

ILLINOIS POLLUTION CONTROL BOARD  
October 19, 1978

ILLINOIS POWER COMPANY, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 78-8  
 )  
 ENVIRONMENTAL PROTECTION AGENCY, )  
 )  
 Respondent. )

MR. SHELDON A. ZABEL, SCHIFF, HARDIN & WAITE, APPEARED ON  
BEHALF OF PETITIONER:  
RUSSELL R. EGGERT, ASSISTANT ATTORNEY GENERAL, APPEARED ON  
BEHALF OF THE AGENCY.

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

Petitioner has requested a determination, pursuant to Rule 203(i)(5) of Chapter 3: Water Pollution, that the thermal discharge from its Hennepin Station has not caused and cannot reasonably be expected to cause significant ecological damage to the Illinois River. A hearing was held on August 16, 1978 at the Board's Chicago office.

Part VI of the Board's Procedural Rules sets out the requirements for this proceeding. Exhibit 1 contains the information required by Rule 602. The Agency waived its right to file a Recommendation.

The Hennepin Station is a coal-fired electric generating facility located on the Illinois River at River Mile 211.9 near Hennepin, Illinois. The plant consists of two units with capacities of 77 and 243 megawatts (MW) respectively. A once through cooling system is employed using double pass condensers. In the period 1972-1976, capacity ranged from 50.1-55.4%. This range is expected to continue with no estimated retirement date for either unit. Shutdowns are usually under 59 hours in duration with the longest on record being 19 days in 1973.

Under typical operating conditions, the flow of cooling water is 276 cfs with a maximum capacity of 356.5 cfs. The temperature rise of the cooling water at maximum capacity is 18.4°F. Temperature of the discharge ranges from 58.0°F to 100°F.

The thermal plume from the Hennepin Station was determined to be shoreline attached by a process of elimination and field observations. Downstream temperature distribution in the plume

was determined by modelling. Worst case conditions were projected by associating low flow with maximum generating capacity and actual ambient river temperature. The days with the lowest recorded river flow (early autumn) did not coincide with highest river temperature (late summer). Even under worst case conditions, the 5°F isotherm is within the standard for mixing zones in Rule 201 of Chapter 3: Water Pollution.

Minimal changes in aquatic biota have been observed in the immediate vicinity of the discharge for typical and worst case conditions and may be expected to continue to occur. These changes are not necessarily due to the thermal discharge alone. In any event no significant ecological damage to the Illinois River has been observed, and none is expected. No impact on animal life or recreation was observed or anticipated.

This opinion constitutes the Board's finding of fact and conclusions of law in this matter.

ORDER

Petitioner has demonstrated that the thermal discharge from its Hennepin Station has not caused and cannot be reasonably expected to cause significant ecological damage to the Illinois River.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Order was adopted on the 19<sup>th</sup> day of October, 1978 by a vote of -0.

  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board