the Ohio River or tributaries thereof.

3. In accordance with 47 CSR 10-4.3, DuPont timely applied for renewal of the Permit on December 20, 2007, over 180 days prior to the Permit's scheduled expiration date of June 30, 2008.

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4. Since DuPont's submittal of its renewal application, WVDEP has administratively extended the Permit. As of the date of this Consent Order, the Permit remains administratively extended until December 31, 2011.

5. DuPont has developed patented technology for a new-generation processing aid for the production of high-performance fluoropolymers using a new compound C3 Dimer Acid/Salt (CAS # 13252-13-6 and CAS # 62037-80-3) (hereafter the "New Compound"). DuPont represents that this technology is a sustainable solution that includes a new processing aid with a favorable toxicological profile and rapid bioelimination. DuPont further represents that it will utilize environmental control technologies that reduce environmental release and exposure. The U.S. EPA, through a Toxic Substances Control Act Section 5(e) Consent Order ("TSCA Order") executed by DuPont on January 28, 2009, granted DuPont approval, under conditions set forth in the TSCA Order, to commercially manufacture, process, and distributes the processing aid. The TSCA Order requires that DuPont shall recover and capture (destroy) or recycle the New Compound "at an overall efficiency of 99% from all the effluent streams and the air emissions (point source and fugitive)." This requirement is interpreted by DuPont to be applied in the aggregate on an annual basis, for all U.S. sites where the New Compound is used. The wastewater treatment system for the Facility's fluoropolymers processes will be modified to achieve the TSCA Order requirements at present and future production capacity.

6. At this time, based on the results of its ongoing research and development activities, DuPont is planning to undertake construction of related upgrades to the Facility's wastewater treatment system for fluoropolymers processes currently discharging through internal Outlets 102 and 305, in conjunction with the use of the New Compound, and to commence the initial phase of commercial-scale production using the New Compound.

7. The planned upgrades to the fluoropolymers wastewater treatment system include new higher efficiency processing aid recovery, addition of a new reverse osmosis ("RO") system, and expansion of the existing carbon bed systems.

8. The Director cannot modify a WV/NPDES permit that has been administratively extended beyond its original expiration date. Accordingly, WVDEP cannot currently modify the Permit to authorize DuPont to scale up the use of the New Compound, to discharge the New Compound, and to undertake the related wastewater treatment plant upgrades described in Paragraphs 6-7, above.

9. DuPont provided toxicity data to WVDEP in March of 2011. Since that time, ongoing dialogue has occurred and additional information shared between the parties regarding the planned upgrades and the New Compound. On August 3, 2011, DuPont provided additional toxicological information as well as plans to begin production using the New Compound to the WVDEP.

10. The parties have entered into this Consent Order as the most expedient mechanism to allow DuPont to begin construction activities in connection with necessary upgrades to the wastewater treatment system and to commence commercial scale production using

the New Compound, as described in Paragraphs 5 and 6 above, pending the Director's renewal of the Permit. This Consent Order does not constitute and shall not be construed as a finding by the Director that DuPont has committed any violation(s) of the terms and conditions of the Permit.

ORDER FOR COMPLIANCE

Now, therefore, in accordance with Chapter 22, Article 11, Section 1 *et seq.* of the West Virginia Code, it is hereby ORDERED by the Director as follows:

1. DuPont shall undertake construction activities associated with the above-described wastewater treatment plant upgrades in accordance with the following schedule:

    a. Modifications to the Granular Mother Liquor ("GML")/Lamella system to achieve enhanced solids removal shall be initiated no later than six months after the effective date of this Consent Order.
    b. Construction of a new stage 1 RO unit with new membrane technology for enhanced processing aid recovery shall be initiated no later than 12 months after the effective date of this Consent Order.
    c. Sub-micron filtration and additional RO units for recovery of processing aid from previously non-recoverable process streams, and carbon beds for capture of processing aid shall be installed no later than 24 months after the effective date of this Consent Order.
    d. Additional carbon beds in W9 Line 1 for enhanced abatement capability when carbon change-outs occur shall be installed no later than 24 months after the effective date of this Consent Order.
    e. Connection of production areas to new recovery/abatement system as reflected in the permit application shall occur no later than 24 months after the effective date of this Consent Order.

2. During the period of transition to the new processing aid and treatment system upgrades, wastewaters from fluoropolymers processes covered by these changes shall continue to be treated by existing treatment facilities such that all wastestreams that are currently receiving treatment via activated carbon will continue to receive such treatment. DuPont has indicated that the New Compound will require more frequent change-outs of carbon in the carbon beds in order to maintain treatment removal efficiencies. DuPont shall replace the lead bed of granulated activated carbon within seven (7) days of detecting break-through of the New Compound from the lead bed while maintaining an effective polish bed in the system or cease discharge from the affected carbon bed system. Should monitoring detect break-through from the final polish bed, DuPont shall cease discharge from the affected carbon bed system within 24 hours of detecting such break-through until unspent carbon is in place to treat that wastestream. For purposes of this Consent Order, "break-through" will be deemed to have occurred when concentrations of the New Compound are detected at 1 mg/l or greater using the analytical method specified in Paragraph 5, below. This requirement shall apply to internal Outlets 102, 305 and a new internal monitoring location being designated as internal Outlet 605. Further, DuPont

shall operate and maintain the granulated activated carbon beds at internal Outlets 102, 305 and 605 in a manner to prevent the inhibition of treatment of other pollutants.

3. Based on the toxicological information provided and all other information available at this time, WVDEP has determined that a concentration of no more than 17.5 ug/l 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 out in Paragraph 4, below.

4. DuPont shall adhere to the following limitations and perform the following self-monitoring for the New Compound during the term of this Order in accordance with the following:

Outlet	Monthly Average	Maximum Daily	Units	Monitoring Frequency	Sample Type
102[A]	Monitor	Monitor	ug/l	1/day[D]	Grab
102[B]	Monitor	Monitor	ug/l	1/week[D]	Grab
305[A]	Monitor	Monitor	ug/l	1/day[D]	Grab
305[B]	Monitor	Monitor	ug/l	1/week[D]	Grab
605[A,C]	Monitor	Monitor	ug/l	1/day[D]	Grab
605[B,C]	Monitor	Monitor	ug/l	1/week[D]	Grab
002	77[E]	112[E]	ug/l	1/week	24-hour Composite
005	191[E]	278[E]	ug/l	1/week	24-hour Composite

[A] Monitoring location after exiting lead activated carbon bed and prior to entering polish activated carbon bed.
[B] Monitoring location after exiting the polish activated carbon bed.
[C] Discharge from carbon treatment system located in building 127.
[D] When discharging.
[E] As discussed in Paragraph 3, above, these limits have been calculated to ensure a concentration of no more than 17.5 ug/l in the receiving stream outside of the applicable mixing zone, as determined by application of the mixing zone dilution factor for the respective outlet specified in the current Fact Sheet for the Permit.

5. Samples taken at Outlets 002 and 005 pursuant to Paragraph 4 above shall be analyzed by Liquid Chromatography/Mass Spectrometry/Mass Spectrometry ("LC/MS/MS") with a method detection limit ("MDL") of 1 ug/l or less. Samples taken at internal Outlets 102, 305 and 605 pursuant to Paragraph 4 above shall be analyzed by Liquid Chromatography ("LC") or Gas Chromatography ("GC") per internal plant method with an MDL of 1 mg/l or less.

6. Outlet results for sampling performed pursuant to Paragraph 4 above shall be reported monthly to the WVDEP on the attached Discharge Monitoring Reports ("DMRs"). In addition, DuPont shall maintain a log of the results of the daily monitoring required by Paragraph 4 at internal Outlets 102, 305 and 605, and shall submit this log to WVDEP on a monthly basis as an attachment to its DMR.

7. Commercial production using the New Compound and generating wastewaters for on-site treatment may commence upon the execution of this Order, subject to compliance with the provisions of this Order.

8. This Consent Order may be reopened and revised by agreement of the parties to prescribe additional and/or different requirements, including different monitoring requirements and/or increased or decreased discharge limitations, pursuant to any new information or data regarding the New Compound.

9. This Order shall terminate upon notification by DuPont that the actions required by the Order of Compliance have been completed and the Director's written concurrence therewith or upon the issuance by WVDEP of a renewed permit for the Facility that authorizes the activities covered by this Order that have not been completed as of that time, whichever occurs earlier.

OTHER PROVISIONS

1. DuPont hereby waives its right to appeal this Order under the provisions of Chapter 22, Article 11, Section 21 of the Code of West Virginia. Under this Order, DuPont agrees to take all actions required by the terms and conditions of this Order and consents to and will not contest the Director's jurisdiction regarding this Order. However, DuPont does not admit to any factual and legal determinations made by the Director and reserves all rights and defenses available regarding liability or responsibility in any proceedings regarding DuPont other than proceedings, administrative or civil, to enforce this Order.

2. If any event occurs which causes delay in the achievement of the requirements of this Order, DuPont shall have the burden of proving that the delay was caused by circumstances beyond its reasonable control which could not have been overcome by due diligence (i.e., force majeure). Force majeure shall not include delays caused or contributed to by the lack of sufficient funding. Within three (3) working days after DuPont becomes aware of such a delay, DuPont shall provide written notification to the Director. Within ten (10) working days of initial notification, DuPont shall submit a detailed written explanation of the anticipated length and cause of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and a timetable by which DuPont intends to implement these measures. If the Director agrees that the delay has been or will be caused by circumstances beyond the reasonable control of DuPont (i.e., force majeure), the time for performance hereunder shall be extended for a period of time equal to the delay resulting from such circumstances. A force majeure amendment

granted by the Director shall be considered a binding extension of this Order and of the requirements herein. The determination of the Director shall be final and not subject to appeal.

3. Compliance with the terms and conditions of this Order shall not in any way be construed as relieving DuPont of the obligation to comply with any applicable law, permit, other order, or any other requirement otherwise applicable. Violations of the terms and conditions of this Order may subject DuPont to additional penalties and injunctive relief in accordance with the applicable law.

4. The provisions of this Order are severable and should a court or board of competent jurisdiction declare any provisions to be invalid or unenforceable, all other provisions shall remain in full force and effect.

5. This Order is binding on DuPont, its successors and assigns.

This Order shall become effective upon the date on which a true and correct copy of this fully executed Order is received by DuPont.

Karl J. Boelter, Plant Manager
Washington Works
E. I. du Pont de Nemours and Company

11/18/11
Date

Public Notice begin: _____
Date

Public Notice end: _____
Date

_____
Scott G. Mandirola, Director
Division of Water and Waste Management
West Virginia Department of Environmental Protection

_____
Date

SGM:rt/mls

Enclosure(s)
cc: Environmental Inspector
Environmental Inspector Supervisor
EPA Region III