

ILLINOIS POLLUTION CONTROL BOARD
June 22, 1978

ELECTRIC ENERGY, INCORPORATED,)
)
) Petitioner,)
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)
) v.) PCB 78-42
)
)
) ENVIRONMENTAL PROTECTION)
) AGENCY,)
)
) Respondent.)

OPINION AND ORDER OF THE BOARD (by Mr. Goodman):

This matter comes before the Board for a determination, as required by Rule 203(i)(5) of Chapter 3 of the Regulations, that thermal discharges have not caused and cannot be reasonably expected to cause significant ecological damage to receiving waters.

Petitioner Electric Energy, Incorporated, operates the Joppa Generation Station on the Ohio River. Once through cooling water, withdrawn from various depths of the river at an average rate of 880 cfs, is applied to the plant's average heat discharge of 4.1×10^9 BTU/hr and returned at the surface 100 yards downstream. The cooling water discharge averages less than 1% of the river's low flow level and creates a plume (based on a 5° isotherm) which is usually less than 31 acres in area and 5 feet in depth. On September 1, 1977, pursuant to Rule 410(c) of Chapter 3, Petitioner was granted a permit modification for the standards in Rules 201(a) and 203(i)(3) of Chapter 3 to allow plumes of greater than 26 acres (PCB 77-124).

The proceedings and "Demonstration" prepared in support of the Petition for Modification are incorporated in the record of this case. The Demonstration contains the information required in the present proceeding by Rules 602(a), (b) and (d) of Chapter 1. On March 10, 1978, the Board granted Petitioner's motion to waive the requirement in Rule 602(c)(3) that theoretical plume studies identify isotherms at 3°F intervals, and

accepted the plume studies included in Petitioner's Demonstration in PCB 77-124.

The Demonstration studied the effects of the thermal discharge on phytoplankton, zooplankton, macroinvertebrates and fish. The results of the study indicate minimal ecological disruption (Demonstration pp.83, 90, 94, 100) despite a discharge which exceeds ambient water temperature by more than 20°F. This minimal disruption is due mainly to rapid mixing and cooling (Demonstration p.5) which results in dissipation of the plume in 6-20 minutes (Demonstration p.22).

On the basis of this study, the Agency recommended that Petitioner be granted the modification sought in PCB 77-124. In lieu of additional recommendations in this proceeding, the Agency has reaffirmed the position taken when modification was sought, that no significant ecological harm is caused by Petitioner's thermal discharge.


The Board agrees with the Agency and finds that thermal discharges from Petitioner's plant have not caused and cannot be reasonably expected to cause significant ecological damage to receiving waters. Petitioner has, therefore, satisfied the requirements of Rule 203(i)(5) of Chapter 3 of the Board's Regulations.

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

ORDER

It is the Order of the Pollution Control Board that the Petitioner has complied with Rule 203(i)(5) of Chapter 3 of the Regulations by demonstrating that its thermal discharges from the Joppa Station have not caused and cannot be reasonably expected to cause significant ecological damage to receiving waters.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 22ND day of June, 1978 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board