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E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE 19898

LEGAL DEPARTMENT

February 8, 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Central Docket Section (LE-131)
Attn: Docket No. A-82-19
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Dear Sir:

E. I. du Pont de Nemours and Company, Inc.
Comments on EPA's Proposed Rule on
Standards of Performance for New Stationary Sources;
Polypropylene, Polyethylene, Polystyrene, and
Poly(Ethylene Terephthalate) Manufacturing Industry
(52 Fed. Reg. 36678, 9/30/87)

Enclosed are two (2) copies of E. I. du Pont de Nemours and Company's (Du Pont's) comments on the above-referenced EPA proposed rule. Du Pont appreciates the opportunity to submit these comments for the Agency's consideration in developing its final rules governing polyester plants. Du Pont currently operates eight plants employing over 10,000 people at polyester facilities. Therefore, Du Pont is materially impacted and is interested in the development and promulgation of reasonable final regulations.

If you have any questions regarding Du Pont's comments, please call me at 302/774-8720.

Very truly yours,

Pamela Meitner

PM#3:pm
Enclosures

E. I. DU PONT DE NEMOURS AND COMPANY, INC.
COMMENTS ON EPA'S PROPOSED RULE ON STANDARDS
OF PERFORMANCE FOR NEW STATIONARY SOURCES; POLYPROPYLENE,
POLYETHYLENE, POLYSTYRENE, AND POLY(ETHYLENE TEREPHTHALATE)
MANUFACTURING INDUSTRY

(52 Fed. Reg. 36678, 9/30/87)

INTRODUCTION

E. I. du Pont de Nemours & Company, Inc. (Du Pont) appreciates the opportunity to submit comments on EPA's proposed rule governing the manufacture of Poly(ethylene Terephthalate), hereinafter PET. Du Pont currently has eight plants manufacturing PET located in North Carolina, South Carolina, Ohio, West Virginia and Tennessee. These plants employ over 10,000 people. Therefore, Du Pont is materially and substantially impacted by these proposed rules.

Du Pont has been an active participant in the Chemical Manufacturers Association (CMA) NSPS for Polymers Task Group. CMA has submitted extensive comments on these proposed rules and Du Pont has provided input into the development of CMA's comments. In the following comments, we will not attempt to repeat all of the points raised in the CMA comments, but will focus on those issues of prime importance to Du Pont. We do, however, incorporate CMA's comments herein and adopt them as additions to our specific comments.

COMMENTS

Du Pont's manufacturing facilities currently use the dimethyl terephthalate (DMT) process. Plans are underway to convert some of our DMT facilities to the terephthalate acid (TPA) process. Most of our facilities produce low viscosity PET but at least one produces high viscosity PET.

There are several features of the polyethylene terephthalate process technology employed by Du Pont, that render the standards proposed by EPA inappropriate or technically impossible. A key feature of the Du Pont TPA and DMT processes is the use of steam to power high-velocity jets to draw the vacuum necessary to drive the polymerization reaction toward completion. As the steam exits the jet venturi, it condenses and thus creates a vacuum. Ethylene glycol vapor is drawn from the polymerizer vessel by this vacuum. As this ethylene glycol vapor stream enters the steam jet, it impinges on the condensing water vapor and is instantly diluted several fold. The very dilute solution of ethylene glycol is then cooled and sent to process waste treatment, where it quickly biodegrades. The rules presumably regulate this stream at Section 60.562-1(c)(1)(iv) and 60.562-1(c)(4)(ii) for DMT processes and 60.562-1(c)(2)(ii) for TPA processes. The New Source Performance Standards need to recognize the steam jet

vacuum process in two ways: 1) no appropriate limits can be set for the ethylene glycol condensate from the vacuum system servicing the polymerization reaction because that condensate stream cannot be analyzed separately from the vastly larger steam jet condensate stream, and 2) the very dilute ethylene glycol in the combined condensate stream is not recovered, but is biodegraded harmlessly. As such, its release into the environment is adequately regulated under provisions of the Clean Water Act. It has a vanishingly low vapor pressure in wastewater solutions at ambient conditions, so air emissions from trade waste basins are insignificant.

Distillation of such a dilute stream to recover the ethylene glycol is economically prohibitive. Similarly, use of a refrigerated condenser is impossible, as there is no practical way to dry the ethylene glycol vapor stream.

We request that this stream be excluded from regulation because it is already regulated by NPDES permits. Further, it is not cost-effective nor is it technically feasible to regulate it as proposed. Our stream is analogous to the "extruder quench vent stream" excluded in the preamble (see 52 Fed. Reg. 36691, Col. 2) for cost reasons and should be similarly treated.

Vapor streams from the material recovery (methanol recovery) section of PET processes both high and low viscosity DMT are laden with water vapor. The concentration of TOC emissions and condenser temperature are regulated in Sections 60.562-1(c)(1)(i) and (ii) and 60.526-1(c)(4)(iv). If a refrigerated condenser were used as the final condenser in the material recovery section, the vapor stream would have to be dried before entering the condenser or the condenser would freeze and plug. A drier for that large a flow and concentration would be prohibitively expensive in terms of capital and operating cost and should be excluded.

Section 60.563(e)(2) states that where a condenser is the final unit in a system, a temperature recording device or an organic monitoring device is required to indicate the level of organic compounds. Yet the test methods for determining compliance (Section 60.564)(d) only addresses the use of a temperature recording device. Test method should include both methods. The test method should be modified to include other methods of showing compliance such as material balances or emission calculation based on exhaust rate and saturation levels of organic compounds.

Section 60.564(a) implies compliance testing is required using specified test methods. Paragraph (8) exempts boilers with a heat input of 150MM Btu's. However, boilers less than 150MM Btu's will require compliance testing. We suggest

this method be modified to provide alternative methods of compliance for boilers or process heaters with a heat input of less than 150MM Btu's. Complete combustion for a boiler of less than 150MM Btu's can be determined if one knows the boiler temperature, the organics in the gas stream, and their combustion temperature.