ILLINOIS POLLUTION CONTROL BOARD
December 22, 1987

MODINE MANUFACTURING COMPANY,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 85-154
	)	
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	

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 October 16, 1985. Modine seeks variance relief until December 31, 1987 from Ill. Adm. Code Sections 302.212 and 304.105 as they relate to ammonia nitrogen and un-ionized ammonia nitrogen, and from Section 304.120(c) as it relates to biochemical oxygen demand ("BOD_5") and total suspended solids ("TSS").

History

Modine owns and operates a manufacturing plant in Ringwood, Illinois, McHenry County, which fabricates air conditioning condensors and evaporators. Modine's Ringwood plant has sought legal protection from the above cited standards in six different actions prior to the present action[1]. In PCB 82-111, the Board granted Modine variance relief for ammonia nitrogen, un-ionized ammonia, BOD_5, and TSS, from May 29, 1984 to March 1, 1985[2].

Hearings were held in this matter on February 3, 1986, September 23, 1986, October 22, 1986 and October 23, 1986. The Illinois Environmental Protection Agency ("Agency") filed its recommendation to grant the variance on December 11, 1985,

[1] PCB 82-111 was the most recent major Board action involving the Ringwood facility's effluent discharges. The prior proceedings were discussed in PCB 82-111 (58 PCB 207), and it is not necessary to the disposition of this action to repeat these here.

[2] At several places in the instant record the present request is characterized as an "extension" of the prior variance. The Board believes that the present request is more properly characterized as a request for a new variance.

subject to conditions (this document also appears in the record as Petitioner's Exhibit 2). Petitioner filed its brief in support of amended variance petition on August 7, 1987, and its amended brief in support of amended variance petition on September 3, 1987. The Agency filed its brief on October 2, 1987[3], and Petitioner filed its reply brief on October 15, 1987 with a motion to file instanter. That motion is granted. In addition, the above have been accompanied by many delays, requests for continuances, and filings of many motions.

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

Ringwood Plant

Modine's condensor products are primarily fabricated from aluminum parts which are metallurgically bonded together using zinc and fluoride salts, under the influence of heat, utilizing the Alfuse process (Petition at 2). As a part of its manufacturing operations, Modine generates process wastewater.

The process wastewater is treated by preliminary physical-chemical treatment, followed by mixing with non-contact cooling water and treated domestic wastewater. It is then discharged into three lagoons for further treatment, and is later chlorinated and discharged into an unnamed tributary to Dutch Creek (Modine's Amended Brief at 2). It is for the excess levels of BOD_5, TSS, ammonia nitrogen and un-ionized ammonia present in the effluent that Modine seeks variance.

Hardship

Modine asserts that there is no technically feasible and economically reasonable means for it to comply with the Board effluent standards noted above.

Since the filing of its petition, Modine has installed a new process on its evaporator line, the Nocolok process, which, as Modine states, has eliminated the process wastewater from that line of production. The cost of installation of the system was approximately $4 million. Modine asserts that although the new process yields evaporators acceptable to its customers, the process is not adaptable to the condensor line because of the

[3] The Agency in its brief amended its recommendation deleting conditions 1 and 2 pertaining to further testing of the wastewater effluent from the Ringwood plant, stating that the two conditions have become moot.

large number of individual condensors produced on that line. Modine therefore states that it cannot come into compliance even with the use of this new production process due to the process wastewater generated by the condensor line production (Modine Amended Brief at 19-20).

Modine has previously investigated other compliance options (See PCB 82-111). Modine retained James W. Patterson, a consultant, who made recommendations for improving the quality of Modine's effluent. The treatment system designed by Dr. Patterson included retrofitting the existing system through the use of rotating biological contact units and certain lagoon modifications (R. at 457). It was estimated in 1982 that the cost of the system would be approximately $408,200 to $420,000, and that even with the system, Modine would not meet the applicable effluent limitations at all times (R. at 458; Modine Exhibit 20,21). Dr. Patterson testified that the condensor production at the plant has remained the same since his previous studies in 1982 and the data would be representative of what he would expect to find at the present time (R. at 456).

Modine has implemented other improvements previously suggested by its consultants including raising the pH level in the clarifier for more efficient removal of suspended solids and to better control ammonia nitrogen, to cease adding phosphorus nutrients to the ponds to avoid increases in suspended solids, and to isolate spent slurry for reuse (R. at 525-6, 500-1).

The Agency states that in view of the fact that Modine provided additional facts on the environmental impact of its effluent at the public hearing, that the variance if granted would shortly expire, and because Modine has spent significant sums in attempting to control its wastewater discharge, the Agency believes it would be an arbitrary or unreasonable hardship to deny the variance (Agency Brief at 5).

Environmental Impact

Modine claims that continued operation of the condensor line at the Ringwood facility will not have an adverse impact on water quality.

Modine currently discharges wastewater into an unnamed ditch adjacent to the Ringwood facility. Upstream from Modine's discharge, the unnamed ditch is fed by drainage area from a marshy meadow. Downstream from Modine's discharge the stream becomes a flowing stream, and because of the retention capability of the Modine lagoons, the stream remains even when

Modine is not producing wastewater[4]. Access to the stream is greatly limited by the physical remoteness of the water course. During the summer the stream is overgrown and partially blocked from view due to vegetation which grows up to seven feet tall immediately adjacent to the stream. For most of the time the stream is several inches deep and one or two yards wide (Modine Amended Brief at 20-2).

In 1979, Modine retained Dr. Charles Wahtola of Camp, Dresser and McKee, Incorporated ("CDM") to review the receiving stream. (Dr. Wahtola's study was discussed in the Board's Opinion and Order in PCB 82-111.) In 1986, Mr. Thomas Meitner, environmental engineer for Modine, conducted a study to determine if any changes in the ditch's ecosystem have occurred since Dr. Wahtola's study. As the study indicates:

> The scope of this investigation includes an overview of the ditch's ecosystem, and concentrates on the general types of organisms which were observed, specifically the benthic macroinvertebrates. The primary objective was to determine the presence or absence of macroinvertebrate and fish populations at various ditch locations, and to note if any marked changes in these populations have occurred since the three CDM studies noted above. Secondly, this investigation was also to determine if land use in the watershed has undergone any changes since the CDM studies. (Modine Exhibit 19 at 1)

Specific observation stations were established from points upstream of Modine's discharge to a point just below the ditch's confluence with Dutch Creek. Mr. Meitner noted that fish, macroinvertebrates, and aquatic vegetation were found at points upstream and downstream of the Modine discharge point. He noted a lack of diversity of macroinvertebrates (finding mainly oligochaetes and diptera) at two points downstream from the discharge, though fish were observed in those areas and at the discharge point itself (R. at 558-560; Modine Exhibit 19).

Mr. Meitner testified that the organisms he found in specific habitat areas were very similar to the types of organisms found by Dr. Wahtola in those same locations (R. at 560). Mr. Meitner further stated that he observed no quantifiable adverse impact on the receiving stream from Modine's discharge (R. at 569). In his study he noted the character of the surrounding area and concluded:

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[4] Morton Chemical also discharges into a ditch at a point below the Modine discharge. The two ditches join before confluence with Dutch Creek.

> Mr. Bryan Petrucci, a Resource Conservationist with the McHenry County Soil and Water Conservation District, was contacted regarding the unnamed ditch to which Modine discharges. Mr. Petrucci stated that Ringwood, Illinois, specifically the Dutch Creek tributary area, has remained basically unchanged since 1979. Some subtle changes involving land ownership and a shift to larger farms have occurred since the CDM study. Mr. Petrucci also stated that this area has been classified as a "target watershed" due to historic agricultural land erosion ... This problem was evidenced at various locations throughout the area under investigation. Gully erosion and areas of silt accumulation in the ditch were commonly observed.
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> * * *
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> [The] presence [of fish] directly in the Modine effluent indicates that this water contains an adequate supply of dissolved oxygen and is of high enough quality to support their existence. This may also indicate that the overall quality of Modine's effluent has improved since the CDM studies.
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> (Modine Exhibit 19 at 2, 3)

There is therefore a basis for concluding that there has been minimal adverse impact on the receiving waters from Modine's discharge over the period of the requested variance. The presence of fish, aquatic vegetation, and other organisms, as indicated by the data presented, support this finding.

Conclusion

The Board finds this matter to be a difficult call. The long time that this matter has been extant, both in its present and previous incarnations, compounded by the repeated delays in bringing the matter to resolution, suggest that some of the hardship asserted by Modine is self-imposed. Moreover, the Board is displeased with a request for a variance which has a term, but for a few days, which is after the fact. While the Board allows that there may be circumstances where the latter condition might validly arise, it also believes that after-the-fact grants of variance are generally inconsistent with the intent of variance relief as enuciated in the Environmental Protection Act. At the minimum, it is not the intent of a variance to legitimize past failure to comply with rules and regulations.

In considering the entirety of this matter, the Board finds that in such a close decision the recommendation and the post-hearing brief of the Agency to grant the requested variance

carries special weight. With this in mind, the Board finds that it has been shown that absent a variance, the applicable effluent standards would have imposed an arbitrary or unreasonable hardship upon Modine, and that there has been minimal adverse environmental impact as a result of the plant discharges over the period of time for which variance is requested. The Board therefore grants the variance, to terminate on the date requested, December 31, 1987.

The Board must also decide to what date the variance presently granted should be retroactive. The Board finds that the most reasonable outcome under the circumstance is to grant the variance retroactive to October 16, 1985, the date of filing of the instant request. The Board further finds warranted the Agency's request (Agency Brief at 7) that condition #2 of the PCB 82-111 variance also be incorporated as a condition in the instant variance.

It is also worth noting that Modine has recently filed with the Board a request for a site-specific rule change involving discharges from Modine's Ringwood plant. The Board's action today should not be construed as indicative of any predisposition toward the merits of that proposal, and Modine is expected to provide all necessary information in support of that proposal as it would under other circumstances.

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

ORDER

Modine Manufacturing Company is hereby granted variance for its plant in Ringwood, McHenry County, from 35 Ill. Adm. Code 302.212 and 304.105 as they relate to ammonia nitrogen and un-ionized ammonia and from 35 Ill. Adm. Code 304.120(c) as it relates to BOD_5 and total suspended solids, all subject to the following conditions:

1) Variance shall begin on October 16, 1985, and terminate on December 31, 1987.

2) The following effluent and water quality limitations, in mg/l, shall not be exceeded:

	BOD_5	TSS	AMMONIA-N	UN-IONIZED NH_3-N
Summer	60	35	5	1.48
Winter	120	20	15	1.3

3) Within forty-five (45) days of the date of this Order, Petitioner shall execute and forward to Wayne L.

Wiemerslage, Enforcement Programs, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62794-9276, a Certification of Acceptance and Agreement to be bound to all terms and conditions of this variance. The 45-day period shall be held in abeyance during any period that this matter is being appealed. Failure to execute and forward the Certificate within 45 days renders this variance void and of no force and effect as a shield against enforcement of rules from which variance was granted. The form of said Certification shall be as follows:

CERTIFICATION

I, (We), _____, hereby accept and agree to be bound by all terms and conditions of the Order of the Pollution Control Board in PCB 85-154, December 22, 1987.

_____
Petitioner

_____
Authorized Agent

_____
Title

_____
Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1985 ch. 111½ par. 1041, provides for appeal of final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 22nd day of December, 1987, by a vote of 6-0.

Dorothy M. Gunn

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board