

ILLINOIS POLLUTION CONTROL BOARD
September 3, 1981

CITY OF QUINCY,)	
)	
Petitioner,)	
)	
v.)	PCB 81-30
)	
ILLINOIS ENVIRONMENTAL PROTECTION)	
AGENCY,)	
)	
Respondent.)	

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

On February 26, 1981 the City of Quincy (Quincy) filed a petition for variance from Rules 403, 404(a), and 408(a) of Chapter 3: Water Pollution to allow the discharge of water treatment sludges from its Outlet 002 and to allow discharge to the Mississippi River of infiltrated sand present in the raw water suction well. Such relief is an extension of that granted by the Board on December 13, 1979 in PCB 79-202 (37 PCB 25). That variance expired March 1, 1981. The present variance request seeks to have the expiration date extended to March 1, 1983. Hearing was properly waived and none was held. On May 28, 1981 the Illinois Environmental Protection Agency (Agency) filed a recommendation that the variance be granted subject to certain conditions.

Quincy has been operating a water treatment sludge disposal system pursuant to NPDES Permit No. IL0037591 and the Board variance (PCB 79-202). The variance allowed sludge waste consisting of sand, alum, lime, and silt to be discharged without treatment through Outlet 002 into the Mississippi River.

The water treatment plant (WTP) serving Quincy is located on the east shore of the Mississippi at Front and Maine Streets. Mississippi River water is taken in through two 36-inch intake lines into a screened intake well. This water is then treated, resulting in an accumulation of sludge. Quincy has spent over \$1.4 million to achieve compliance with NPDES standards for discharge, but has experienced difficulty with sludge removal from the raw water settling basin. This is due to excessive amounts of sand (7 to 9 feet deep), rocks, silt and floating debris which results in extreme difficulty in pumping through the sludge transfer pumps. Under the PCB 79-202 compliance schedule, these pumps were timely replaced by open impeller pumps. However, attempts to withdraw and pump large quantities of sand on a daily basis from the primary settling basin have

been periodically unsuccessful and have resulted in blockages and extreme abrasive wear on the impellers. This noticeably reduced the carrying capacity of the sludge transfer pipeline.

In its petition Quincy has requested to be allowed to pump the sand from the raw water suction well back to the Mississippi via its outfall. However, on March 27, 1981 Quincy applied for a construction permit for a submersible pump to remove that sand. On May 4, 1981 the Agency issued the permit. As a result, that sand will be discharged back to the Mississippi directly and such variance relief for the outfall is no longer necessary. Instead, the solids will be gravity settled, the supernatant will be recycled to the intake, and the solids removed to the city landfill. As indicated in Ex. 6 of the petition, six months will be needed to install this equipment (See Answer 22).

This, however, will not entirely solve Quincy's difficulties. Since the sludge disposal system became operational in May of 1979, approximately 400,000 cubic yards of water treatment sludge have been stored. This has completely filled one of the two sludge holding beds which were to be used for this purpose. Quincy has requested grant funding for an estimated \$800,000 needed for purchase of dewatering and land application equipment that will be required to remove the water treatment and wastewater sludges from the holding basins to assure adequate future storage capacity. This grant application is currently under review.

Under present operations, both lime and alum sludges are generated. Apparently, there is no difficulty with transporting the lime sludge to the second water treatment basin, and this is currently being done. At present rates the second basin can accept the lime sludge for 1.9 years prior to its reaching capacity. The alum sludge cannot be handled in the same manner for two reasons: first, the sand problem prevents the transport of that sludge; and second, even if it could be transported, mixing of the alum and lime sludges would make them unsuitable for land application. Thus, the hoped for ultimate disposal would be precluded.

It therefore appears that variance is needed to allow the discharge of sand, alum, and silt for a six month period and that an eighteen month variance is needed for the discharge of alum and silt. By the end of this period, the lime sludge should be susceptible to land application and the alum sludge could be dewatered and landfilled.

Since there is no apparent reason why these improvements cannot proceed simultaneously, the Board will grant variance for final compliance until March 1, 1983.

The Board finds that the environmental impact should be small, given the large dilution provided by the Mississippi. However, as the Agency notes, spreading the discharges over

a minimum of seven days in relatively equal proportions rather than on one or two days should minimize the impact on the River.

Considering the minimal impact on the environment, the absence of a feasible alternative solution, and the past good faith efforts at compliance, the Board finds that denial of variance would cause an arbitrary and unreasonable hardship.

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

ORDER

1. It is hereby ordered that the City of Quincy be granted a variance from Rules 403, 404(a), 408(a) and Rule 914 of Chapter 3: Water Pollution Regulations until March 1, 1983, subject to the following conditions:
 - a. Quincy shall provide a compliance schedule consistent with information already contained in its petition to the Agency within 60 days of the date of this Order;
 - b. Quincy shall discharge the sludge from outfall 002 over a minimum of seven days in equal proportions to reduce the impact of the load on the Mississippi River;
 - c. Quincy shall submit all plans and specifications for the sludge dewatering and handling facilities and apply for all necessary permits from the Agency within 180 days of the date of this Order;
 - d. Quincy shall re-apply for its NPDES Permit within 60 days of the date of this Order; and
 - e. Within 45 days of this Order, Quincy shall execute and forward to the Illinois Environmental Protection Agency, PWS Enforcement Programs and DWPC, Compliance Assurance Section, 2200 Churchill Road, Springfield, Illinois 62706, two copies of certificates of acceptance and agreement to be bound to all terms and conditions of this variance. This 45-day period shall be held in abeyance for any period this matter is being appealed. The form of the certificate shall be as follows:

CERTIFICATION

I, (We) _____, having read the order of the Illinois Pollution Control Board in PCB 81-30, dated _____, understand and accept the said order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: _____
Title

Date

- 2. The Agency is hereby granted authority to issue the NPDES Permit for discharge from Outfall 002 in a manner consistent with the terms of this Order.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 3rd day of September, 1981 by a vote of 5-0.

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