

ILLINOIS POLLUTION CONTROL BOARD
October 13, 1977

ILLINOIS POWER COMPANY,)
)
) Petitioner,)
)
) v.) PCB 76-74
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
) Respondent.)

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This variance petition was originally filed with the Board March 16, 1976. The Illinois Power Company asks for variance from Rule 203(f) of the Chapter 3: Water Pollution Regulations as it applies to boron. The facility for which the variance is sought is Petitioner's fossil-fueled electric power generating station, Wood River, East Alton, Madison County, Illinois. Variances for this same facility were the subjects of proceedings in PCB 74-9, PCB 74-423 and PCB 75-221. In the first two cases Petitioner was granted research variances; in the latter case Petitioner was granted a variance until March 15, 1976 subject to several conditions. On June 3, 1976 the Board denied without a hearing this variance request because of a lack of a corporate approved compliance plan. The Board incorporates that Opinion by reference for purposes of background information. On appeal this case was remanded for hearing.

Petitioner is now pursuing what has been labeled alternative B. Petitioner has pursued a regulatory change, R76-18, now pending before the Board. This change, if approved, will allow an exception to the boron water quality standard for the drainage of Illinois Power's lagoon discharge until it reaches the confluence of Wood River Creek and the Mississippi River. This would allow Petitioner to build its new lagoon and continue to use the effluent route to the Mississippi River as it now exists. The record of R76-18 has been incorporated into this proceeding by Board Order on September 15, 1977 in lieu of holding duplicative hearings. Petitioner now asks the Board to grant a variance from March 15, 1976 to either (a) the date of favorable Board action in R76-18, or (b) a date not less than one year after the date of Board action denying the request in R76-18.

Petitioner has been pursuing an answer to its boron problems since early 1974 as witnessed in the earlier Board grant of research variances in PCB 74-9 and PCB 74-423. Petitioner's research failed to produce an economical treatment plan (R. 38-44) and has left Petitioner with only the alternative of routing the effluent to the Mississippi River where the applicable standards would be met. The cost of construction of Petitioner's new ash lagoon using alternative B, i.e. gravity flow to Wood River Creek and thence to the Mississippi River, is \$485,971.

To determine the environmental effects of Illinois Power's boron effluent Petitioner hired Drs. Donald R. Tindall and Walter E. Schmid, both professors in the Department of Botany at Southern Illinois University at Carbondale, Illinois, to undertake an environmental survey. Their testimony states that "boron is generally accepted as an essential element for plants. On the other hand, it has also been used as a non-selective herbicide, but only in concentrations up to several orders of magnitude greater than IPC's theoretical maximum concentration" (R. 58). They concluded that "the boron concentration present in IPC's discharge has not had any discernible effect on the observed terrestrial and aquatic community, which is typical in constituents, maturity and quantity and in all other respects to those found in this region" (R. 63, 64).

James A. Smithson, a staff aquatic biologist for Illinois Power also testified. Mr. Smithson found in a literature search that there are no toxic effects of boron on fish even at twenty times Illinois Power's theoretical maximum boron level (R. 143). Smithson also did a biological survey of Wood River Creek upstream and downstream of the unnamed tributary. The unnamed tributary (the Illinois Power ditch) had a greater diversity and number of aquatic organisms than did Wood River Creek (R. 148-149).

The Board finds that Petitioner has shown that it would suffer arbitrary and unreasonable hardship if denied this variance. The control of boron at this site is economically not feasible (R. 38-40) and to date no environmental damage has been proven. The Board will grant this variance subject to an interim standard. In R76-18 there are currently two numbers proposed for a boron water quality standard for this unnamed tributary and the designated section of Wood River Creek. Petitioner proposes a standard of 25 mg/l. The Agency proposes 5 mg/l. During calendar year 1976 Petitioner took 53 24-hour composite samples (R. 29). Within this time period

the average boron measure was 4.3 mg/l (R. 30). Four of the 53 samples measured over 10 mg/l (R. 31, 32). The area affected by this petition is small and is not used agriculturally. The Board will adopt 10 mg/l of boron as an interim standard.

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 Illinois Power is granted a variance for its fossil-fueled electric power generating station, Wood River, East Alton, Madison County, Illinois from Rule 203(f) of the Chapter 3: Water Pollution Regulations as it applies to boron from March 15, 1976 until either the date of the Board's adoption of a change in R76-18 or one year from the date of the Board's action denying any change in Rule 203 as proposed in R76-18. During the interim the facility shall not exceed the interim water quality standard of 10 mg/l boron.

Petitioner shall, within thirty (30) days of the date of this Order, execute and forward to the Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance in the format shown as follows:

CERTIFICATE OF ACCEPTANCE

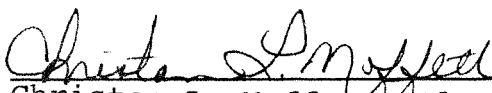
I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 76-74, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

SIGNED _____

TITLE _____

DATE _____

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



Christan L. Moffett, Clerk
Illinois Pollution Control Board