

It will ultimately be discharged to the Madison sewer system. The non-contact water will be recycled within the facility's process.

The wastewater which currently passes through the oil/water separator meets pretreatment standards for the timber products category. However, the new polishing tanks will also be equipped to add flocculant chemicals to enhance treatment as necessary to meet applicable federal categorical standards. The added flocculation and polishing tanks will also further reduce oil and grease levels, BOD, COD, and suspended solids. Phenol levels will remain the same, but Petitioner claims that additional control equipment can be added to further reduce these concentrations. (Pet. 5). An estimated 40 gallons per day of creosote oil will be reclaimed for recycling by these two steps. It is anticipated that approximately 21,500 gallons per day of treated water will be discharged to the Madison sewer system and treatment works should variance be granted. This estimate does not include the amount of water which will be discharged when the surface impoundment is being dewatered. Approximately 200,000 gallons of wastewater will be discharged per day during that transition.

Kerr-McGee examined five alternative methods for handling its wastewater. The first of those was its current treatment process: an aerated surface impoundment. It found this no longer acceptable because it was subject to hazardous waste regulations including stringent and costly liner and groundwater monitoring regulations. In fact, the United States Environmental Protection Agency has requested that Kerr-McGee submit a Part B permit application under RCRA requirements for the impoundment by July 16, 1984. In response, Kerr-McGee intends to submit immediate closure plans. One reason for this is because the Agency has indicated that it will not permit the surface impoundment for continued use as a hazardous waste treatment facility, and a second is because the lagoon would eventually have to be emptied. The second alternative Kerr-McGee considered was evaporation. However, the high amount of the precipitation in the St. Louis area would have necessitated pan evaporation techniques, i.e. artificially induced evaporation. The ideas of discharging to a nearby waterway and land irrigation were discarded as alternatives because there is no acceptable waterway nearby to receive an outfall and there is insufficient land nearby for the latter. The final alternative, a powdered activated carbon treatment (PACT) was considered too costly because it would cost approximately \$350,000 to install and would generate a hazardous waste by-product which would have to be landfilled or incinerated accordingly. Finally, a third reason for discontinuing use of the lagoon, and for electing to build a pretreatment facility, is that it maximizes the recovery and recycling of the preservative chemicals.

As stated above, Madison's sewage system was put on Restricted Status in 1981. According to the Agency and Petitioner, Madison

itself has not taken steps to upgrade its system through the construction grant program so as to be removed from the Restricted Status list. However, Madison, therefore, Petitioner, is within the Metro-East Sanitary District. Rather than upgrade the Madison plant, the District's plan is to construct a force main from the Madison plant to the Granite City treatment works. The Granite City plant has a design average flow of 23 million gallons per day (mgd), and current flows average approximately 9 mgd. According to the Agency, the agreement to divert the Madison plant flows to Granite City's was to be completed in April, 1984, and the Madison facility subsequently eliminated in two years. At this time the Board does not know whether such an agreement was signed and if so what is the specific date anticipated for completion of the project. In its Recommendation, the Agency did state that Granite City's sewer ordinance includes a phenol regulation more stringent than the federal limitation. The Agency speculated that Kerr-McGee's discharge may not comply with such a level. If it should not, Petitioner informed the Agency that it is prepared to work with Granite City to insure that the appropriate level is achieved.

The Agency agreed with Petitioner's assessment that the best alternative is to build and connect an on-site treatment facility to replace the existing lagoon. It raised, however, two problems should Kerr-McGee discharge to the Madison treatment works. Madison's facility is not capable of treating for phenols. Since the current discharge levels at Madison are well below the effluent standards found at 35 Ill. Adm. Code 304.124, the amount contributed by Kerr-McGee should not cause problems under normal operations. However, once its flow goes to the Granite City plant, Kerr-McGee will have to meet the level set by local ordinance. The second problem raised by the Agency concerned water quality, especially the levels of phenols, during the frequent bypassing experienced at the Madison facility. Should Kerr-McGee's flow be included along with the other amounts of wastewater bypassed, the Agency feared that the phenols could cause odor and taste problems for users of the downstream Illinois American Water Works Company. To minimize this possibility and the effect caused by bypassing into the Mississippi, the Agency suggested, and Kerr-McGee agreed, that it should retain its flows both before and after the on-site process plant is operational and the lagoon is dewatered, during rainfall events of 0.25 inch rain in two hours, or greater, for at least twelve hours.

The Board finds that denial of the variance requested by Kerr-McGee would impose arbitrary or unreasonable hardship. Variance will allow Petitioner to construct a treatment facility which meets federal categorical water standards, and to properly close surface impoundment under RCRA regulations, while not jeopardizing environmental quality in the area. Petitioner has identified sixteen steps in its plan to close the surface impound-

ment and switch to process wastewater treatment tanks. The Board finds that its plan is environmentally preferable to the existing lagoon. The Agency's Recommendation asks that the Board include dates-certain for Petitioner to obtain permits and complete various steps in its compliance plan. However, the Board is troubled not so much with the necessity of dates-certain but that the contents of the lagoon will be sent to the Madison plant, which only has a design capacity of 6.0 mgd and on the average is treating 3.9 mgd, experiences bypassing during rainfall events, and which cannot treat for phenols. Since it appears that Kerr-McGee can neither defer dewatering the lagoon until the force main to Granite City is completed due to the Part B permit call-in, nor defer dewatering due to possible environmental consequences, the Board will condition the variance to reduce the risk of Kerr-McGee excessively contributing to bypassing at the Madison facility. The dates for closing the lagoon and constructing the various stages for improving the in-house wastewater treatment shall be governed by the Part B permit call-in, the responsive closure plan, and the construction and operating permits issued by the Illinois Environmental Protection Agency.

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

ORDER

Kerr-McGee Chemical Corporation, Petitioner, is hereby granted variance from 35 Ill. Code 309.241 for the purpose of constructing and connecting a process wastewater treatment facility at its Madison plant to replace an existing surface impoundment, subject to the following conditions.

- 1) Petitioner shall promptly apply for and receive the necessary construction permits from the Division of Water Pollution Control prior to beginning any of the stages in its plan to build and connect a process wastewater facility as described in subparagraph (2), below.
- 2) Petitioner's process treatment facility shall comply with the following:
 - a) The plant's contact and non-contact water shall be segregated, with only the contact water requiring wastewater treatment;
 - b) A new cooling system shall be installed to reduce total wastewater by 69,000 gpd.
 - c) The existing oil/water separator will be modified as proposed by the Petitioner;
 - d) Sufficient chemical treatment of the process

wastewater shall be provided to maintain phenol levels below the federal categorical limits and the sewer-use ordinance limit set by Granite City;

- 3) Only after obtaining the necessary operational permits from the Division of Water Pollution Control may Petitioner begin discharging to the Madison treatment works;
- 4) Only after submitting an acceptable closure plan to the United States Environmental Protection Agency and obtaining the permits required in subparagraph (3) may Petitioner begin dewatering the existing surface impoundment;
- 5) During periods of rainfall of 0.25 inches or more per 2 hours and for twelve hours after the rainfall has ended, Petitioner shall not allow its process wastewater to flow to the Madison treatment works; and
- 6) Within forty-five days from the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Division of Water Pollution Control, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance for any period this matter is being appealed. The form of the certificate shall be as follows:

CERTIFICATE

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 84-31, dated May 29, 1984, 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, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 29th day of May, 1984 by a vote of 60.



Christan L. Moffett, Clerk
Illinois Pollution Control Board