

ILLINOIS POLLUTION CONTROL BOARD  
July 13, 1989

COMMONWEALTH EDISON )  
QUAD CITIES POWER STATION, )  
 )  
Petitioner, )  
 )  
v. ) PCB 89-115  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

OPINION AND ORDER OF THE BOARD (by J. Marlin):

This matter comes before the Board upon a recommendation filed by the Illinois Environmental Protection Agency ("Agency") on July 12, 1989 recommending the Board grant a 45-day provisional variance to Commonwealth Edison's Quad Cities Power Station. Commonwealth Edison requests a variance from their thermal discharge limitations under 35 Ill. Adm. Code 302.211 and Part 303.

Commonwealth Edison owns and operates Quad Cities nuclear-fueled electrical generating facility located near Cordova, Illinois on the Mississippi River. This station consists of 2 boiling water nuclear fission reactors each providing steam to a turbine generator. Two boiling water reactors provide a maximum capacity of 1666 megawatts. Circulating water used to cool and condense the steam from the generating process is discharged to the Mississippi River.

According to the Agency, Commonwealth Edison's NPDES permit states that, "Water temperature at representative locations in the main river shall not exceed the maximum limits identified in the following table during more than one (1) percent of the hours (87.6 hrs.) in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 3°F" (special condition #6, B, NPDES permit #IL0002224):

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
°F	45	45	57	68	78	85	86	86	85	75	65	52

Commonwealth Edison has stated that the extremely hot weather and moderate drought conditions have caused low river

flows, elevated ambient river temperatures, and decreased heat dissipation which have in various combinations imposed severe operating restrictions on several of Edison's generating stations. While at the same time, record electrical demands have occurred. This has resulted in Commonwealth Edison's electrical reserve levels to become dangerously low.

Commonwealth Edison has stated that the Quad Cities Station has used up all their available hours for the station as of July 10, 1989. The Agency agrees with Commonwealth Edison that denial of this provisional variance would impose an arbitrary or unreasonable hardship upon Commonwealth Edison.

Commonwealth Edison has requested an additional 100 hours to be used during this provisional variance period. Commonwealth Edison's current permit limits will allow them to recover 71.6 hrs. as of August 1, 1989. Commonwealth Edison has stated "we would like to point out that this request essentially grants only 28.4 hours of exceedance than we would normally experience under existing standards; however, it allows the redistribution of some of these hours into July, if necessary. In addition, the hours of standard temperature exceedance experienced during this provisional variance period shall not be credited toward the 87.6 hours exceedance limitation imposed by the NPDES permit" (Variance Request at 2). Commonwealth Edison has also stated that the request for additional hours will not affect their intention to observe the 3°F allowable temperature excursion.

Commonwealth Edison has stated that "typically, ambient water temperatures in Pool 14 do not exceed 80°F during the summer months. However, the unusually hot and dry weather we have experienced this summer have caused ambient water temperatures to raise above 80°F throughout much of the summer. Ambient water temperatures exceeding 84.2°F have occurred regularly for short periods throughout July. The rise in temperature has occurred gradually over several months time and the fish community has had sufficient time to respond to increased temperatures." The Agency obtained temperature data from Commonwealth Edison by phone on July 11, 1989 indicating the river temperature as of July 10, 1989 to be 85.7°F. Commonwealth Edison further stated that "fishery surveys conducted in July and August, 1988, have not detected any substantive change in community composition downstream from the Quad Cities Station discharge. Cool water species have responded to avoidance threshold temperatures and have moved to portions of the river more suited to their normal thermal preferences." The Agency therefore concurs with the Petitioner that the anticipated environmental impact of this variance will be minimal. The Agency also states that there are no public water supplies which would be adversely affected nor any federal laws which would preclude the granting of this variance.

The Board having received notification from the Agency that compliance on a short term basis with the thermal discharge limitations imposed by 35 Ill. Adm. Code 302.211 and Part 303 would impose an arbitrary or unreasonable hardship upon Commonwealth Edison, and the Board concurring in that notification will grant Commonwealth Edison's provisional variance, subject to the conditions suggested by the Agency.

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

ORDER

1. Commonwealth Edison is hereby granted variance from 35 Ill. Adm. Code 302.211 and Part 303 for its Quad Cities Power Station, subject to the following conditions:
  - a. This variance shall begin when Quad Cities Station uses up their NPDES permit allocation of 87.6 hours (July 10, 1989) for discharge of effluent hotter than the temperatures allowed in special condition #6, B of their NPDES permit and continue for 45 days or when Quad Cities Station uses up the additional 100 hours received from granting this variance, whichever occurs first. The hours used during this provisional variance period shall also be excluded from the 87.6 hours limitation imposed by their NPDES permit.
  - b. During the variance, at no time shall the water temperature discharged exceed the maximum limits in special condition #6, B of their NPDES permit by more than 3°F.
  - c. During this variance, Commonwealth Edison shall maintain a continuous temperature and flow recorder for the cooling blowdown to the Mississippi River. Such records shall be submitted with Commonwealth Edison's Discharge Monitoring Reports. The records submitted should indicate the daily temperature discharge to the Mississippi River.
  - d. Commonwealth Edison shall mitigate possible adverse affects to the river's fishery and conduct daily observations of fish condition.
  - e. Within 10 days of the date of this Order, Commonwealth Edison shall execute and submit a Certificate of Acceptance and Agreement shall be sent to Mark T. Books at the address indicated below:

Illinois Environmental Protection Agency  
2200 Churchill Road

P. O. Box 19276  
Springfield, IL 62794-9276

Attention: Mark T. Books

This variance shall be void if Commonwealth Edison fails to execute and forward the certificate within ten day period. The ten day period shall be held in abeyance during any period that this matter is being appealed. The form of said Certification shall be as follows:

CERTIFICATION

I, (We), \_\_\_\_\_, having read the Order of the Illinois Pollution Control Board, in PCB 89-115, dated July 13, 1989, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
Petitioner

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

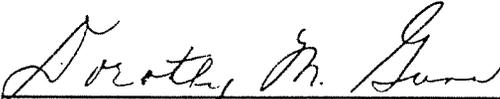
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Title

\_\_\_\_\_  
Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987 ch. 111 1/2 par. 1041, provides for appeal of Final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 13<sup>th</sup> day of July, 1989, by a vote of 7-0.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board