

ILLINOIS POLLUTION CONTROL BOARD

January 31, 1974

BORG-WARNER CORPORATION, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 73-156  
 )  
 ENVIRONMENTAL PROTECTION AGENCY, )  
 )  
 Respondent. )

Joseph S. Wright, Jr. Attorney for Borg-Warner Corporation  
Fredric J. Entin, Assistant Attorney General for the EPA

OPINION AND ORDER OF THE BOARD (by Mr. Henss)

On July 26, 1973 we granted Borg-Warner a short term variance from certain air pollution control regulations in the operation of its Linmar Chemical Plant which is located 5 miles east of Ottawa, Illinois. The plant currently produces about 220 million lbs. of ABS (acrylonitrile-butadiene-styrene) resin per year and Petitioner plans to boost the plant output to 270 million lbs. per year. The manufacturing process involves use of drying units which emit styrene and acrylonitrile in a monomeric form and particulate matter. The organic emissions were in excess of standards, and therefore Borg-Warner after considerable research, had proposed a control program to achieve a more complete conversion of monomer to polymer and thereby come into compliance with the Regulations.

Rule 205(f) of the Air Pollution Control Regulations is effective December 31, 1973 and limits total emissions of organic material to 8 lbs. per hour or in the alternative requires an 85% reduction of organic emissions.

Our grant of variance was for a short term since the EPA contended that Borg-Warner had failed to adequately analyze other alternatives in the control of acrylonitrile. The purpose of the short variance was to allow the parties to "prepare additional information for us" (Opinion page 5). We ordered Borg-Warner to review other emission control methods which had been suggested by the Agency and report to the Board and the EPA regarding those methods. The report was to include some comment on the health affects of acrylonitrile in the concentrations which exist in the area of the Linmar plant.

The Agency was ordered to submit its final Recommendation within 15 days after receiving the Borg-Warner report. We retained jurisdiction for entering further orders.

Borg-Warner filed its report on September 20, 1973 as scheduled. However, the Agency has not to this date commented on the merits of Borg-Warner's report. Instead, the EPA contends that a new variance petition should have been filed by Borg-Warner, completely disregarding the fact that in making the report Petitioner was only complying with our July 26 Order. A reading of that Order should have made it obvious to the Agency that we had not made a final disposition of the matter and were retaining jurisdiction for the entry of a final Order. We had requested information from both parties, but now must render our final decision without having a final comment from the EPA regarding Borg-Warner's method of compliance.

When we previously considered this matter two rotary resin dryers, dryers A and B, were in operation and a third, dryer C was under construction. The plan was to have dryer C in operation by October 15, 1973. The control equipment installed on dryer C was to provide the engineering data for the design of control equipment for dryers A and B. Each of Petitioner's lines, A, B and C, contain in addition to the dryers a coagulation unit and a dewatering unit. Each of the coagulation units and each of the dewatering units is a source of organic materials to the atmosphere.

Borg-Warner now requests variance from Rule 205(f) of the Air Pollution Control Regulations for the A and B dryers, coagulation units and dewatering units until September 1, 1974 and dryer C until April 30, 1974.

Petitioner advises that a temporary control strategy known as "post polymerization" was tested on dryer C resulting in a 75% reduction in hydrocarbon emissions. Rule 205(f) requires an 85% reduction. A more efficient and permanent post-polymerization system has just been completed and placed in operation. Borg-Warner claims that the new system will gradually increase the control efficiency to a minimum of 85% through "fine tuning"

A Compliance Plan which was submitted with the application for permit on dryer C showed that compliance would be achieved on dryer C by December 31, 1973. Compliance is now planned for April 30, 1974. Petitioner states that this delay will not affect the schedules for installation of the "post-poly" system on dryers A and B. The control systems will be installed on dryers A and B by September 1, 1974.

A favorable feature of the post-poly system has been the removal of organic materials upstream from the coagulation units, the dewatering units and the dryer. While the system has not yet achieved the necessary 85% reduction in emissions from dryer C, it has had the effect of reducing by 90% or more the organic materials from coagulation unit C and dewatering unit C. This reduction has been accomplished with the expenditure of little or no additional fuel.

In this respect the post-poly method is to be preferred over incineration as a control method. Incineration would require six million Btu's per hour of natural gas which is not available.

We believe the post-polymerization process is similar to that which was described in our prior opinion on page 2 and is not a "new set of facts" as the Agency contends.

The record shows that Borg-Warner has developed a method whereby compliance with 205(f) should be achieved within a reasonable period of time. In our prior Opinion we concluded that it would be a hardship for Petitioner to immediately comply with the emission standard. Petitioner claims that, at current emission rates, the acrylonitrile will not be detrimental to health of persons living nearby. "The maximum allowable concentration (MAC) for acrylonitrile is more than 2,000 times higher than the current annual average acrylonitrile concentration predicted by the dispersion model at the nearest receptors. The emission reductions planned for the future will increase the margin of safety still further."

Compliance by September 1, 1974 seems reasonable to us and we shall grant a variance to that date.

#### ORDER

It is the Order of the Board that:

Borg-Warner Corporation be granted a variance from Rule 205(f) of the Illinois Air Pollution Control Regulations until September 1, 1974 for the operation of dryers A and B, coagulation units A and B and dewatering units A and B and until April 30, 1974 for the operation of dryer C at Petitioner's Marbon Division Plant near Ottawa, Illinois. During the term of the variance Petitioner shall install the necessary control equipment as outlined in this proceeding, to achieve compliance with Rule 205(f).

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 31<sup>st</sup> day of January, 1974 by a vote of 5 to 0.

Christan L. Moffett