

ILLINOIS POLLUTION CONTROL BOARD
October 9, 1986

COMMONWEALTH EDISON COMPANY,)
BYRON GENERATING STATION,)
)
Petitioner,)
)
v.) PCB 86-168
)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

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

This provisional variance request comes before the Board upon an October 8, 1986 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that a 45-day provisional variance be granted to the Commonwealth Edison Company (CWE) from 35 Ill. Adm. Code 304.120(a) as it pertains to the biochemical oxygen demand (BOD) and total suspended solids (TSS) effluent requirements of the Petitioner's NPDES Permit for Outfall 001(b) (Sewage Treatment Plant Discharge) during the time period in which portions of the sewage treatment plant are bypassed for essential maintenance and repairs.

The Petitioner's Byron Generating Station is a nuclear-fueled steam electric generating plant located in Byron, Ogle County, Illinois. At this nuclear power plant, a maximum capacity of 2350 megawatts of electric power will be provided by two pressurized water reactors. There is one 1175 megawatt electric unit presently in operation, while the other electric unit is still under construction. (Pet. 1-2). Commonwealth Edison Company owns and operates both sanitary and industrial wastewater treatment facilities in conjunction with its Byron Generating Station. The Petitioner's sanitary wastewater treatment facilities, which are the subject of the instant provisional variance request, consist of flow equalization equipment, grit removal, flow measurement, final clarifiers, aeration tanks, sand filters, disinfection, sludge drying beds, and aerobic digestion. (Rec. 1). These facilities have a design average flow of 0.046 million gallons per day (MGD) and treated effluent from the sewage treatment plant discharges into the Rock River via the generating station's cooling tower blowdown lines after being combined with effluent from the industrial wastewater treatment facilities. CWE presently discharges wastewaters pursuant to its NPDES Permit No. IL 0048313 which was just reissued on April 28, 1986. (Pet. 1).

The reason that corrective maintenance work is vitally important is that "cracks in welds between the various chambers of the old activated sludge plant have been observed" while "cracks in the bottom are suspected". (Pet. 2). Moreover, the coatings on the chamber walls are corroding, thereby jeopardizing their integrity. During the requested provisional variance period, CWE intends to repair the welds, sand blast the walls, and recoat the chamber walls. The units not undergoing maintenance will remain in service to provide some treatment of the domestic wastewater. (Pet. 1-2; Rec. 2). The Petitioner emphasizes the necessity for essential maintenance by contending that, if the weld (and other) repairs are not performed soon, "the plant could be idled for a much longer reconstruction period". (Pet. 2).

As alternatives to partially bypassing its sewage treatment plant, the company has considered two primary alternatives: (1) to shut down electric plant operations and thereby eliminate all waste inputs, and (2) to shut the sewage treatment plant down and use portable tanks for the storage of sewage generated during the shutdown. (Pet. 2; Rec. 2). However, the Petitioner believes that a shutdown of its electric plant operations is not feasible since it would necessitate the complete shutdown of its 1175 megawatt electric unit which is currently generating power on a 24-hour a day, 7-day a week basis, thereby costing CWE (and ultimately its customers via increased electric rate charges) up to \$1,000,000 per day in fuel charges and electric power replacement costs. (Pet. 2). Moreover, its sewage treatment plant receives wastes even when the electric plant is not operating, so that a complete elimination of waste inputs "could only be accomplished by virtually deserting the site and this is clearly impossible." (Pet. 2).

Similarly, the shutdown of its sewage treatment plant and use of portable tanks for the storage of sewage generated during the shutdown is not practical "because of the amount of storage that would be required and the difficulty that would arise later in trying to treat the stored waste along with the normal treatment load". (Pet. 2). In its Recommendation, the Agency has stated that it agrees with the Petitioner's "assessment of the alternatives and the remedial method selected". (Rec. 2).

To minimize any adverse environmental impact while repairs to its sewage treatment plant are being performed, the Petitioner plans to reduce the level of pollutants in its discharge by: (1) performing the essential maintenance and repair work in stages, so that units (such as the digester) not normally used for treatment will be reconfigured to provide some treatment at all times, and (2) providing temporary tanks for chlorination "to assure uninterrupted disinfection" during the time period that repairs are being completed. (Pet. 2).

The Petitioner has stated that it believes that "the environmental impact to the Rock River will be negligible due to the relatively small wastewater volumes involved (daily average flow of the STP is approximately 20,000 gallons per day) and because the discharge is co-mingled with cooling tower blowdown water flowing at approximately 10,000 gallons per second prior to its entry to the Rock River". (Pet. 2). In fact, CWE expects that discharges from its sewage treatment plant will, during most of the time, still be in compliance with the requisite NPDES Permit limits because of its partial treatment of sewage wastes and chlorination of its sewage treatment plant discharges during the time that necessary maintenance work is performed. (Pet. 2). After carefully evaluating the company's detailed maintenance plan for performing the requisite system repairs, the Agency has indicated that it agrees with CWE's conclusion that there will be a minimal environmental impact. (Rec. 2).

Based on limited sampling of partially treated sewage which the Byron Generating Station has collected during the past several weeks, the Petitioner has requested that interim effluent limitations of 100 mg/l for biochemical oxygen demand and 100 mg/l for total suspended solids from Outfall 001(b) should be established during the time period that corrective maintenance work will be done. (Pet. 1).

However, the Agency has recommended that the Board set interim effluent limits of 75 mg/l for both BOD and TSS because CWE will be providing partial treatment while the requisite repairs are being made. (Rec. 2). The Board believes that the Agency's evaluation of the situation is fundamentally correct, and will therefore set appropriate interim effluent limits in accord with the Agency's recommendation.

The Commonwealth Edison Company contends that denial of its requested provisional variance would impose an arbitrary or unreasonable hardship because it will now be providing partial treatment to the wastewater when repairs are made, while the alternative of doing nothing until failure of the welds would probably result in little or no treatment being provided for a period longer than 45 days. (Pet. 1-3).

The Agency agrees with the Petitioner's assessment of hardship and has therefore concluded that immediate compliance on a short-term basis with 35 Ill. Adm. Code 304.120(a) as it pertains to the BOD and TSS effluent requirements of the Petitioner's NPDES Permit for Outfall 001(b) would impose an arbitrary or unreasonable hardship upon the company "since Petitioner is ready to repair the affected treatment units before total failure occurs and will be able to provide partial treatment while the repairs are made". (Rec. 1-3). Additionally, there are no federal regulations which would preclude the granting of the requested relief and there are no

public water supplies which would be adversely affected by the granting of the provisional variance. Accordingly, the Agency has recommended that the Board grant the Petitioner a provisional variance from 35 Ill. Adm. Code 304.120(a) as it pertains to the Bod and TSS effluent limitations for Outfall 001(b), subject to various specified conditions.

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

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

ORDER

The Petitioner, the Commonwealth Edison Company (Byron Generating Station), is hereby granted a provisional variance from 35 Ill. Adm. Code 304.120(a) as it pertains to the biochemical oxygen demand and total suspended solids effluent requirements of its NPDES Permit No. IL 0048313 for Outfall 001(b) (Sewage Treatment Plant Discharge), subject to the following conditions:

1. This provisional variance shall begin on October 17, 1986, and shall continue for 45 days thereafter, or until the repairs to the sanitary wastewater treatment facilities are completed, whichever occurs first.
2. The Petitioner shall sample and analyze the effluent discharged from Outfall 001(b) as required by its NPDES Permit No. IL 0048313. Analysis results shall be recorded and submitted to the Agency on the requisite monthly discharge monitoring reports.
3. Effluent discharged from Outfall 001(b) shall be limited to 75 mg/l and 35.5 lb/day for both biochemical oxygen demand and total suspended solids as 30-day averages during the time period of this provisional variance.
4. The Petitioner shall notify Mr. Gary Reside of the Agency's Compliance Assurance Section via telephone at 217/782-9720 when the repair work is started and when it is completed. Written confirmation of each telephone notification shall be submitted within 5 days to the Agency at the address given below:

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

Attention: Mr. Gary Reside

- 5. The Petitioner shall adhere to the maintenance procedure referred to in its provisional variance petition so as to provide partial treatment at all times.
- 6. The Petitioner shall operate and maintain its sanitary wastewater treatment facilities so as to produce the best effluent possible during this provisional variance period.
- 7. Within 10 days of the date of the Board's Order, the Petitioner shall execute a Certificate of Acceptance and Agreement which shall be sent to Mr. James Frost of the Agency at the following address:

Mr. James Frost
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:

I, (We) _____, having read the Order of the Illinois Pollution Control Board in PCB 86-168 dated October 9, 1986, understand and accept 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 9th day of October, 1986 by a vote of 6-0.

Dorothy M. Gunn 1986
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board