



V-0117-96

ENCLOSURE 1

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060-6296
(804) 527-5020

Peter W. Schmidt
Director

Gerard Seeley, Jr.
Regional Director

CONSENT AGREEMENT

WITH

E. I. du Pont de Nemours and Company
Spruance Plant
P. O. Box 27001
Richmond, Virginia 23261

Registration Number 50397

SECTION A: Purpose

This Agreement establishes a Reasonably Available Control Technology (RACT) standard for the E. I. du Pont de Nemours and Company Spruance Facility. RACT is mandated in order to control volatile organic compound (VOC) emissions in the Richmond ozone nonattainment area, which is a requirement of the 1985 State Implementation Plan (SIP) and Section 120-04-0407 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This RACT standard shall be the basis for VOC emission control for this facility, with the exception of areas covered by permits which require greater VOC control efficiencies than RACT.

SECTION B: References

Unless the context indicates otherwise, the following words and terms have the meanings assigned to them below:

"Agreement" means this Consent Agreement.

"Board" or "SAPCB" means the State Air Pollution Control Board, a collegiate body of the Commonwealth of Virginia described in § 10.1-1301 of the Code. Particular powers and duties of the Board are referred to in Section C of this document.

"Code" means the Code of Virginia.

"DEQ" means the Department of Environmental Quality, an agency of the Commonwealth described in § 10.1-1183 of the Code.

"Director" means the Director of the Department of Environmental Quality. Particular powers and duties of the Director are described in Section C of this document.

"DuPont" or "affected facility" means the E. I. du Pont de Nemours and Company Spruance Facility, located at 5401 Jefferson Davis Highway in Chesterfield County, Virginia.

"EPA" means the U. S. Environmental Protection Agency.

"Major Stationary Source" means any stationary source with a theoretical potential to emit 100 tons or more per year of any criteria pollutant.

"New Source Review Program" means a program for the preconstruction review and permitting of new stationary sources or expansions to existing ones in accordance with regulations promulgated to implement the requirements of §§110 (a)(2)(C), 165 (relating to permits in prevention of significant deterioration areas), and 173 (relating to permits in nonattainment areas) of the federal Clean Air Act.

"Non-CTG" means a source type for which the EPA has not issued a Control Technique Guideline (CTG), and thus has not established RACT for that source type.

"Piedmont Regional Office" means the staff of the office of the Department of Environmental Quality, 4949-A Cox Road, Glen Allen, Virginia.

"Reasonably Available Control Technology" or "RACT" means the lowest emission limit that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

"Regional Director" means the Director of the Piedmont Regional Office.

"SAPCB Regulations" means the State Air Pollution Control Board Regulations for the Control and Abatement of Pollution.

"SIP" means the State Implementation Plan.

"Theoretical potential to emit" means the of a stationary source to emit a pollutant physical and operational design. It is a

at design capacity or maximum production and maximum operating hours (8,760 hours/year) before add-on controls, unless the source is subject to state and federally enforceable permit conditions which limit production rates or hours of operation.

"VOC" means volatile organic compounds as defined by Section 120-01-02 of the SAPCB Regulations.

SECTION C: Authority

1. Chapter 13 of Title 10.1 of the Code creates the Board and vests in it the authority to supervise and control various aspects of air pollution in the Commonwealth. Among the Board's powers is the authority to promulgate regulations "abating, controlling and prohibiting" air pollution, found in § 10.1-1308 of the Code.
2. Pursuant to its authority, the Board has promulgated the SAPCB Regulations, which first took effect March 17, 1972, and have been periodically amended.
3. Pursuant to §§ 10.1-1307 D of the Code, the Board has the authority to issue orders to diminish or abate the causes of air pollution and to enforce its rules and regulations. Orders of the Board are enforceable pursuant to §§ 10.1-1316 and 10.1-1320 of the Code.
4. The Director is the executive officer of the Board. Under § 10.1-1307.2 A of the Code, the Director is to perform those duties required of him by the Board. Additionally under § 10.1-1307.3 of the Code, the Director has such powers to supervise, administer and enforce the provisions of Chapter 13 of Title 10.1 of the Code, as well as the regulations and orders of the Board, as are conferred upon him by the Board. The powers and duties conferred and imposed upon the Director under §§ 10.1-1307.2 and 10.1-1307.3 of the Code are continued under § 10.1-1185 of the Code.
5. Under § 10.1-1307.2 B of the Code, the Director may be vested with the authority of the Board when it is not in session, subject to such regulations or delegation as may be prescribed by the Board. Appendix F of the SAPCB Regulations contains the Delegation of Authority from the Board to the Director. In Section II A of Appendix F the Director is given the authority, with some exceptions, to act for the Board when it is not in session and to issue consent orders and emergency special orders.

SECTION D: Findings

1. DuPont operates a synthetic fiber production and coating facility located at 5401 Jefferson Davis Highway in Chesterfield County, Virginia.
2. Section 120-04-0407 of the SAPCB Regulations, which became effective on July 1, 1991, requires RACT for all non-CTG major stationary sources of VOC emissions in the Richmond Ozone Nonattainment Area, which includes the Cities of Richmond, Hopewell, and Colonial Heights; and the Counties of Henrico, Hanover, Chesterfield, and Charles City.
3. DuPont was determined to be a non-CTG major stationary source of VOC emissions in the Richmond Ozone Nonattainment Area.
4. DuPont has performed a RACT analysis, which was submitted to the DEQ on October 16, 1992.
5. The DEQ submitted comments to DuPont on the RACT analysis on May 11, 1993.
6. DuPont submitted a final RACT analysis to the DEQ on August 9, 1993.
7. DuPont requested changes to the initial draft of this Agreement at a meeting on September 17, 1993.
8. The DuPont Spruance facility on which the RACT analysis was performed consists of the Kevlar® plant, the Nomex® plant, the Nylon plant, Dowtherm® operations, the Teflon® plant, the Mylar® plant, the Tyvek® plant, and the Wastewater Treatment plant.
9. The DuPont Nylon plant was destroyed by fire in November, 1992. In this plant, Dowtherm® was used as a heat transfer medium, conveying heat from boilers to the Nylon plant. The Nylon plant is being replaced by a new process which produces Zytel®. In this new process the Dowtherm® is used in a similar manner as it was in the Nylon process. Although the Zytel® plant underwent new source review prior to construction, it is being included as part of the most recent RACT analysis.
10. Based on 1991 emissions data, the following VOC emissions, including control efficiencies from existing control equipment, are summarized for 1991 in the RACT analysis for high production levels. These numbers do not represent efficiencies which can be attained during periods of lesser production, nor do the VOC emission levels reflect permitted levels, unless otherwise stated:

Plant	Pre-RACT VOC Emissions (TPY)	Existing Control Efficiency (if applicable)
Kevlar®	33.2	98.3%
Nomex®	594.7	98.3%
Nylon	82.8	80.8%
Dowtherm®	10.5	0.0%
Teflon®	6.5	0.0%
Mylar®	117.3	98.3%
Tyvek®	N. A.	N. A.
Wastewater Treatment	1.4	N. A.
Plant-Wide Total	846.4	-

11. Based on 1991 emissions data, RACT for the Kevlar® plant referenced in Paragraph D.10. of this Agreement is determined to be the continued use of solvent recovery and the implementation of a leak detection and repair (LDAR) program. The combination of control technology and LDAR will result in a VOC control efficiency of at least 98.3% on a mass basis.
12. Based on 1991 emissions data, RACT for the Nomex® plant referenced in Paragraph D.10. of this Agreement is determined to be the continued use of solvent recovery and the implementation of a leak detection and repair (LDAR) program. The combination of control technology and LDAR will result in a VOC control efficiency of at least 98.3% on a mass basis.
13. Based on 1991 emissions data, RACT for the Nylon plant referenced in Paragraph D.10. of this Agreement is determined to be the permanent shutdown of the Nylon plant and the startup of a new plant which produces Zytel®. It is not economically feasible to control VOC emissions from the new Zytel® plant, therefore, RACT for the Zytel® plant is determined to be no control.
14. Based on 1991 emissions data, RACT for Dowtherm® referenced in Paragraph D.10. of this Agreement is determined to be the implementation of a leak detection and repair (LDAR) program.

15. Based on 1991 emissions data, it is not economically feasible to control VOC emissions from the Teflon® plant referenced in Paragraph D.10. of this Agreement. RACT for the Teflon® plant, therefore, is determined to be no control.
16. Based on 1991 emissions data, RACT for the Mylar® plant referenced in Paragraph D.10. of this Agreement is determined to be the continued use of carbon adsorption and solvent recovery having a combined VOC control efficiency of at least 98.3% on a mass basis.
17. Based on 1991 emissions data, RACT for the Tyvek® plant referenced in Paragraph D.10. of this Agreement is determined to be the implementation of a leak detection and repair (LDAR) program.
18. Based on 1991 emissions data, it is not economically feasible to control VOC emissions from the Wastewater Treatment plant referenced in Paragraph D.10. of this Agreement. RACT for the Wastewater Treatment plant, therefore, is determined to be no control.
19. Based on the RACT proposed in Paragraphs D.11. through D.18. of this Agreement, VOC emissions from the affected facility after RACT has been applied are estimated to be the following:

Plant	Post-RACT VOC Emissions (TPY)	RACT Control Efficiency (if applicable)
Kevlar®	33.2	98.3%
Nomex®	594.7	98.3%
Nylon	0	N. A.
Zytel® (including Dowtherm®)	20.0	N. A.
Teflon®	6.5	0.0%
Mylar®	117.3	98.3%
Tyvek®	N. A.	N. A.
Wastewater Treatment	1.4	N. A.
Plant-Wide Total	773.1	-

These emission estimates are summarized in the RACT analysis for high production levels. These numbers do not

necessarily represent efficiencies which can be attained during periods of lesser production, nor do the VOC emission levels reflect permitted levels, unless otherwise stated.

The RACT control efficiencies listed, along with the institution of Leak Detection and Repair procedures where required, constitute RACT levels of controls for the plants at the DuPont Spruance Facility. These numbers take no credit for reductions achieved by the required LDAR Programs for Kevlar®, Nomex®, Dowtherm®, and Tyvek®.

SECTION E: Agreement

Accordingly, the Board and DuPont agree that, for the Spruance facility in general:

1. VOC emissions from the affected facility shall be controlled and reduced as outlined in this Agreement and shall be fully implemented within 12 months of the incorporation of this Agreement as an EPA approved Virginia SIP revision.
2. Upon the effective date of this Agreement, DuPont shall continue to operate all process operations not described in this Agreement using existing or improved control methods.
3. All solvent-spun synthetic fiber processes at each plant shall demonstrate compliance with the VOC control efficiencies as specified in the Agreement by a monthly material balance averaged with the preceding five months. The VOC control efficiencies shall be calculated each month from the VOC emissions determined in the Performance Test and Compliance Provisions section of 40 CFR 60, Subpart HHH (Standards of Performance for Synthetic Fiber Production Facilities, §§ 60.600-60.604). The VOC control efficiencies shall be calculated using the following equation:

$$EFF = (1 - (E/1000)) \times 100$$

where:

EFF = VOC control efficiency, and
E = Emissions in pounds per 1,000 pounds of solvent feed

4. DuPont shall submit a written report to the Regional Director of the results of the first 6-month average VOC control efficiency demonstration. DuPont shall also submit the results of subsequent demonstrations in which the 6-month average VOC control efficiency in any plant as specified in this Agreement is not demonstrated. These reports shall be submitted at the end of each calendar quarter after the initial demonstration, however, if DuPont is successful in demonstrating compliance with the VOC

control efficiency in each plant during a particular quarter, a report stating this shall be submitted to the Regional Director semiannually.

Specific conditions for the Kevlar® plant:

5. The Kevlar® plant solvent recovery area shall institute fugitive leak detection and repair (LDAR) procedures (for chloroform and NMP components) to correspond with the standards of 40 CFR 60 Subpart VV, with two exceptions:
 - a. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC (i.e., an action level of 500 ppm) is obtained using an approved measurement technique, and
 - b. The facility shall not be subject to the reporting requirements in §60.487. Records shall be kept at the facility in accordance with §60.486 and shall be submitted to the Piedmont Regional Office upon request.
6. Volatile Organic Compound (VOC) emissions from the Kevlar® plant shall be controlled by a solvent recovery system.
7. The VOC control efficiency of the Kevlar® plant processes shall be a minimum of 98.3% on a six-month rolling average basis. This efficiency shall be verified by mass balance methods described or referenced in Condition E.3. of this Agreement.

Specific conditions for the Nomex® plant:

8. The Nomex® plant solvent recovery area shall institute fugitive leak detection and repair (LDAR) procedures (for chloroform components) to correspond with the standards of 40 CFR 60 Subpart VV, with two exceptions:
 - a. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC (i.e., an action level of 500 ppm) is obtained using an approved measurement technique, and
 - b. The facility shall not be subject to the reporting requirements in §60.487. Records shall be kept at the facility in accordance with §60.486 and shall be submitted to the Piedmont Regional Office upon request.
9. Volatile Organic Compound (VOC) emissions from the Nomex® plant shall be controlled by a solvent recovery system.
10. Volatile Organic Compound (VOC) emissions from the Nomex® Wash/Draw lines shall be controlled by a scrubber. The scrubber shall be equipped with a liquid flow meter and a

device to continuously measure the gas flow rate through the scrubber.

11. The VOC control efficiency of the Nomex® plant processes shall be a minimum of 98.3% on a six-month rolling average basis. This efficiency shall be verified by mass balance methods described or referenced in Condition E.3. of this Agreement.

Specific conditions for the Zytel® plant (including Dowtherm®):

12. The Dowtherm® operations at the Zytel® plant shall institute fugitive leak detection and repair (LDAR) procedures to correspond with the standards of 40 CFR 60 Subpart VV, with two exceptions:
 - a. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC (i.e., an action level of 500 ppm) is obtained using an approved measurement technique, and
 - b. The facility shall not be subject to the reporting requirements in §60.487. Records shall be kept at the facility in accordance with §60.486 and shall be submitted to the Piedmont Regional Office upon request.

Specific conditions for the Mylar® plant:

13. Mylar® plant VOC emissions shall be controlled by carbon bed adsorbers. The carbon adsorption system shall be equipped with a device which measures the VOC concentration of the exhaust gas and an exhaust gas flow meter. The instruments shall be calibrated as recommended by the manufacturer for the service in which they are installed. The carbon bed outlet VOC concentration shall not exceed 50 ppm before triggering a switch to a fresh bed.
14. DuPont shall maintain records of the manufacturer's recommendations for carbon bed replacement and records of actual carbon bed replacement.
15. The VOC control efficiency of the Mylar® plant processes shall be a minimum of 98.3% on a six-month rolling average basis. This efficiency shall be verified by mass balance methods described or referenced in Condition E.3. of this Agreement.

Specific conditions for the Tyvek® plant:

16. The Tyvek® plant shall institute fugitive leak detection and repair (LDAR) procedures to correspond with the standards of 40 CFR 60 Subpart VV, with two exceptions:

- a. Equipment shall be considered to be leaking when a reading above 500 ppm of VOC (i.e., an action level of 500 ppm) is obtained using an approved measurement technique, and
- b. The facility shall not be subject to the reporting requirements in §60.487. Records shall be kept at the facility in accordance with §60.486 and shall be submitted to the Piedmont Regional Office upon request.

For the DuPont Spruance facility in general:

17. DuPont shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
 - a. to enter at reasonable times upon DuPont's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this Agreement.
 - b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this Agreement or the Regulations.
 - c. to inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this Agreement or the SPCB Regulations; and
 - d. to sample or test at reasonable times.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

18. Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate your prompt response to requests for information, to include process and production data and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact followed up by a written request. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, § 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board), and Section 120-02-30 of the Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
19. DuPont shall comply with all applicable SPCB Regulations including the requirements for monitoring, notification, recordkeeping, reporting, maintenance, and malfunction.

20. At any time in the future, should DuPont plan any modifications (within the context of the new source review program) of the affected facility covered by this Agreement, DuPont shall have the right to apply to the Board for a new source review permit and the Board may consent to such modifications provided such modifications will meet all of the new source review permit program regulatory requirements in existence at that time.
21. The Board may modify, rewrite, or amend this Agreement with the consent of DuPont, for good cause shown by DuPont, or on its own motion provided approval of the changes is accomplished in accordance with SAPCB regulations, the Administrative Process Act (§9-6.14:1 et. seq.) and 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).
22. So long as this Agreement remains in effect, DuPont waives the right to any hearing pursuant to §§9-6.14:11 and 9-6.14:12 of the Code and to judicial review of any issue of fact or law contained herein. Nothing herein, however, shall be construed as a waiver of the right to a hearing or to judicial review of any action taken by the Board to enforce this Agreement.
23. Failure by DuPont to comply with any of the terms of this Agreement shall constitute a violation of an Order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
24. DuPont declares it has received fair and due process under the Administrative Process Act (§ 9-6.14:1 et. seq. of the Code).
25. This Agreement shall become effective upon signature by both parties and shall continue in effect indefinitely or until otherwise terminated by the Board.

The foregoing Consent Agreement has been executed on behalf of the STATE AIR POLLUTION CONTROL BOARD of the COMMONWEALTH OF VIRGINIA and on behalf of E. I. DU PONT DE NEMOURS AND COMPANY, each by its duly authorized representatives, or self, on the dates indicated below.

DEPARTMENT OF ENVIRONMENTAL QUALITY OF THE COMMONWEALTH OF VIRGINIA

5/30/96
(date)

BY: John M. Schmidt
Peter W. Schmidt
Director

E. I. DU PONT DE NEMOURS AND COMPANY

5/9/96
(date)

BY: John L. Grohusky
John L. Grohusky
Plant Manager

STATE OF VIRGINIA
COUNTY OF CHESTERFIELD

The foregoing instrument was acknowledged before me this 9th day of May, 1996, by JOHN GROHUSKY of E. I. du Pont de Nemours and Company, a Virginia Corporation, on behalf of the Corporation.

Notary Public Seal
My Commission Expires May 31, 1999
CLAUDE L. EDWARDS

My commission expires 5/31/99

Claude L. Edwards
Notary Public