

ILLINOIS POLLUTION CONTROL BOARD  
September 1, 1977

IN THE MATTER OF: )  
ALTERNATIVE THERMAL EFFLUENT ) PCB 77-124  
LIMITATIONS FOR ELECTRIC ENERGY, INC. )  
JOPPA GENERATING STATION )

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

This matter comes before the Board on a petition for a determination of alternative thermal effluent limitations pursuant to Rule 410(c) of Chapter 3: Water Pollution of the Board's Rules and Regulations.

On February 12, 1976 Petitioner submitted a demonstration to the U.S. Environmental Protection Agency (USEPA) in support of its request that the plant be allowed to continue operating with its once through cooling system. On February 22, 1977 the USEPA granted Petitioner's request. The same demonstration was submitted to the Board in support of this petition. A hearing was held on July 19, 1977 at the Massac County Courthouse in Metropolis, Illinois. At the hearing the Agency indicated that it supported the petition. No public comment on this matter appears in the record.

Petitioner is requesting relief from the requirement of Rule 201(a) of Chapter 3 which states that no single mixing zone shall exceed the area of a circle with a radius of 600 feet (approximately 26 acres). The demonstration showed that during periods of low flow and high plant operation levels a difference of 5 degrees Fahrenheit over the Ohio River's background temperature was measured in an area that covered 31.1 acres (Demonstration, p. 174). At the hearing Mr. Jacob testified that the thermal plume from this plant had caused a 5 degree rise in temperature in an area of 34.1 acres during the third quarter of 1976.

These violations must be weighed against the other facts brought out in the record. The discharge from this plant ranges from 0.13% to 1.7% of the total flow of the Ohio River with an average of 0.56% (Demonstration p. 78). The phytoplankton and zooplankton in the river experienced some redistribution as a result of power plant operations, but there were no significant effects on their population (Demonstration p. 83, 90). Macro-invertebrates and fish also showed no harmful effects (Demonstration 94, 100). The plume from the Joppa Station covers from 0.37% to 10.7% of the surface of the river and is restricted to the top 3 to 5 feet (Demonstration p. 355).

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The Board finds that the Petitioner has shown that its discharge complies with the thermal standards of Chapter 3 during most of the year and that its failure to comply has not had any significantly harmful effect on the Ohio River. The limitation on mixing zones imposed by Rule 201(a) of Chapter 3 is not necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the Ohio River.

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 may continue to operate its Joppa Generating Station with a once-through cooling system as long as thermal discharges from this facility do not exceed those levels associated with the maximum power production capacity capability existing on February 22, 1977.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 13<sup>th</sup> day of September, 1977 by a vote of 5-0.

  
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Christan L. Moffett, Clerk  
Illinois Pollution Control Board

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