

ILLINOIS POLLUTION CONTROL BOARD  
August 3, 1978

IN THE MATTER OF: )  
)  
PROPOSED DETERMINATION OF ) PCB 77-82  
THERMAL STANDARDS FOR ZION AND )  
WAUKEGAN GENERATING STATIONS )

MESSRS. A. DANIEL FELDMAN & GLEN E. NELSON, OF ISHAM, LINCOLN & BEALE, APPEARED ON BEHALF OF PETITIONER;  
MS. BARBARA SIDLER, SENIOR TECHNICAL ADVISOR, APPEARED ON BEHALF OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY;  
MR. MICHAEL BERMAN APPEARED ON BEHALF OF CITIZENS FOR A BETTER ENVIRONMENT.

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

This case is before the Board pursuant to Rule 410(c) of the Board's Water Pollution Regulations. In its petition of January 12, 1977 and amended petition of February 1, 1977, Commonwealth Edison Company requests that the Board allow the following standard to apply to Edison's Zion and Waukegan Generating Stations:

present capability of the Station in terms of maximum heat rejection and water usage.

The present capability for each plant, in terms of heat rejection and water usage, respectively, is:  $17.33 \times 10^9$  BTU/hr., and  $2.236 \times 10^6$  gpm for the Zion Station; and approximately  $5.301 \times 10^9$  BTU/hr. and  $0.758 \times 10^6$  gpm for the Waukegan station.

The requested determination would relieve both stations from Rule 206(e)(1)(A)(iii) of Chapter 3: Water Pollution Regulations. This rule imposes a limitation on thermal discharges to Lake Michigan of 3°F above natural temperatures beyond the mixing zone. Edison also requested the alternative standard from the USEPA. Pursuant to Section 316(a) of the Federal Water Pollution Control Act (FWPCA), Edison submitted the required demonstration to Region V and to the Board. The Board was notified of Region V's decision to grant the alternative standard on June 30, 1977.

A hearing was held on May 23, 1977 at the Illinois Institute for Environmental Quality. Citizens for A Better Environment (CBE) requested and was granted Leave to Intervene. Neither CBE nor

Illinois Environmental Protection Agency (Agency) presented any evidence or called any witnesses. Members of the public were present, and one, Mr. Clark B. Rose, made a statement and examined witnesses.

Edison's experts were in agreement that virtually no damage was being done to the Lake Michigan environment as a result of heated discharges from the two Edison stations. Evidence from the experts' studies showed no disruption of the zooplankton community (R.17). There was some evidence that chlorination from the Waukegan Station may have a more significant effect on phytoplankton and periphyton than changes in water temperature. However, it was noted that most of the chlorine in the area comes from sewage treatment, and there is only minimal evidence of any chlorine impact (R.81, 83).

Similarly, while some changes in the relative abundance of various kinds of fish have been noted, these changes are more attributable to competition among the species than to thermal changes in the environment (Testimony of Dr. Gerking, P.6). No fish kills were observed as a result of the thermal effluent. At Zion, the thermal mortality rate was approximately 1%; so low that it does not pose a serious threat to the population (R.88). However, fish and their eggs or larvae have been killed when they become entrained in the intake water and are swept into the intake structure. The fish become impinged on cleaning screens and are eventually killed. It was suggested that a design change might remedy the situation (R.108-109).

The Agency recommends granting the alternative standard, but CBE objects to the absence of opinions of recognized independent experts on Lake Michigan. The Board finds that the evidence submitted indicates that the environmental damage to the Lake is minimal, and we note that Edison has promised to continue studying possible damaging effects on the Lake in the future (R.20). For these reasons, the Board grants Edison's request for the alternative standard.

In his statement, Mr. Rose voiced two objections concerning the location and notice of hearing. For the convenience of all interested parties, the hearing was held in Chicago (R.32). The tentative hearing date of April 22, 1977 was set on March 30, 1977 and published in the Environmental Register of April 11, 1977. The final hearing date of May 23, 1977 was set on May 3, 1977 but came too late for publication in the next issue of the Register. However, notice of this date was published in the Chicago Tribune

at some date prior to the hearing (R.36). Mr. Rose's main concern was based on the need for public participation at Board hearings. The Board has always been acutely aware of this need and has encouraged openness and public participation. The record was held open until June 25, 1977, and notice of this was published in both the Environmental Register and a Waukegan newspaper with county-wide circulation in Lake County (R.145). No other public comment was received.

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:

- 1) Pursuant to Rule 410(c) of Chapter 3, Petitioner's present capabilities in terms of heat rejection and water usage shall apply to thermal discharges in lieu of those standards set forth in Rule 206(e) (1)(A)(iii).
- 2) The Agency shall modify Petitioner's NPDES permit to reflect this change in standard, if the permit does not already reflect such change.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 3<sup>rd</sup> day of August, 1978 by a vote of 5-0.

Christan L. Moffett / CLM  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board