

solution. Quincy proposes to construct a pipeline which will extend beyond the proposed discharge point at Curtis Creek and connect into the City's 36" sewer. Thus, when the City's sewer becomes available Quincy would stop the discharge into the Creek and open the sewer connection.

The Board must determine whether compliance with the thermal discharge standard of Water Rule 203(i) would place an arbitrary or unreasonable hardship upon Quincy. Quincy proposes a two year discharge of 5.5 MGD of water at an average temperature of 80° into the final 1,500 feet of Curtis Creek prior to its confluence with the Mississippi River. Quincy states that the effluent conforms to all applicable standards except for the thermal limits to Curtis Creek. The first issue, then, is the extent of environmental damage which could be caused by the proposed discharge. Quincy has submitted biological surveys of both Curtis Creek and the presently used drainage ditch. The Curtis Creek survey describes septic odors, depressed oxygen concentrations, algal growth and silt layers which cover the bottom, and the absence of intolerant macroinvertebrates. The proposed discharge point is downstream from the South Park storm and sanitary discharge point, industrial discharges, and the bypass from the City's treatment plant. On either side of Quincy Soybean's proposed discharge point the survey states that the "...bottom deposits were comprised of silts and organic materials resembling partially digested domestic sewage." After reviewing the survey data the Board finds that there is a rather low potential for adverse environmental impact. The main concern of the Board is the possibility of a fish kill which could result from a sudden cessation of the heated discharge during the winter.

Quincy's survey of the South Drainage Ditch, into which it currently discharges its effluent, indicates the presence of large numbers of fish and a large diverse population of macroinvertebrates. The report concludes that the ditch is a more balanced aquatic ecosystem than is the lower portion of the Creek. This indicates that Quincy's two year discharge will not have a long-term adverse effect on Curtis Creek. The possibility of a fish kill exists in either the Creek or the ditch during the winter. It will be Quincy's duty to operate its plants in such a manner so as to minimize this risk.

Quincy has submitted, by affidavit, an assessment of alternatives for cooling the effluent or re-routing by pipeline. As for cooling methods it is clear that design and construction lag times would render these alternatives useless. By the time

construction could be completed the device would probably no longer be needed. Of course, were there an indication of self-imposed delay and bad faith on Quincy's part such factors would present no excuse. However, in this case no such allegation has arisen. The affidavit also considers the construction of a pipeline to the Mississippi. While the cost would not be prohibitive, this project would require the removal of trees from 30,000 square feet of river flood plain. There is also question as to whether such pipeline could be completed prior to January 1, 1977. Therefore, given the absence of long-term adverse environmental effects the Board finds that compliance with Water Rule 203(i) would place an arbitrary or unreasonable burden upon Quincy. However, the Board will structure its order to reflect the uncertainty of the dates of termination of use of the ditch and the availability of the outfall sewer.

The Opinion constitutes the Board's findings of fact and conclusions of law.

ORDER

Petitioner Quincy Soybean Company is hereby granted variance from Rule 203(i) of the Board's Water Pollution Regulations for the discharge of cooling water into Curtis Creek at an average rate of 5.5 MGD and an average temperature of 80°. The discharge shall be located not more than approximately 1500 feet upstream of the Creek confluence with the Mississippi. This variance shall commence at the time Quincy Soybean Company notifies the Agency that the South Quincy Drainage District has refused all reasonable offers to extend and/or modify the existing contract, but not sooner than December 31, 1976. The variance shall terminate upon the occurrence of any of the following:

1. Extension or modification of Quincy's contract to discharge to the South Quincy Drainage District; or
2. Failure of the City of Quincy to agree to lease its 36" outfall sewer to Quincy Soybean; or

3. Availability of the 36" outfall sewer for Quincy Soybean's discharge.

However, in no case shall this variance extend beyond December 31, 1978. This variance does not relieve Petitioner from liability associated with any killing of fish or other aquatic life caused by its discharges.

This variance is granted subject to the following conditions:

- (a) Petitioner shall investigate and report to the Agency by December 31, 1976 on the feasibility of phasing its plant shut downs to avoid fish kills attributable to thermal shock.
- (b) Petitioner shall complete its proposed separation of process waste, cooling water, and floor drains by April 15, 1977.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 5-7 day of August, 1976 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board