

ILLINOIS POLLUTION CONTROL BOARD  
June 14, 1984

ILLINOIS POWER COMPANY, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 84-75  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This provisional variance request comes before the Board upon a June 14, 1984 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that the Board grant Illinois Power Company (IPC) a 45-day provisional variance, beginning on June 18, 1984 and lasting until August 2, 1984, from the effluent limitations, monitoring requirements, and special conditions in its currently expired NPDES Permit No. IL0036919\* and from 35 Ill. Adm. Code 304.124(a) and 35 Ill. Adm. Code 304.141(a). (Rec. 4). The requested provisional variance would enable the Clinton Power Station to: (1) bypass the existing station flushwater treatment facilities so that preoperational flushwaters from the outside ring header of the station fire protection and safe shutdown service water systems can be discharged directly to Clinton Lake and (2) to allow it to exceed the total suspended solids (TSS) and total iron effluent standards for these discharges. (Rec. 1).

IPC is in the process of constructing a nuclear-powered electrical generating facility at its Clinton Power Station in DeWitt County, Illinois which will include a boiling-water reactor and steam turbine generator, varied electrical transmission facilities, normal operating and emergency shutdown heat dissipation systems, primary water consumption systems, a station fire

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\*The Petitioner's NPDES Permit No. IL0036919 expired on July 31, 1980. Although IPC submitted an application for its renewal on January 29, 1980, the NPDES Permit has not yet been reissued. On April 11, 1984, the Agency issued a pre-public-notice draft reissued NPDES Permit for the Clinton Power Station. The Petitioner has requested that an additional special condition be incorporated in the final NPDES Permit which would authorize direct discharge to Clinton Lake such as requested in this provisional variance. (Pet. 1 & 2).

protection system, and a safe shutdown service water system. Construction of this station, which has been designed to generate 933 net megawatts of electricity, was begun in October of 1975 and is expected to be completed around October of 1986. The initial fuel loading has been scheduled for January of 1986 and the initial commercial operation is anticipated to begin in November of 1986. (Pet. 3-4; see: Figure 1).

The fire protection system (which supplies fire suppression water throughout the station) and the safe shutdown service water system (which supplies water to cool safety-related equipment such as diesel-generator coolers, residual heat removal heat exchangers, and other equipment necessary for a safe shutdown of the reactor) are designed to be operated and available as precautionary operational systems to prevent the potential loss of life, personal injury, and property damage associated with accident or emergency situations. (Pet. 4; see: Figures 1, 2, & 3).

IPC has preliminarily scheduled the flushing of the ring header portion of the station's fire protection system for June 18-19, 1984 and anticipates that about 2.8 million gallons of water will be discharged during this time period. This flushing operation will flush the service water pumphouse piping, the 10-inch supply line; and the 14-inch loop line with water being discharged from all 29 of the hydrants on the loop header. (Pet. 8; Rec. 2).

Similarly, the flushing of the division no. 3 subsystem of the safe shutdown service water system is tentatively scheduled for July 1-4, 1984 and is expected to discharge about 2 million gallons of water during this short time period. Flushing operations will involve the flushing piping associated with the ECCS heat exchangers 1A, 1B, and 1C as well as with the switch heat removal condensing piping and diesel-generator 1C. (Pet. 8; Rec. 2).

There appears to be no reasonable alternative to the method suggested by IPC, since the flushing water which will be discharged is all very far removed from the flushwater treatment system. To be able to convey this flushwater to the treatment system, IPC would need to either lay "thousands of feet of hose" which would improperly block station roadways, or make costly modifications to the piping systems which are presently ready for startup. If large quantities of hose were laid, safety hazards from ruptured or broken hoses might be prevalent. Similarly, if costly modifications to existing piping systems were made, these changes might be contrary to the design and installation specifications of the Nuclear Regulatory Commission. (Rec. 2).

The flushwater treatment system, which has a batch treatment capacity of 2 million gallons and normally receives flows of about 350,000 gallons per week, consists of a storage chamber and

a treatment pond followed by a filter. (Rec. 2-3). Twelve days are usually needed to treat and discharge each batch. IPC has stated that, if the treatment system was expanded to accommodate the additional flushwaters resulting from a temporary flushing, it would result in the unnecessary expenditure of funds (since the resultant additional capacity would be needed infrequently) and would necessitate costly delays in the construction of the generating station without any concomitant benefits. (Rec. 3).

The Petitioner has indicated that both of the pre-operational flushes are necessary and are critical path milestones on the startup schedule for the Clinton Power Station. IPC has asserted that each day of delay in the completion of a "critical path item" is considered equivalent to a day of delay in fuel loading and is estimated to cost about \$1,000,000. (Rec. 3). Because IPC personnel estimate that it would take 30 days to construct special facilities to convey and provide the requisite treatment for the pre-operational flushwaters, the expense involved in such an alternative include construction costs plus the substantial equivalent of \$30,000,000 due to the completion delay. (Rec. 3).

Data obtained from previous flushes indicates that TSS and total iron concentrations have been well within allowable limits when flows have been greater than 1 million gallons. (Pet. 10; see: Table 1; Rec. 3). Moreover, because precleaned pipes will be used in the systems to be flushed, minimal suspended solids and iron levels are expected to be present in the flushwater. (Rec. 3).

Although the actual flushing of the two systems is anticipated to occur on only six days, IPC has requested a longer time period to allow for adjustment, if necessary, of the planned schedule for the pipe flushing activities. (Rec. 4). While the presently expired NPDES Permit does not include a provision to authorize the discharge of the ring header and safe shutdown service water system, future flushing activities of a similar nature are expected to be authorized in the proposed NPDES Permit which is presently under public notice. (Rec. 3-4). IPC has requested this provisional variance in order to maintain its construction schedule and control its costs while discharging the necessary flushwaters.

The Agency believes that the denial of the provisional variance would impose an arbitrary or unreasonable hardship on the Petitioner. Thus, the Agency recommends that the Board grant Illinois Power Company a 45-day provisional variance from Sections 304.124(a) and 304.141(a) to begin on June 18, 1984, subject to certain conditions.

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, the Board hereby grants the provisional variance as recommended.

However, in so granting this provisional variance, the Board

wishes to alert the parties to portions of the Petition and attachment that appear to suggest that future flushing activities may violate Board effluent standards and that these activities are to be authorized in a proposed NPDES permit renewal (see Pet. unnumbered p. 3, lines 2-5; p. 4, lines 4-6; Attach. p. 3, para. 3 and 4). It is, of course, unacceptable to include, without a Board variance, a permit condition that allows Board effluent standards to be exceeded. Also, regarding the "infrequently" needed additional capacity (Pet. p. 3, lines 2-5), the Board wishes to alert the parties to the limits on the frequency with which provisional variances may be granted in Sec. 34(c) of the Act.

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

#### ORDER

Illinois Power Company is hereby granted a 45-day provisional variance, beginning on June 18, 1984 and lasting until August 2, 1984, from the effluent limitations, monitoring requirements, and special conditions in its NPDES Permit No. IL0036919 and from 35 Ill. Adm. Code 304.124(a) and 35 Ill. Adm. Code 304.141(a) to enable the Clinton Power Station to (1) bypass the existing station flushwater treatment facilities so that pre-operational flushwaters from the outside ring header of the station fire protection and safe shutdown service water systems can be discharged directly to Clinton Lake and (2) to allow it to exceed the total suspended solids and total iron effluent standards for these discharges, subject to the following conditions:

1. The Petitioner shall notify Roger Cruse of the Agency's Compliance Assurance Section by telephone at 217/782-9720 when each flushing event begins and ends.
2. The Petitioner shall monitor these discharges by taking a 24-hour composite sample each day that discharge occurs. These samples shall be analyzed for pH, total suspended solids and total iron.
3. The Petitioner shall monitor the lake water used for these flushes prior to its use by 24 hour composite samples. The waters of Clinton Lake shall be analyzed for total suspended solids, total iron and pH.
4. The results of the above referenced analyses, along with flow data and dates and times of each discharge, shall be sent to Roger Cruse within 10 days after the last day of each flushing event. The appropriate documents shall be sent to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Compliance Assurance Section  
2200 Churchill Road  
Springfield, Illinois 62706

5. The Petitioner shall perform the flushes so as to minimize any impact upon Clinton Lake.

6. Within 10 days of the date of the Board's Order, Illinois Power Company shall execute a Certificate of Acceptance and Agreement which shall be sent to: Illinois Environmental Protection Agency, Division of Water Pollution Control, Compliance Assurance Section, 2200 Churchill Road, Springfield, Illinois 62706. This certification shall have the following form:

CERTIFICATION

I, (We), \_\_\_\_\_ having read the Order of the Illinois Pollution Control Board in PCB 84-75 dated June 14, 1984, 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, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 14<sup>th</sup> day of June, 1984 by a vote of 6-0.

Dorothy M. Gunn  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board