

ILLINOIS POLLUTION CONTROL BOARD
May 25, 1989

KOPPERS INDUSTRIES, INC.,)
)
 Petitioner,)
)
 v.) PCB 88-196
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

J.A. CARNES (PLANT MANAGER) APPEARED ON BEHALF OF THE PETITIONER.

JOHN J. BRESLIN APPEARED ON BEHALF OF THE RESPONDENT.

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

This matter comes before the Board on a Petition for Variance which was initially filed by Koppers Industries, Inc. (Koppers) on December 6, 1988. By its Order of December 15, 1988, the Board found the December 6th petition deficient and ordered that Koppers file an amended petition. Koppers did so on January 30, 1989.

In the Amended Petition, Koppers states that it has served a copy on the Metropolitan Sanitary District (now called the Metropolitan Water Reclamation District of Greater Chicago (MWRD)) so that MWRD could join in the variance request if it so desired. MWRD receives Koppers' discharge.

Koppers is seeking variance from 35 Ill. Adm. 307.1102 which prescribes effluent limitations for mercury in discharges to a publicly owned or publicly regulated sewer system. Koppers requests that it be granted a variance until November 5, 1990 in order to allow construction of a wastewater treatment facility. According to Koppers, such a facility will enable its discharge to the MWRD system to achieve compliance with the mercury monthly average standard of 0.003 mg/l. Koppers proposes interim limits, which would be in force during the requested variance period, of 0.030 mg/l for a daily composite and 0.010 mg/l for a monthly average.

Koppers waived its right to a hearing on its petition, and no one filed a timely objection to the petition. No hearing was held in this matter.

On April 6, 1989, the Board granted the Illinois Environmental Protection Agency's (Agency) motion to file the Agency Recommendation instanter. In its Recommendation, the Agency recommends that the Board grant Koppers a variance as requested.

The discharge which is the subject of this variance is the wastewater discharge from Koppers' manufacturing facility located at 3900 South Laramie Avenue, Cicero, Cook County. The Cicero facility employs 205 persons and is involved in the following processes: 1) coal tar distillation; 2) phthalic anhydride production; and 3) polyester resin manufacture. Currently, the wastewater generated from these processes is pre-treated by pH adjustment, API separation, and dissolved air flotation and discharged to MWRD. A MWRD treatment plant is located adjacent to the Koppers facility. (Pet. p. 3-4). Koppers' discharge rate is approximately 0.250 million gallons per day (MGD). (Pet. p. 8).

According to the Agency, the MWRD plant which receives Koppers discharge, the Stickney Water Reclamation Plant, in turn discharges to the Chicago Sanitary and Ship Canal. The MWRD plant has a design average flow of 1200 MGD. The Stickney facility provides secondary treatment and actually consists of two district plants. The West Plant is an Imhoff system and discharges to the Southwest Plant which is an activated sludge treatment works. (Ag. Rec. p.3).

Koppers asserts that discharges which exceed the mercury standard are intermittent. The petition indicates that Koppers encountered discharges exceeding the monthly mercury standard in 1981, 1984 and 1987. In recent years MWRD has "conducted one or two sampling campaigns per year to determine compliance", according to Koppers. (Pet., p.8). MWRD has the same monthly mercury standard as the Board. (Attachment 2 to Pet.).

Sampling by MWRD in 1987 showed some violations of the daily composite and monthly standards for mercury. As a result Notices of Violation were issued by MWRD (Attachments 4 and 5 to Pet.). Koppers entered into a Conciliation Agreement with MWRD. That agreement called for a three phase sampling program. Koppers asserts that the results of the sampling program show that "[o]f the 28 days of sampling [conducted in 1988] only 2 were out of compliance with the daily composite limitation".

According to Koppers, the sampling results also indicate that more than 90% of the mercury is in an insoluble form and less than 10% is in a soluble form. (Pet., p.8).

Koppers states that the sampling program results also indicate that the mercury content of the coal tars that it receives (as a raw material) is responsible for the mercury in Koppers' discharge. Koppers purchases its coal tars from various coke plant operators. At the Koppers plant, coal tar is refined into a number of products. The most important product is coal tar pitch which is used as a binder for carbon electrodes in the aluminum industry. The Petition states:

In the last few years aluminum production has increased substantially. Because of the supply demand situation coal tar processors cannot afford to forego reasonable coal tar streams if they expect to satisfy customer demand.

(Pet., p.6).

Koppers states that it is the largest manufacturer of coal tar-derived products in the United States; the plant at issue has the largest capacity of all Koppers' plants. Koppers asserts that all the coal tars from the available suppliers it uses have mercury contamination. Apparently, alternate supplies are not a possibility due to transportation costs. (Pet. p.6).

As a result of recently promulgated pretreatment standards of the U.S. EPA which apply to Organic Chemicals, Plastics and Synthetic Fibers industries, Koppers is planning to construct a wastewater treatment plant. It is Koppers' position that the wastewater treatment plant will enable Koppers to comply with the mercury standard of 307.1102. Koppers states that the new wastewater treatment plant combined with the existing pretreatment will likely provide:

1. pH control
2. API separation
3. Dissolved Air Flotation
4. Equalization
5. Biological treatment
 - a. Aeration
 - b. Nutrient addition
 - c. Activated Carbon addition (if required)
 - d. Clarification

(Pet. p.7).

The equalization process of the new plant will allow a minimum total equalization time of five-days. Such equalization will limit quality fluctuations and variations in Koppers discharge. Since Koppers only has intermittent periods of non-compliance, Koppers asserts that such equalization will even out the flow and reduce the likelihood of exceeding the standard.

Secondly, Koppers expects the biomass of the activated sludge, biological treatment system to trap the insoluble portion of the mercury in the wastewater. However, soluble portions of the mercury content of the wastewater will continue to flow through the plant untreated. As a result, the soluble portion will ultimately be discharged. (Pet., p.10).

Koppers claims that technologies which actually remove mercury, such as hydroxide precipitation and sulfide

precipitation, are infeasible and expensive as applied to Koppers due to the relatively low concentration of mercury in the wastewater. (Pet., p.10).

The Agency agrees with Koppers' assertion that granting a variance will have "no measurable impact on human, plant or animal life". (Pet., p. 8). The bases for such a conclusion are: 1) the relatively small amount of mercury discharged per day by Koppers (0.0069 lbs per day); 2) the types of dilution afforded by MWRD's effluent (ratio of Koppers' flow to the MWRD's flow is 1 to 3,265)¹; and 3) the intermittent nature of the mercury problem. (Ag. Rec., p. 3).

As to consistency with federal law, the Agency states that there is no federal law or regulation specifically limiting mercury discharges by Koppers. (Ag. Rec., p. 5).

The Agency recommends that Koppers be granted a variance subject to the conditions which are set forth in the Agency Recommendation. According to the Agency, "[o]n December 13, 1988, Richard Lanyon of MWRD verbally informed the Agency that the District supports [Koppers'] Variance request". However, despite a request, the Agency never received any written comment from MWRD. (Ag. Rec., p.5-6).

Given the circumstances of this case, including the apparent minimal environmental impact which would result from the requested variance, the Board finds that compliance with Section 307.1102, during the time period of the requested variance, would impose an arbitrary or unreasonable hardship upon Koppers. Consequently, the Board will grant Koppers a variance from Section 307.1102 subject to conditions.

As one of its recommended conditions, the Agency accepts the interim limits requested by Koppers. Koppers has requested effluent limits of 0.030 mg/l for daily composite and 0.010 mg/l for monthly composite.

According to Koppers, such values are consistent with recent data which showed non-compliance and the "worst-case" situation. (Pet., p. 11). The Board will accept the interim limitations and will impose them as a condition of the variance.

Also, the Agency states that Koppers has agreed to comply with the schedule of implementing its compliance plan as set forth by Attachment #13 to the Petition. (Ag. Rec., p. 4). That schedule provides for completion of the wastewater treatment

¹ Koppers facility has a flow of 0.250 and the Stickney plant has a design average flow of 1200 MGD. However, the average flow during the period of 10/87 to 9/88 was 816.3 MGD. (Ag. Rec., p.4)

facility and compliance by November 5, 1990. Koppers itself states that the time schedule is being maintained.

Finally, although Koppers requests a variance from Section 307.1102 and 304.104, the Board finds that a variance from Section 307.1102 is sufficient to address Koppers' needs.

This Opinion constitutes the Board's finding of fact and conclusions of law.

ORDER

Koppers Industries, Inc. (Koppers) is hereby granted variance from Section 307.1102 with respect to the discharges to the Metropolitan Water Reclamation District of Greater Chicago (MWRD) system by Koppers' plant located at 3900 South Laramie Avenue, Cicero. This variance is subject to the following conditions:

1. This variance shall begin on May 25, 1989 and expire November 5, 1990 or when Koppers achieves compliance, whichever occurs first.
- 2) During the period of this variance Koppers' discharge shall not exceed the following limitations for mercury: 0.030 milligrams per liter (mg/l) measured as a daily composite and 0.010 mg/l measured as a monthly average. For the purpose of this variance, the terms "daily composite" and "monthly average" shall have the meanings as set forth in 35 Ill. Adm. Code 304.104(b).
- 3) This variance does not provide relief from compliance with any local limits and does not affect any compliance agreement or order between Koppers and MWRD.
- 4) Within 45 days after the date of this Order, Koppers shall execute and send to the Agency a Certificate of Acceptance of this variance by which it agrees to be bound by the terms and conditions contained herein. The executed Certificate shall be sent to:

Illinois Environmental Protection Agency
 Attention: John J. Breslin
 Enforcement Programs
 P.O. Box 19276
 2200 Churchill Road
 Springfield, IL 62794-9276

The 45-day period shall be held in abeyance for any period during which this matter is appealed. Failure to execute and forward the Certificate within 45 days renders this Variance void and of no force and effect. The form of the certification shall be as follows:

CERTIFICATION

I, (We) _____, having read the Order of the Illinois Pollution Control Board in PCB 88-196, dated May 25, 1989, understand and accept the Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

Authorized Agent

Title

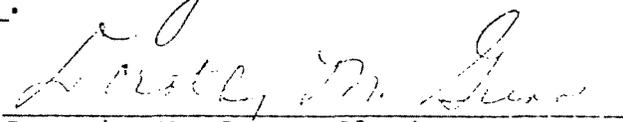
Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987 ch. 111 1/2 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.

J.D. Dumelle concurred.

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 25th day of May, 1989, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board