

ILLINOIS POLLUTION CONTROL BOARD  
June 10, 1981

COMMONWEALTH EDISON COMPANY, )  
 )  
Petitioner, )  
 )  
v. ) PCB 81-34  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

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

On March 2, 1981 Commonwealth Edison Company (Edison) filed a petition for a variance requesting an extension, for a period of three years, of its existing variance from the provisions of Rules 203(i)(5) and 203(i)(4) of Chapter 3, the Board's Water Pollution Rules and Regulations, applicable to its Joliet Generating Station (Joliet Station). That variance was granted on May 25, 1978 (PCB 78-79).

Thermal discharge points from the Joliet Station are located approximately seven miles upstream from a portion of the lower Des Plaines River commonly known as the Five Mile Stretch. Edison's variance, which granted relief from thermal demonstration requirements and thermal discharge requirements as to the river, a water of the State and covered by the "Other Waters" category in Rule 203(i)(4), was, however, conditioned upon compliance with thermal discharge standards for the Five Mile Stretch portion of the river. This area of the river has been and continues to be heavily polluted due to the influence of the Chicago Sanitary and Ship Canal. It had been expected that the water quality in the Five Mile Stretch would have been greatly improved by Metropolitan Sanitary District's installation of instream aeration devices and by its completion of the tunnel and reservoir system. Neither of these programs have been completed; the water quality in the Five Mile Stretch continues to be suboptimal. Edison has alleged that because of these facts temperature is not the limiting factor regarding the water quality of the river at this time.

Edison's discharges are required to comply with the "Other Waters" thermal standards, which in turn necessitates the installation of either natural or mechanical draft cooling towers or the derating of Joliet Station. Edison estimates the direct economic cost to its customers caused by derating to be approximately \$3.6

million per year (1978 dollars), whereas the estimated cost of cooling towers is approximately \$21.0 million (1975 dollars). In addition, the cooling towers would result in the environmental and other problems commonly associated with such equipment.

The Agency recommends denial of the variance on substantive and procedural grounds. The Agency questions both the need and the form of relief from Rule 203(i)(4), citing the lack of excursions over the last year above the thermal limitations, the recent decrease in average flow from the station, and the lack of a compliance plan in the petition. Edison responds that its petition is based upon thermal conditions in the river which have existed over a number of years and that the lack of excursions does not necessarily indicate that similar conditions will exist in the future. In addition, Edison points out that the Joliet Station's heat rejection is controlled by operating level and not by either the temperature or the rate of flow of the discharge. With regard to the lack of a compliance plan, Edison responds that it is unlikely that the water quality in the river would improve sufficiently over the next three years so as to result in temperature being the factor limiting restoration of its water quality; Edison states that any compliance plan should await measurable improvement in the water quality status of the river. Edison further notes that a review by the State of Illinois' water quality standards is underway pursuant to Sections 208 and 203 of the Clean Water Act and suggests that rulemaking proceedings pursuant to these proceedings would be the most appropriate forum to address a long term solution of the problems. Edison will participate in any such proceedings.

The Agency contends that there is no justification for extension of the variance as to its requirement of performing a thermal demonstration pursuant to Rule 203(i)(5) and notes that no compliance plan for making such a demonstration is included in the petition. Edison responds that, given that the Joliet Station's thermal contribution is not the factor limiting restoration, no purpose would be served by undertaking the demonstration. In addition, Edison claims that it has already submitted to the Board all of the data required for such a showing, with the exception of plume studies, in the numerous past proceedings pursuant to Rule 203(i)(5) involving the Joliet Station and the Five Mile Stretch.

Although the Agency's technical objections appear to be reasonable at first blush, the Board is faced with an unusual factual situation in this case. The Board has anticipated a dramatic improvement in the lower Des Plaines River for a long period of time and has determined variances and other conditions based upon that expectation. It is clear that the expected improvements have not occurred and that they are not likely to occur in the near future. The Board finds that it would be an arbitrary and unreasonable hardship on Edison to force it to improve the thermal conditions of a stretch of stream so polluted with other contaminants that the results of any temperature-related controls

would not have a discernible effect on water quality. The Board also finds that under these conditions it is arbitrary and unreasonable to insist that Edison engage in a thermal demonstration pursuant to Rule 203(i)(5); the results would not be completely reliable since the major pollution problems in the lower Des Plaines River are other than thermal ones. Although Edison has been in compliance recently with Rule 203(i)(4), the Board acknowledges the fact that, based upon the past variance compliance history, there may be thermal excursions in the future. For these reasons the Board will as well grant variance from Rule 203(i)(4)'s standards for Other Waters. Variance will be for three years and under specified conditions.

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

ORDER

It is the Order of the Pollution Control Board that Commonwealth Edison Company be granted variance until July 1, 1984 for its Joliet Generating Station from the requirement in Rule 203(i)(5) of Chapter 3: Water Pollution Rules and Regulations, which requires a thermal demonstration of the environmental effect of the discharge from Joliet Generating Station, and from the thermal requirements in the "Other Waters" category in Rule 203(i)(4) of Chapter 3: Water Pollution Rules and Regulations, subject to the following conditions:

1. During the term of this variance Commonwealth Edison Company shall comply with the thermal standards for the "Other Waters" category in Rule 203(i)(4) pertaining to that lower portion of the Des Plaines River commonly known as the "Five Mile Stretch".
2. Commonwealth Edison Company shall participate in, and contribute material and relevant evidence regarding thermal discharges of Joliet Generating Station to such Five Mile Stretch to, any Board rulemaking hearing, and shall submit written comment if no hearings are to be held therein, during the term of this variance.
3. Commonwealth Edison Company shall submit annual thermal monitoring reports to the Illinois Environmental Protection Agency.
4. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Water Pollution Control Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of acceptance and

agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period during which this matter is appealed. The form of the certificate shall be as follows:

CERTIFICATE

I, (We), \_\_\_\_\_, having read the Order of the Illinois Pollution Control Board in PCB 81-34 dated \_\_\_\_\_, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
By: Authorized Agent

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 10<sup>th</sup> day of June, 1981 by a vote of 4-0.

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