

ILLINOIS POLLUTION CONTROL BOARD
February 15, 1979

IN THE MATTER OF:)
)
PROPOSED AMENDMENT TO) R77-3
RULE 205(g)(1) OF THE)
AIR POLLUTION CONTROL)
REGULATIONS)

PROPOSED OPINION OF THE BOARD (by Mr. Dumelle):

This proceeding was initiated by a Petition from The Sherwin-Williams Company, Monsanto Company, The B.F. Goodrich Company, and Borg-Warner Corporation (Petitioners) which was filed with the Board on February 15, 1977 and published in Environmental Register #143 on March 21, 1977. An Amended Petition filed on August 26, 1977 served as the basis for all evidence received. The Amended Petition was summarized in Environmental Register #156 dated September 26, 1977. Hearings were held on November 30, 1977 and January 30, 1978 in Chicago and January 12, 1978 in Peoria. A study entitled "Economic Impact of the Proposed Change in the Hydrocarbon Emission Limitation for Petrochemical Manufacturing Processes (R77-3)" (INR Document #78/30) (Ex. 14) was received by the Board from the Institute of Natural Resources on October 31, 1978. Hearings were held on the study on December 4, 1978 in Chicago and December 18, 1978 in Ottawa. This Proposed Opinion supports a Proposed Order adopted by the Board on January 4, 1979. The Board has proposed to adopt this amendment in the form in which it appeared in the Amended Petition.

NEED FOR THE REGULATION

On December 18, 1975 the Board ruled that the organic emissions from a para-cresol manufacturing process were covered by Rule 205(g)(1)(C) of the Air Pollution Control Regulations (The Sherwin-Williams Company v. EPA, PCB 75-268, 19 PCB 478). This decision meant that many petrochemical manufacturing processes whose organic emissions had been covered by Rule 205(f) (8 pounds per hour or 85% removal for photochemically reactive material) would now be required to meet a standard of 100 ppm equivalent methane. Petitioners claimed that this would result in exorbitant expense with very little benefit. The Agency felt that the rule could not be applied equitably and that a concentration based standard was undesirable in this instance.

Petitioners have proposed to allow affected sources to choose between the limitations of Rule 205(f) or the present limitation provided there is no increase in total organic emissions. New sources would have the same choice except all organic emissions,

not just photochemically reactive emissions, would have to be controlled.

EFFECT ON AIR QUALITY

The Agency estimated that adoption of Petitioners' proposal would forego control of 871.2 pounds of organic emissions per hour or 2200 tons per year (R.221). This estimate was based on a review of the permit files which disclosed 58 affected facilities with approximately 800 sources. (Ex. 6).

The Petitioners translated this amount of reduction through the Empirical Kinetic Modelling Approach (EKMA) to obtain a conservatively high estimate of 0.5% reduction in organic emissions and 0.25% reduction in ozone formation which would be foregone if the proposal was adopted and all affected sources were located in the Chicago area. (R.288, Ex. 11) This reduction amounts to one part per billion or less and could not be measured by any routine monitoring method. (R.290)

The effect of the proposal on air quality appears to be negligible.

TECHNICAL FEASIBILITY AND ECONOMIC REASONABLENESS

Petitioners and Northern Petrochemical Company showed that although they could comply with the present Rule 205(g)(1)(C), the cost to do so would be very high and quite variable (Ex. 1,2,3,7,8). The wide variations confirm the Agency's claim that the present rule is inequitable. When these costs are compared with the insignificant improvement in air quality, they are rendered unreasonable.

ECONOMIC IMPACT

The authors of the economic impact study concluded that compliance with the present standard would require approximately \$83 million in capital costs and \$26 million in annualized operating costs. These amounts can be translated to approximately \$2750 per year per ton of hydrocarbon emissions eliminated. The study authors reviewed the literature on the health effects of exposure to ozone. They concluded that there was no way to measure any adverse effects from such a small increment. (Ex.14, p.38). Consequently the Board can conclude that adoption of the proposal will have no significant adverse impact on the people of the State of Illinois.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Proposed Opinion was adopted on the 15th day of February, 1979 by a vote of 3-0.

Christan L. Moffett/s
Christan L. Moffett, Clerk
Illinois Pollution Control Board