

ILLINOIS POLLUTION CONTROL BOARD
November 2, 1978

STEPAN CHEMICAL CO.,)
)
 Petitioner,)
)
 v.) PCB 78-220
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by Mr. Goodman):

Stepan Chemical Company (Stepan) submitted a variance petition on August 14, 1978. The Environmental Protection Agency (Agency) submitted its recommendation on September 25, 1978. Stepan waived its right to a hearing, and no hearing has been held.

The subject of Stepan's variance petition is its Millsdale Plant, a phthalic anhydride plant located in Will County near Elwood, Illinois. The plant has been the subject of prior variance proceedings before the Board, PCB 74-425 and PCB 76-161. The phthalic anhydride process was described in the Board's Opinion in PCB 74-425. Byproducts of the process include hydrocarbons, some in particulate form, carbon monoxide and carbon dioxide, all of which are discharged to the atmosphere along with excess air after condensing the phthalic anhydride.

In PCB 76-161, the Board granted Stepan a variance from Rules 203(a), 205(f), 205(g)(1)(C) and 206(c) of Chapter 2: Air Pollution Regulations, until August 15, 1978. Stepan's compliance plan consisted of the installation of a catalytic reactor on the waste gas stream of the plant. The reactor was to be installed and debugged by August 15, 1978. However, although installation was completed by August, 1978, a fire occurred in the exhaust stack shortly after operation began, and the catalytic system was shut down. To prevent further fires or explosions, Stepan plans to change the damper design. Stepan estimates that redesign and replacement of the dampers will be accomplished by November 15, 1978. Stepan, therefore, requests that its variance be further extended until November 15. A variance from Rule 206(c), however, is no longer necessary because of the Board's modification of that rule.

At rated capacity, Stepan's Millsdale Plant emits from the condensers of its phthalic anhydride production process approximately 1,750 lbs./hr. of carbon monoxide, 267,000 lbs./hr. of nitrogen, 6,000 lbs./hr. of carbon dioxide, 64,400 lbs./hr. of oxygen, and an average of 1,000 lbs./hr. of hydrocarbons, of which less than 100 lbs./hr. on the average are in particulate form. The Agency indicates that one of two particulate monitors in the general vicinity of the Millsdale plant recorded a violation in 1977 of the primary ambient air quality standard for particulate matter on an annual geometric mean. The only Will County monitor for ozone is in Joliet; it recorded 124 violations of the photochemical oxidant standard in 1977.

Stepan's use of the catalytic reactor it has installed represents new application of this technology and will bring the facility fully into compliance. Stepan has made satisfactory progress toward compliance and has been unable to comply due to circumstances beyond its control. Because the replacement dampers need to be redesigned for the equipment, the three month variance request is reasonable. The Board finds that denial of the requested variance would result in an arbitrary and unreasonable hardship to Stepan. We find that Stepan is unable to comply with Rules 203(a), 205(f) and 205(g)(1)(C) until the catalytic reactor is operating and hereby grant Stepan a variance from those rules until November 15, 1978, subject to the conditions detailed in our Order.

This Opinion constitutes the findings of fact and conclusions of law of the Board in this matter.

ORDER

It is the Order of the Pollution Control Board that Stepan Chemical Co. be and is hereby granted variance from Rules 203(a), 205(f) and 205(g)(1)(C) of Chapter 2 for its Milldale Plant until November 15, 1978, subject to the following conditions:

- 1) Stepan shall design, fabricate and install dampers for the catalytic reactor by November 15, 1978. Stepan shall start up and debug the catalytic reactor by November 15, 1978. Until November 15, 1978, Stepan shall minimize emissions as much as possible;
- 2) Stepan shall conduct stack tests for particulates and organics within thirty-five (35) days after installation of the dampers and completion of the reactor;

- 3) Within sixty (60) days of the date of this Order, Stepan shall apply for and obtain all necessary Agency construction and operating permits;
- 4) Stepan shall, on or about the 15th day of the month subsequent to the entry of this Order, submit to the Environmental Protection Agency a written report detailing all progress towards compliance, such report to be submitted to:

Environmental Protection Agency
Control Program Coordinator
2200 Churchill Road
Springfield, Illinois 62706

- 5) Stepan shall, within twenty-eight (28) days of the date of this Order, continue in effect its performance bond in the amount of Twenty-Five Thousand Dollars (\$25,000), in a form satisfactory to the Environmental Protection Agency, to insure compliance with the control program detailed in the accompanying Opinion. Such bond shall be submitted to the Environmental Protection Agency at the address given in subparagraph (4) above;
- 6) Stepan shall, within twenty-eight (28) days of the date of the Order, execute and send to: Kathryn S. Nesburg, Technical Advisor, 1701 South First Avenue, Maywood, Illinois, 60153, a certification of acceptance of this variance by which it agrees to be bound by its terms and conditions. This twenty-eight (28) day period shall be held in abeyance for any period in which this matter is appealed. The form of said certification shall be as follows:

I (We), _____ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 78-220 hereby accept the said Order and agree to be bound by all terms and conditions thereof.

SIGNED _____

TITLE _____

DATE _____

- 7) Final compliance must be achieved by July 1, 1979, or Stepan will be subject to noncompliance penalties under Section 120 of the Clean Air Act as amended in August, 1977 (42 U.S.C. 7401 et seq.)

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 2ND day of November, 1978 by a vote of 4-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board