

ILLINOIS POLLUTION CONTROL BOARD
May 24, 1979

CITY OF MARION,)
)
 Petitioner,)
)
 v.) PCB 79-46
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by Mr. Young):

This matter comes before the Board on a Petition for Variance filed on March 6, 1979, by the City of Marion requesting relief from Rules 203(c) and 404(f)(ii)(A) of Chapter 3: Water Pollution Regulations. On April 10, 1979, the Environmental Protection Agency submitted its recommendation in favor of granting a variance from the phosphorus requirements of Rules 203(c) and 402 and from Rule 404(f)(ii)(A) of Chapter 3 provided that the Petitioner adhere to certain conditions. No hearing was held in this matter; hearing was properly waived in its petition pursuant to Procedural Rule 401(b).

The City of Marion owns and operates a new sewage treatment plant with a design capacity of 2.5 million gallons per day. The Marion Sewage Treatment Plant discharges its effluent to the West End Creek which is tributary to the Crab Orchard Creek and the Crab Orchard Lake. (Pet. 2, 3).

The new treatment plant consists of one manually cleared bar screen, a grit chamber and two primary settling tanks. The City wastewater is then processed through ten 12-foot diameter rotating biological discs (biodisc), two secondary settling tanks, two sand filters and a disinfection detention tank before it is discharged to the waters of Illinois. The Marion Sewage Treatment Plant is currently operating under NPDES Permit IL0029751 which requires an effluent quality not to exceed 4 mg/l BOD₅ and 5 mg/l suspended solids based upon a 30-day average. (Pet. 2, 3).

While the Marion Sewage Treatment Plant became operational in April, 1978, problems were almost immediately experienced with the biodisc shafts. On July 11, 1978, a fish kill occurred downstream from the Marion plant. The Agency believes that the

incident was the result of a malfunction at the Marion treatment plant. On that date, downstream dissolved oxygen levels ranged from 0.2 mg/l to 0.4 mg/l as compared to a 9.1 mg/l upstream reading. Since this occurrence, the City has paid \$486.78 to the Department of Conservation to compensate for the fish kill and has undertaken measures to correct the biodisc problem by June, 1979. (Pet. 3: Exh. C; Rec. 2; Exh. #3).

Rules 203(c) and 402 (Phosphorus)

On March 7, 1972, the Pollution Control Board adopted a general water quality standard of 0.05 mg/l for phosphorus as P for Illinois reservoirs and lakes and in any stream at the point where the waters enter the lake or reservoir. When coupled with the Rule 402 effluent quality standard, any point source discharger that contributed to a phosphorus water quality standard was required to improve its effluent quality so as to eliminate the phosphorus violation. As an alternative to compliance, dischargers were granted relief from the phosphorus requirement pursuant to Section 35 of the Environmental Protection Act upon a showing that compliance would impose an arbitrary or unreasonable hardship.

On April 26, 1979, the Board adopted revisions to the phosphorus effluent and water quality standards in R76-1. Rules 203(c) and 407 of Chapter 3 were amended to provide an interim phosphorus effluent requirement for dischargers once best practicable treatment technology was in place until a coordinated effort is developed to control point and non-point sources of phosphorus to the waters of Illinois. In its present form, Rule 203(c) suspends the 0.05 mg/l phosphorus water quality standard until December 31, 1983, to lakes and reservoirs in excess of 20 acres or in any stream at the point where the stream enters the lake or reservoir. During this interim period, point source dischargers to affected Illinois waters must meet the applicable effluent requirement in Rule 407 to comply with the revisions in Rule 203(c) and with Rule 402.

Since March 7, 1972, the City of Marion and numerous other dischargers upstream from lakes and reservoirs have sought relief from the phosphorus water quality standard. See City of Marion, PCB 75-220, 18 PCB 561; City of Hoopeston, PCB 76-234, 24 PCB 441; Southern Illinois University at Edwardsville, PCB 77-111, 25 PCB 775; Valley Water Company, Inc., PCB 77-146, 25 PCB 289. In these and other cases, the Board recognized that it was economically impractical for the treatment facilities to comply with the 0.05 mg/l standard in lakes and reservoirs downstream from their discharge. However, the variance required the Petitioner to provide adequate space and in the event grant funds became available, to install best practicable treatment technology for phosphorus removal.

After reviewing the record before us concerning phosphorus, the Board will dismiss that part of the Petitioner's request for relief from Rule 203(c) and 402. The Board finds nothing in the record to persuade us that Petitioner's new treatment plant when properly operating should not meet the applicable phosphorus effluent limitation of 1.0 mg/l as required by Rule 407(c) of Chapter 3.

Rule 404(f)(ii)(A), BOD₅/Total Suspended Solids

In this petition, the City of Marion also requests a variance from Rule 404(f)(ii)(A) as a prerequisite to "Pfeffer Exemption" eligibility and relief from the 4/5 BOD₅/TSS effluent limitations of Rule 404(f). According to the Petitioner, the new sewage treatment plant would not cause or contribute to a downstream dissolved oxygen violation or to any other applicable water quality violation if permitted to discharge an effluent quality of 10 mg/l BOD₅, 12 mg/l total suspended solids and 1.5 mg/l ammonia nitrogen. (Pet. 6).

However, the Agency does not affirm the Petitioner's capability to attain compliance with the downstream dissolved oxygen water quality standard. In the alternative, the Agency has recommended that the Petitioner be granted the appropriate relief provided that it conduct a monitoring program of downstream dissolved oxygen conditions. In addition, the Agency will survey the water quality in Crab Orchard Lake and its tributaries from May through November, 1979.

In R77-12, Docket C, the Agency has proposed that the 4/5 BOD₅/TSS requirements of Rule 404(f) be deleted and that a maximum limit of 10/12 BOD₅/TSS be established for dischargers to low-flow streams. Under these circumstances, the discharger would be required to demonstrate pursuant to Rule 402 that it is in compliance with all applicable water quality standards to retain the 10/12 BOD₅/TSS allowance for its discharge. In this matter, the Petitioner claims and the Agency agrees that the Marion STP could not demonstrate compliance with the dissolved oxygen standard without a complex, time consuming and expensive field study and analysis of a dissolved oxygen profile downstream from the Marion outfall. (Pet. 6; Rec. 3, 4).

In view of the difficulty and the expense which would be involved for the Petitioner to conduct a dissolved oxygen study, the Board will grant the Petitioner relief from Rule 404(f)(ii)(A) of Chapter 3 in order that Petitioner may become eligible for a Pfeffer exemption. The Petitioner rightfully recognizes that relief from Rule 404(f)(ii)(A) does not affect the dissolved oxygen water quality requirement downstream from the Marion plant. (Pet. 6).

The Board will direct the Agency to modify Petitioner's NPDES Permit IL0029751 consistent with this order pursuant to Rule 914 of Chapter 3 and to include interim effluent limitations as may be reasonably achieved through application of best practicable operation and maintenance practices in the existing facilities.

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

ORDER

1. The City of Marion is granted a variance from Rule 404(f)(ii)(A) of Chapter 3: Water Pollution Regulations for the Marion Sewage Treatment Plant until May 24, 1980, or until the Board has adopted an applicable regulation in R77-12, Docket C, whichever occurs first, subject to the conditions in paragraphs 2, 3, 4, 6 and 8 set forth below.

2. The City of Marion shall meet all requirements of Rule 404(f)(ii) of Chapter 3, except those exempted by this order.

3. The City of Marion shall initiate within 35 days from the date of this order a monitoring program acceptable to the Environmental Protection Agency to determine the impact of a 10 mg/l BOD₅ and 12 mg/l total suspended solids effluent discharge on waters downstream from the Marion Sewage Treatment Plant.

4. In the event that the monitoring program required in paragraph 3 indicates that the 10 mg/l BOD₅ and the 12 mg/l total suspended solids allowance is causing or contributing to violations of any applicable water quality standard, the City of Marion shall submit a plan acceptable to the Environmental Protection Agency for complying with the water quality standards within 60 days of the date of the violation.

5. The request for a variance by the City of Marion from Rules 203(c) and 402 of Chapter 3: Water Pollution Regulations is hereby denied.

6. Petitioner, within 30 days of the date of this order, shall request Agency modification of NPDES Permit IL0029751 to incorporate all conditions of the variance set forth herein.

7. The Agency, pursuant to Rule 914 of Chapter 3, shall modify NPDES Permit IL0029751 consistent with the conditions set forth in this order including such interim effluent limitations as may reasonably be achieved through the application of best practicable operation and maintenance practices in the existing facilities.

8. Within forty-five (45) days of the date of this order, the Petitioner shall submit to the Manager, Variance Section, Division of Water Pollution Control, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois, 62706, an executed Certification of Acceptance and Agreement to be bound to all terms and conditions of the variance. The forty-five day period herein shall be suspended during judicial review of this variance pursuant to Section 41 of the Environmental Protection Act. The form of said certification shall be as follows:

CERTIFICATION

I, (We), _____ having read the Order of the Pollution Control Board in PCB 79-46, understand and accept said order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.


SIGNED

TITLE

DATE

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 24th day of May, 1979, by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board