

ILLINOIS POLLUTION CONTROL BOARD  
June 20, 1986

MODINE MANUFACTURING COMPANY,        )  
  )  
                  Petitioner,            )  
  )  
                  v.                        )       PCB 83-18  
  )  
ILLINOIS ENVIRONMENTAL                )  
  PROTECTION AGENCY,                 )  
  )  
                  Respondent.            )

MR. ROY M. HARSCH APPEARED ON BEHALF OF MODINE MANUFACTURING COMPANY.

MR. JOSEPH R. PODLEWSKI, JR., APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY.

OPINION AND ORDER OF THE BOARD (by R. C. Flemal):

This matter comes before the Board upon a Petition for Variance filed by Modine Manufacturing Company ("Modine") on February 9, 1983. In the more than three years that this matter has been before the Board there have been multiple filings by Modine, including amended petitions filed on August 31, 1984, April 23, 1985, and October 16, 1985. The Illinois Environmental Protection Agency ("Agency") has similarly made multiple filings, including recommendations filed on May 2, 1983, December 5, 1985, and March 3, 1986. Hearing was held in Cary, Illinois, on January 30, 1986.

As the matter presently stands before the Board, Modine requests variance until December 31, 1987, from the volatile organic material (VOM) emissions limitations for manufacturing plants involving extreme performance coatings contained in 35 Ill. Adm. Code 215.204(j)(3). Alternatively, Modine requests that the Board determine that Modine is in compliance with 35 Ill. Adm. Code 215.204(j)(3) or that the Board determine that 35 Ill. Adm. Code 215.204(j)(3) does not apply to Modine's operations.

In its Second Amended Variance Recommendation, filed March 3, 1986, the Agency recommends that variance be granted subject to conditions. On May 20, 1986, Modine filed a motion for leave to file instanter a Response to Agency Second Amended Variance Recommendation. That motion is granted. On May 28, 1986 the Agency filed a motion to strike Petitioner's response to Second Amended Variance Recommendation or, in the alternative, for leave to file a reply to Petitioner's Response to Agency Second Amended

Variance Recommendation. On June 5, 1986, the Board granted the Agency leave to file the reply, and said reply was filed on June 16, 1986. By the same June 5, 1986 Order the Board denied Modine's June 4, 1986 motion for leave to file a response to the Agency's May 28, 1986 motion. On June 16, 1986 Modine filed a motion for leave to file response to Respondent's Reply to Petitioner's Response to Second Amended Variance Recommendation. For the same reasons expressed in the Board's June 5, 1986 Order, that motion is denied.

For the reasons discussed below, the Board finds that Modine will suffer arbitrary or unreasonable hardship if denied the requested variance. Therefore, variance will be granted, subject to conditions.

#### BACKGROUND

Modine owns and operates a manufacturing plant located in Ringwood, McHenry County, Illinois; this plant is referred to within the record both as the McHenry plant and as the Ringwood plant. The plant employs 191 people with an annual payroll of \$2.5 million (R. at 19). McHenry County is presently in attainment with the National Ambient Air Quality Standard for ozone; it is adjacent to Lake and Cook Counties, both of which are non-attainment counties.

At its McHenry facility Modine manufactures aluminum air conditioning evaporators and condensers for vehicular application. Production requirements for the two products differ. As presently manufactured and as specifically related to VOM matters, the evaporators do not require painting; the condensers do. The condenser paint coatings presently used are conventional solvent-based, extreme performance coatings formulated to exhibit exceptional resistance to water, salt spray, hot oil, ethylene glycol, bleed-through, chipping and peeling, and other deteriorating factors. Over 288 different sizes and types of condensers are manufactured at the McHenry plant.

The total VOM content of the paint and solvent presently applied by Modine to its condensers is contended by Modine to be 5.4 pounds per gallon (lb/gal) of coating (R. at 26). The Agency cites this figure as 5.54 lbs/gal (Agency Amended Variance Recommendation, Dec. 5, 1985, par. 3). The limit identified in 215.204(j)(3) is 3.5 lb/gal. Thus, the applied coating and standard difference is 1.9 lb/gal to 2.04 lb/gal.

There is also some disparity in the data presented on the annual VOM emissions of the McHenry plant. At various places in the record it is cited as being between 47.99 tons/yr (R. at 41) and 95 tons/yr (R. at 54); in comments submitted to the Board on August 26, 1982 it was cited as 57 tons/yr and in the original petition in PCB 83-18 as 62 tons/yr. Some of this difference is apparently related to variation in annual production at the

McHenry plant (R. at 53-4). It would appear that the most reasonable estimate of annual emissions over the period of the requested variance would be 75 tons/yr, which is the apparent calendar year 1985 emission rate (R. at 54).

### COMPLIANCE

Modine has considered a number of compliance alternatives. Some of these have been rejected and others remain under consideration.

#### Rejected Compliance Alternatives

Modine contends that installation of VOM control systems would be economically unreasonable. Modine estimates that control system capital costs would exceed \$500,000 and operating costs would range between \$99,000 and \$177,000 (Agency 2nd Amended Variance Recommendation, March 3, 1986, par. 8). Assuming that a control system could eliminate one-half of the facility's VOM emissions, this is equivalent to \$9,000 to \$22,000 per ton of VOM removed for installation and \$3,700 to \$6,600 per ton of VOM removed for operation (R. at 25, 66-7).

Modine also contends that, despite diligent search, it has been unable to find a technologically feasible solvent-based substitute coating which would allow it to meet the 3.5 lbs/gal limitation. Modine believes that solvent-based coatings meeting a 3.5 lb/gal limitation, which are generally referred to as "high solids" coatings, are unacceptable for Modine's condenser applications. Specifically, high solids coatings reduce to a prohibitive degree the heat transfer efficiency of the condensers (R. at 22-23, 59).

As an alternative to abandoning solvent-based coatings entirely, Modine has investigated application of an inorganic corrosion preventive coating prior to painting. This alternative would still require use of high VOM coatings, but would utilize less paint for an equivalent amount of protection, and thus reduce total emissions. Assuming that one-half of the VOM emission could be eliminated, Modine estimates that this system would cost approximately \$13,000 per ton of VOM reduction for installation and an additional \$10,000 per ton for operation. On this basis Modine concludes that it is an economically unreasonable alternative (R. at 27).

Waterborne coatings have also been investigated by Modine. Such coatings are available and produce an appropriate coating quality (R. at 24). As initially conceived, it was believed that waterborne coatings would require application via electro-deposition ("EDP"). Modine contends that EDP installation and operating costs, estimated as before, would be \$36,000 per ton of VOM removed for installation and \$10,000 per ton of VOM removed for operation. This is considered by Modine to be economically unreasonable (R. at 24).

Compliance Alternatives Under Consideration

Modine has committed itself (2nd Amend. Pet., par. 16; R at 37) to a series of compliance alternatives, each of which would bring Petitioner into compliance by December 31, 1987. These are:

- 1) Converting condenser production to a new process, termed the Nocolok\* process, which would eliminate the need for painting.
- 2) Moving the condenser production out of the McHenry plant and replacing it with a new product line which does not require painting.
- 3) Continuing condenser production with the present process, the Alfuse process, but converting to a compliance coating.

Modine also presented at hearing a fourth "compliance alternative" which is to "proceed with the challenge to the applicability of the RACT rules in question only if Modine encounters some unforeseen problem with the paint system presently being studied" (R. at 37). The Board notes that this is not properly considered a compliance alternative.

Recently Modine has committed to installation of the Nocolok production process at its McHenry facility. Because the Nocolok process does not require painting of a finished product, it solves or greatly reduces environmental concerns related not only to VOM, but also to production and disposal of solid wastes and process waste waters (R. at 35-6). The Nocolok process will be operative at the McHenry facility by August, 1986 (R. at 36). At that time all evaporator production will utilize the process. Modine believes that the more exacting requirements for condenser production might also be met through the Nocolok process. However, Modine contends that it requires until December 31, 1987, to evaluate economics and customer demand (R. at 37) and to gain appropriate production experience with Nocolok (R. at 37-8) before this determination and its implementation can be made.

As previously noted, Modine has considered waterborne coatings applied via EDP and rejected this alternative as economically unreasonable. However, subsequent investigation has allowed Modine to identify a waterborne coating which can be applied using the present production process, would allow compliance, and might be economically reasonable. This process has in fact been installed and is being utilized in a Modine facility located in Clinton, Tennessee, which produces condensers using the same Alfuse process presently employed at McHenry (R.

\*The Board notes that this process is also referred to in some portions of the record under the variant spelling "Nocoloc".

at 27-8). Modine elected to install this somewhat untested process at the Clinton plant rather than the McHenry plant due to lesser technical and economic problems at Clinton (R. at 27-33). Production at the Clinton plant has indeed encountered difficulties with the waterborne coating (R. at 28, 45-8), and Modine believes that it will require the time period of the variance to determine whether these difficulties could preclude adoption of the new coating at McHenry.

#### HARDSHIP AND ENVIRONMENTAL IMPACT

Absent grant of the requested variance, Modine would be required to come into immediate compliance with 215.204(j)(3). Modine believes that the most cost effective method of immediate compliance would be adaption of the McHenry facility to use of a waterborne compliant coating for the Alfuse condenser process. It is estimated that this adaption would involve an investment of approximately \$200,000 (R. at 40, 75, 80). Modine would prefer to defer this adaption on the belief that there is a significantly likelihood that the Alfuse process will be rendered obsolete by the Nocolok process, or that condenser production will be eliminated at the McHenry facility. Modine further asserts that additional data collection and analysis is required before decision on the proper alternative can be made. Accordingly, Modine contends that immediate expenditure of the \$200,000 would cause a financial hardship (R. at 40). Given that an immediate choice among the compliance alternatives would involve a substantial capital investment which could be jeopardized in the absence of data allowing for an informed management decision, the Board finds that hardship does exist.

Modine's McHenry facility is located in McHenry County, an attainment area for ozone. The Board notes that it is aware that airborne substances, though not the cause of violations at the location emitted, can be transported and ultimately contribute to violations observed in other areas. However, given the volume of VOM Modine will be emitting during the variance period, the Board finds that the anticipated environmental impact over the period of the variance is not large relative to the cost of immediate compliance. The Board therefore finds that hardship would be arbitrary or unreasonable.

#### CONDITIONS

In its Second Amended Variance Recommendation the Agency recommends grant of the requested variance, subject to conditions. The Board agrees that many of the conditions are appropriate and accordingly will condition the grant of variance upon them. However, the Board finds inappropriate those portions of the Agency's recommended conditions which would require Modine to divulge business information not pertinent to a determination of compliance with the Board's Rules and Regulations or variance thereto. These include the matters of reporting economic and customer demand associated with the Nocolok evaporator

manufacturing process noted in the Agency's recommended conditions B and C. Accordingly, such conditions shall not be imposed. However, the Board would expect that the absence of these conditions will not be a cause of delay in Modine's attainment of compliance or of failure of Modine to meet any of the other conditions imposed in the Order.

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

ORDER

Modine Manufacturing Company is hereby granted variance from 35 Ill. Adm. Code 215.204(j)(3) for the condenser coating line at its plant located at Ringwood, McHenry County, Illinois, subject to the following conditions:

1. Variance shall be effective this date and shall extend through December 31, 1987.
2. No later than April 30, 1987, Modine shall elect to achieve compliance with the VOM emission limitation of 35 Ill. Adm. Code 215.204(j)(3) by implementing one of the following three compliance options:
  - a. Converting condenser production to the Nocolok process; or
  - b. Moving condenser production out of the Ringwood plant and replacing it with a new product line using Nocolok; or
  - c. Keeping the existing condenser line using the Alfuse process and utilizing a compliance coating.

Within five (5) working days of this compliance decision Modine shall notify the Agency at the addresses provided in Condition 4 of the compliance option chosen. All relevant information concerning the chosen compliance approach and a proposed compliance schedule shall be submitted to the Agency within thirty (30) days of the decision.

3. Until the decision described in Condition 2 is made, Modine shall continue its efforts to achieve compliance with the VOM emissions limitation of 35 Ill. Adm. Code 215.204(j)(3) through the utilization of compliance paints on its condenser coating line. These efforts shall include an investigation into the feasibility of using any compliance coating which the Agency brings to Modine's attention via written communication during this period.

4. Beginning October 15, 1986, and at two-month intervals thereafter until and including April 15, 1987, Modine shall submit reports to the Agency. Such reports shall specify the status of product production at the Ringwood plant using the Nocolok process and shall give consideration to the manner in which the condenser coating line may be brought into compliance with 35 Ill. Adm. Code 215.204(j)(3) by use of the Nocolok process. Additionally, the reports shall describe progress made in utilization of the compliance coatings referred to in Condition 3. The reports shall also include monthly information on the number of condensers manufactured, the quantity and solvent content of all coatings applied to assembled condensers during the reporting period, and monthly VOM emission data from the condenser painting process. The reports shall be submitted to the Agency at the following addresses:
  1. Manager, Permit Section  
Division of Air Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706
  2. Manager, Field Operations Section  
Division of Air Pollution Control  
Illinois Environmental Protection Agency  
1701 South First Avenue  
Suite 600  
Maywood, Illinois 60153
5. No later than ninety (90) days prior to the initiation of construction of either a compliance paint system or some other system designed to bring VOM emissions from its condenser coating line into compliance with 35 Ill. Adm. Code 215.204(j)(3), Modine shall submit an application for a construction permit for that system in accordance with 35 Ill. Adm. Code 201.152. Construction shall not be begun until a construction permit is issued. Operation of either system is not allowed until an operating permit is issued by the Agency, pursuant to Section 35 Ill. Adm. Code 201.143.
6. The Agency shall be notified in writing at the addresses provided in condition 4 above of any stack tests to be performed at the facility at least five (5) working days before such stack tests take place. Agency personnel may witness any such test.
7. During the period of this variance VOM emission levels shall not increase to more than representative 1984 levels.

- 8. Within forty-five (45) days after the date of the Board Order the Petitioner shall execute and send to:

Mr. Joseph R. Podlewski, Jr.  
 Enforcement Attorney  
 Illinois Environmental Protection Agency  
 1701 S. First Avenue  
 Maywood, Illinois 60153

a certificate of acceptance of this variance by which it agrees to be bound by its terms and conditions. This forty-five (45) day period shall be held in abeyance for any period for which this matter is appealed. The form of the certification shall be as follows:

CERTIFICATION

I, (We), \_\_\_\_\_, having read the Order of the Illinois Pollution Control Board, in PCB 83-18, dated June 20, 1986, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
 Petitioner

\_\_\_\_\_  
 By: Authorized Agent

\_\_\_\_\_  
 Title

\_\_\_\_\_  
 Date

IT IS SO ORDERED.

J.D. Dumelle and B. Forcade concurred.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 20th day of June, 1986, by a vote of 7-0.

*Dorothy M. Gunn*  
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 Dorothy M. Gunn, Clerk  
 Illinois Pollution Control Board