

ILLINOIS POLLUTION CONTROL BOARD
September 4, 1987

REYNOLDS METALS COMPANY,)
)
 Petitioner,)
)
 vs.) PCB 87-63
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

This matter is before the Board on a petition for variance filed by Reynolds Metals Company (Reynolds). Reynolds seeks relief until July 1, 1988, from 35 Ill. Adm. Code 304.120(c) as it relates to the bio-chemical oxygen demand (BOD) effluent limitations applicable under its National Pollutant Discharge Elimination System (NPDES) permit for its McCook, Illinois, aluminum fabricating facility. The Illinois Environmental Protection Agency (Agency) has filed its Recommendation in support of grant of variance, subject to certain conditions. On July 23, 1987, Reynolds filed a motion for expedited consideration, in which it stated that it agreed with those conditions. On August 6, 1987, the Board granted the motion for expedited consideration. Hearing was waived.

Reynolds' McCook plant casts and imports alloyed aluminum ingots which are then hot and cold rolled into sheet, coil, and plate products. Oil and water emulsions are used as lubricants in hot rolling the ingots into sheet and plate. These emulsions are treated with an emulsion breaking system of steam heat and acid treatment. The wastewater from this emulsion treatment system is then neutralized with a caustic soda and discharged into the plant's wastewater treatment system. The wastewater treatment process consists of oil skimming, chemical precipitation, and settling. The treated wastewater is subsequently discharged, through Reynolds' Outfall 001, into the the Summit - Lyons Ditch and then by siphon to the Chicago Sanitary and Ship Canal (Canal). Outfall 001 is the only one of Reynolds' three outfalls which is limited for BOD, and Reynolds states that the wastewater from the emulsion breaking system is the only major source of BOD.

Reynolds' existing NPDES permit provides for BOD load limits of 98.2 lbs/day (30 - day average) and 286.9 lbs/day (daily maximum), and concentration limits of 10 mg/l (30 - day average)

and 20 mg/l (daily maximum). Reynolds asks that the BOD limits be revised to load limits of 150 lbs/day (30 - day average) and 450 lbs/day (daily maximum), and concentration limits of 20 mg/l (30 - day average) and 40 mg/l (daily maximum). In the fifteen month period between January 1986 and March 1987, the maximum concentration limits have been exceeded in eight months and the average concentration limits have been exceeded in five months. The maximum load limit was surpassed once, and the average load limits were exceeded twice. With the exception of three of the maximum concentration violations, all of the excesses occurred in the last five months of that period. Reynolds states that changes in quality and production requirements for aluminum rolling operations have forced it and other manufacturers to use more stable oil and water emulsions. These more stable emulsions contain a greater percentage of water-soluble organics, which result in more BOD in the treated wastewater.

Reynolds proposes to eliminate the discharge of the oil and water emulsion breaking system from the wastewater treatment system by routing it to the sanitary sewer of the Metropolitan Sanitary District of Greater Chicago (MSDGC). This would require the design and installation of piping to allow the neutralized wastewater from the emulsion breaking system to be discharged to the sanitary sewer. This proposal is based upon a 1986 report prepared by an outside environmental consultant for Reynolds. Reynolds anticipates that the applicable permits will be obtained and the system designed and installed by July 1, 1988. The preliminary estimated cost of re-routing the emulsion breaking system wastewater is approximately \$100,000.

An alternative method for handling the present BOD load would be to install additional tertiary treatment to remove water-soluble organics from the emulsion breaking system effluent. However, Reynolds contends that additional treatment systems would be expensive to install and maintain, and would not guarantee that the BOD levels would be in compliance with the point limits. Reynolds states that MSDGC, on the other hand, already has a biological degradation treatment system in place which would effectively treat the BOD. Thus, Reynolds asserts that routing the emulsion breaking system wastewater to the sanitary sewer is the most efficient way to treat the wastewater containing the highest concentration of BOD, and would insure compliance with existing NPDES permit levels. Reynolds does not believe that the requested variance will have any significant environmental impact on the quality of the receiving water.

Reynolds notes that without a variance, it faces the likelihood of continued violations of the existing BOD limits until the re-routing is completed. Such violations subject Reynolds to the possibility of enforcement action by the Agency or by citizen suits. Because it has pursued its BOD non-

compliance problem and has specific actions underway to achieve compliance, Reynolds asserts that the prospect of such liability during the construction period constitutes an arbitrary and unreasonable hardship.

The Agency recommends that the requested variance be granted, subject to conditions. The Agency believes that the re-routing is the best way to handle Reynolds' discharge. The Agency also agrees that Reynolds has an arbitrary and unreasonable hardship, since Reynolds cannot meet its BOD limits even with good operation. As to the environmental impact of the variance, the Agency states that the increased BOD in the discharge should not significantly reduce dissolved oxygen (DO) in the ditch or in the Canal. The Agency notes, however, that its water quality sampling program has shown DO violations in the Canal at Lockport, downstream from Reynolds' discharge. Furthermore, the Agency points out that the Board may grant the variance consistent with federal requirements, since the regulation for the aluminum forming subcategory provides no guidance or restriction on BOD. The Agency does express doubts as to whether Reynolds' compliance schedule is accurate. Since it is in no better position to determine what the schedule should be, however, the Agency states that it accepts Reynolds' compliance schedule as the most reasonable available.

Based on all of the facts and circumstances presented here, the Board finds that denial of the variance would impose an arbitrary or unreasonable hardship. Therefore, the Board will grant the requested variance until July 1, 1988, or until the emulsion breaking system wastewater is re-routed to the MSDGC sewer system, whichever occurs first.

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

ORDER

1. Petitioner, Reynolds Metals Company, is hereby granted a variance from 35 Ill. Adm. Code 304.120(c) as it relates to bio-chemical oxygen demand (BOD) and from 35 Ill. Adm. Code 304.141(a) for Outfall 001 only, subject to the following conditions:
 - a) This variance will expire on July 1, 1988, or upon the re-routing of the emulsion breaking system wastewater to the MSDGC sewer system, whichever occurs first.
 - b) Petitioner shall operate its facilities so as to meet the BOD load limits of 150 lbs/day for the 30-day average and 450 lbs/day for the daily maximum;

- c) Petitioner shall operate its facilities so as to produce the best effluent possible and meet the BOD effluent limits of 20 mg/l for the 30 - day average and 40 mg/l for the daily maximum;
 - d) Petitioner shall apply for all applicable permits in a timely manner; and
 - e) Petitioner shall complete the re-routing of the emulsion breaking system wastewater to the MSDGC sewer system by July 1, 1988.
2. Within forty-five days of the date of this Order, Petitioner shall execute and forward to Jose Gonzalez, Jr., Enforcement Programs, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, a certificate of Acceptance and Agreement to be bound to all terms and conditions of the variance. This forty-five day period shall be held in abeyance during any period that this matter is being appealed. The form of said Certification shall be as follows:

CERTIFICATION

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 87-63, dated September 4, 1987, 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.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 1st day of September, 1987, by a vote of 6-0.

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