

ILLINOIS POLLUTION CONTROL BOARD

April 22, 1976

CITY OF MT. VERNON,)	
)	
Petitioner,)	
)	
v.)	PCB 76-41
)	
ENVIRONMENTAL PROTECTION)	
AGENCY,)	
)	
Respondent.)	

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

This matter comes before the Pollution Control Board (Board) upon the February 13, 1976, Petition of the City of Mt. Vernon, (Mt. Vernon) for variance from Rule 962(a) of the Water Regulations and modification of condition six contained in the Board Order in City of Mt. Vernon v. EPA, PCB 74-489 (1975). The Environmental Protection Agency (Agency) filed its Recommendation on March 16, 1976. No hearing was held.

In pertinent part, Rule 962 states:

The Agency shall not grant any permit required by this Subpart B...unless the applicant submits adequate proof that the treatment works...(a) will be constructed...or operated so as not to cause a violation of the Act or this Chapter, or has been granted a variance....

Mt. Vernon seeks a variance in order to operate its Jefferson County Sewage Treatment Plant (STP) based upon effluent limitations of 10 mg/l BOD₅, 12 mg/l suspended solids (SS), and 1.0 mg/l phosphorus, rather than the 4/5 mg/l BOD/SS. On November 3, 1975, the Agency issued Mt. Vernon a "Pfeffer Exemption" for the STP

allowing an effluent standard of 10/12 mg/l BOD/SS. The exemption was based upon effluent quality contained in Mt. Vernon v. EPA, PCB 74-489 (1975), including a 0.05 ppm phosphorus standard.

Petitioner's STP operates with an average dry weather flow design capacity of 2.0 MGD. The STP discharges into Casey Fork some seven miles upstream from its influx to Rend Lake. Agency sampling of Petitioner's discharge reflects a range of 7 to 26 mg/l BOD and 11 to 46 mg/l SS. However, Mt. Vernon's STP discharge monitoring reports for their NPDES permit indicate a BOD range of 1.0 mg/l to 9.2 mg/l and an average of 4.9 mg/l for the same period. In the case of the Agency figures, the Board is hesitant to rely upon 6 grab samples over as many months to give results suitable for the determination of effluent limits. On the other hand, Mt. Vernon's results are so low as to be incredible. Condition #6 in the Order of PCB 74-489 requires Mt. Vernon to meet an average BOD of 4.2 mg/l and SS of 22.3 mg/l. based upon what was claimed to be prior performance.

The Board finds the record to be devoid of any reasonable evidence upon which to set effluent limits for the short time remaining before the startup of the new plant. We shall nevertheless set those limits at 20 mg/l of BOD and 30 mg/l of SS as a reasonable effluent for this type STP, especially considering the short duration until the new STP comes on line.

Mt. Vernon is in the process of upgrading its STP to a tertiary system consisting of primary clarification with chemical feed facilities, high rate trickling filters, aerated lagoon, secondary clarification with chemical feed, tertiary filters and chlorination. Mt. Vernon had expected to achieve a phosphorus effluent limitation of 0.05 ppm. However, Petitioner contends that the 0.05 mg/l phosphorus limitation is not technologically feasible. The Agency does not deny the lack of technology and states that there is pending before this Board a regulatory proposal which would place a 1.0 mg/l phosphorus limitation upon a STP such as Mt. Vernon.

Further evidence of an arbitrary and unreasonable hardship is shown by the fact that Mt. Vernon was conditionally certified for Federal Step 3 construction funds for its STP. One of the conditions of the grant is that Mt. Vernon obtain a construction permit from the Agency. However, without the instant variance, the Agency may not issue a construction permit.

According to the U.S. EPA National Eutrophication Survey, Report On Rend Lake, June, 1975, Mt. Vernon contributes 19.9% to Rend Lake's

overall phosphorus load. The present loading rate is 0.97 g/m³/yr (over 2.5 times that proposed by Vollenweider as a eutrophic rate). Even 100% reduction in known point source effluent would not reduce the loading rate to below twice the eutrophic rate.

Currently Mt. Vernon discharges approximately 108.6 lb/day phosphorus based upon an average discharge of 1.6 MGD with a phosphorus concentration of 8.1 mg/l. If the grant is received and construction completed, Petitioner would discharge 3.8 MGD with a phosphorus concentration of 1.0 mg/l or 31.7 lb/day.

The Board finds that a variance is appropriate with the condition that should technology become available to reduce the phosphorus concentration to 0.05 mg/l then Mt. Vernon shall take appropriate action to implement said technology.

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

ORDER

It is the Order of the Board that:

1) Mt. Vernon be granted variance from Rule 962(a) of Chapter Three of the Water Regulations with respect to BOD₅, Suspended Solids, and phosphorus provided that Mt. Vernon's STP when modified not exceed effluent concentrations of 10 mg/l BOD₅ and 12.0 mg/l SS and 1.0 mg/l phosphorus.

2. Should technology become available to reduce phosphorus concentrations in Petitioner's effluent to 0.05 mg/l, Mt. Vernon shall implement said technology as soon as practicably possible. Petitioner's construction plans shall provide for such an eventuality.

3. Condition #6 contained in the Order of PCB 74-489 is modified as follows:

6) Effluent limits (on a monthly average) shall not exceed:

Average BOD	20 mg/l
Suspended Solids	30 mg/l
Ammonia Nitrogen	5.4 mg/l
Phosphorus	8.1 mg/l

4. Within 28 days of the adoption of this Order, the Petitioner shall execute and forward to both the Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706 and the Pollution Control Board a Certification of Acceptance and agreement to be bound to all terms and conditions of this Opinion and Order. The form of said certification shall be as follows:

CERTIFICATION

I (We), _____ having read and fully understanding the Order of the Illinois Pollution Control Board in PCB 76-41 hereby accept said Order and agree to be bound by all of the terms and conditions thereof.

Signed _____

Title _____

Date _____

Mr. Young abstained.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order were adopted on the 21st day of April, 1976 by a vote of 4-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board