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STATE OF ILLINOIS
Pollution Control Board

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

CITY OF ROCK ISLAND,)	
)	
Petitioner,)	
)	
v.)	PCB 98-164
)	(Variance – Water)
)	
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

POST HEARING BRIEF OF CITY OF ROCK ISLAND

Petitioner City of Rock Island ("Rock Island"), by its attorneys Gardner, Carton & Douglas, hereby files its Post Hearing Brief.

I. INTRODUCTION

Rock Island operates two sewage plants, but only the main treatment plant (the "Plant") is the subject of the Petition for Variance filed in this matter. On December 26, 1985, Rock Island filed a petition for exception seeking relief from the requirement under 35 Ill. Adm. Code 306.305 (a)(b) to construct and operate certain combined sewer overflow ("CSO") transport and treatment facilities. (Petition for Variance, Att. 1). On May 9, 1986, the Illinois Pollution Control Board granted Rock Island and Illinois Environmental Protection Agency's Joint Petition for Exception ("Joint Petition") from 306.305, which provides:

All combined sewer overflows and treatment plant bypasses shall be given sufficient treatment to prevent pollution, or the violation of applicable water quality standards unless an exception has been granted by the Board pursuant to Subpart D. Sufficient treatment shall consist of the following:

a) All dry weather flows, and the first flush of storm flows as determined by the Agency, shall meet the applicable effluent standards; and

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b) Additional flows, as determined by the Agency but not less than ten times the average dry weather flow for the design year, shall receive a minimum of primary treatment and disinfection with adequate retention time and

c) Flows in excess of those described in subsection (b) shall be treated, in whole or in part, to the extent necessary to prevent accumulations of sludge deposits, floating debris and solids in accordance with 35 Ill. Adm. Code 302.203, and to prevent depression of oxygen levels; or

d) Compliance with a treatment program authorized by the Board in an exception granted pursuant to Subpart D.

(35 Ill. Adm. Code 306.305; see Petition for Variance, Att. 2). The Board found that the existing CSOs from the main treatment plant produced only a minimum impact upon the Mississippi River and that requiring Rock Island to expend \$55 million to come into compliance with the express terms of the rule would constitute an undue economic hardship on Rock Island. (Petition for Variance, Att. 2). As conditions of the Order granting the exception, the Board required Rock Island to implement modifications which consisted of improvements to the screening system, flow diversion by increasing weir elevations and interceptor chamber modifications which were projected to cost \$101,000. (Petition for Variance, Att. 2). The Board adopted by reference three paragraphs of the Joint Petition in which Rock Island described the modifications that Rock Island would perform in order to obtain the Illinois Environmental Protection Agency's ("IEPA") support for the Joint Petition.

At ¶ 15 of the Joint Petition which was adopted by referenced in the Board's Order, the modifications were described as "the construction of head works improvements to allow operation of the treatment plant at the design maximum flow level of 16 million gallons a day." The 16 million gallons per day ("MGD") figure used in the Joint Petition and by the Board in its Order was derived from the May 1982 CSO study prepared by Missman, Stanley & Associates.

Rock Island retained James E. Huff of Huff & Huff to determine the design maximum flow of the Plant. Mr. Huff testified that, using IEPA's current design standards, the design maximum flow is actually 12 MGD, rather than 16 MGD. (Tr. 3/22/00, PCB 98-164, pp. 101-02). Rock Island filed a Petition for Variance to allow it to address this mistake while moving forward with the design and construction of modifications to its sewage treatment plant, which will allow it to treat a 16 MGD design maximum flow.¹

Rock Island also filed an appeal of its NPDES Permit issued in September 1999, which addresses certain issues that are pertinent to this Variance proceeding. A hearing was held on March 22, 2000, in conjunction with the hearing on this Petition for Variance. The testimony and exhibits in this Variance proceeding were incorporated by reference into the record of the Permit Appeal pursuant to agreement of the parties. (Tr. 3/22/00, PCB 00-073, p. 7).²

Based on the testimony and exhibits presented at the hearing, Rock Island has demonstrated that it is entitled to a Variance from the requirements of 35 Ill. Adm. Code 306.305(d), which requires that Rock Island comply with the Board's Order in PCB 85-214, to the extent that the Order requires Rock Island to operate its Plant at a design maximum flow of 16 MGD.

1. The Treatment Plant Does not Have a Design Maximum Capacity of 16 MGD

At the time the Plant was designed in the late 1960s, it was designed to meet then-existing narrative standards for treatment, which required secondary treatment. (Tr. 3/22/00,

¹ Rock Island originally believed, when it filed its Petition for Variance, that the 16 MGD figure first appeared in the Missman, Stanley & Associate report as an error. During the pendency of this proceeding, Rock Island learned that the 16 MGD figure was placed in the original operating and construction permits for the Plant as a result of the Illinois Sanitary Water Board and IEPA policy of multiplying the design average flow by two in order to designate a maximum flow rate. (Permit Record, PCB 00-073, pp. 00344-53; Tr. 3/22/00, PCB 98-164, pp. 71-72).

² Because the hearings for both PCB 00-073 and PCB 98-164 were held on the same date, the transcript for PCB 00-073 shall be referred to herein as "Tr. 3/22/00, PCB 00-073, p. ___" and the transcript for PCB 98-164 shall be referred to herein as "Tr. 3/22/00, PCB 98-164, p. ___".

PCB 98-164, p.68). Existing design standards at that time required that final clarifiers be designed on the basis of design average flow rate. (Tr. 3/22/00, PCB 98-164, p. 67). Thomas McSwiggin, manager of the Permit Section of the Bureau of Water of IEPA, testified at hearing that at that time, the Plant also would have had a “reasonable possibility” of meeting effluent limitations of 40 mg/L for biochemical oxygen demand (“BOD”) and 45 mg/L for total suspended solids (“TSS”), which were enacted while the Plant was being constructed. *Id.* However, Mr. McSwiggin stated that it is impossible to state with certainty what the maximum flow rate is that can be treated at a given sewage treatment plant. *Id.*

During the pendency of this action, Rock Island has learned that the plant was described by IEPA in the first operating permit issued after construction was completed in 1971 as an 8 MGD design average flow, with “max 200%” or 16 MGD peak flow capacity, subject to the water effluent limitations of 20 mg/L BOD and 25 mg/L TSS that were promulgated shortly before issuance of the permit. (Permit Record, PCB 00-073, see pp. 00344-53). This apparently was done consistent with the then existing IEPA practice of doubling the design daily average flow rate to designate the design maximum flow rate. (Tr. 3/22/00, PCB 98-164, pp. 71-72)

Rock Island sought in its Petition for Variance such relief as may be necessary to allow it to construct modifications to the sewage treatment plant to increase the maximum design flow from 12 MGD to 16 MGD, while remaining in compliance with regulations governing the treatment of overflows and bypasses during the construction.

On May 9, 1986, the Board granted Rock Island and the Agency’s Joint Petition in PCB 85-214. However, one of the conditions of the exception was the adoption of the 16 MGD maximum design flow which was erroneously included in the Joint Petition. Rock Island has recently discovered that the maximum design flow of the main treatment plant is actually 12

MGD. To address this situation, Rock Island has designed and is currently in the process of constructing plant modifications to increase the maximum design flow from 12 MGD to 16 MGD. These modifications include adding a final clarifier, improving aeration basin and digester efficiency, and making various piping modifications. (Tr. 3/22/00, PCB 98-164, p. 35). Rock Island submitted preliminary engineering plan to carry out this work to the IEPA in 1997, and IEPA approved it. (Tr. 3/22/00, PCB 98-164, p. 31; Pet. Exh. 10) Rock Island originally filed a Petition for Variance in June 1998, which IEPA objected to, primarily because the compliance plan was conditioned on obtaining low interest loan money from IEPA and that the loan process would take too long. (Tr. 3/22/00, PCB 98-164, p. 33). In response, Rock Island decided to finance the improvements through the sale of general obligation bonds, so that it could begin the project in 1999, and it filed an Amended Variance Petition in April 1999. (Tr. 3/22/00, PCB 98-164, p. 33). Rock Island currently is scheduled to complete the project by June 1, 2001, at a cost of approximately \$3 million, and is approximately four months ahead of schedule. (Tr. 3/22/00, PCB 98-164, p. 30).

Rock Island requested a Variance from the CSO rules and the Board's CSO exception granted to Rock Island because some personnel within the IEPA interpret the Order to require that Rock Island must treat 16 MGD before bypassing through CSO Outfall 001A. Rock Island's NPDES Permit, prior to changes being made in response to comments by the United States Environmental Protection Agency ("U.S. EPA"), which provision is on appeal in PCB 00-073, recognized Rock Island's inability to treat flows in excess of 12 MGD, in that it required Rock Island only to treat the maximum practical flow prior to utilizing the CSO bypass. (See Permit Record, PCB 00-073, Draft NPDES Permit No. IL0030783, p. 00161). Mr. McSwiggin testified at the hearing that it is long-standing IEPA policy to require treatment plants to treat the

“maximum practical flow” prior to utilization of the CSO bypass. (Tr. 3/22/00, PCB 98-164, p. 74). The purpose of this policy is to avoid washout of solids that are necessary to achieve BOD and TSS limits. *Id.* Mr. McSwiggin also testified that there would be nothing to preclude the IEPA from designating the Plant’s design maximum flow at 12 MGD. (Tr. 3/22/00, PCB 98-164, p. 69). Despite this, Rock Island has determined that it wants to improve its Plant, and is willing to increase the capacity of the Plant to 16 MGD. However, Rock Island needs the requested Variance in order to be given the time to do so without being subject to enforcement for utilizing the CSO bypass when flows exceed what it is capable of treating without suffering solids washout. As reported by the IEPA in its Variance Recommendation, Rock Island has received an administrative order from USEPA dated February 13, 1998, which is based on the erroneous designation of the plant as capable of treating 16 MGD. However, contrary to the assertion made in IEPA’s opening statement, Rock Island had committed to this expansion and to obtaining the present Variance in 1997, long before it knew of any federal enforcement. (Tr. 3/22/00, PCB 98-164, pp. 27-32, 42-43).

There was and still is no independent regulatory authority which mandates that Rock Island’s 8 MGD daily average flow Plant have a daily maximum flow of 16 MGD. This designation was based solely on IEPA’s policy of multiplying the daily average flow by 2 in order to state the design maximum flow. (Tr. 3/22/00, PCB 98-164, pp. 67-68). Mr. McSwiggin acknowledged that the designation has nothing to do with Rock Island’s treatment plant being physically capable of treating 16 MGD and complying with its effluent limitations. (Tr. 3/22/00, PCB 98-164, p. 71).

Rock Island has attempted to ensure that the maximum practical amount of flow is treated in the Plant before using the CSO bypass. (Tr. 3/22/00, PCB 98-164, p. 37). In response to

continued concern by the Illinois EPA, Rock Island has carried out a series of improvements, including completing the installation of additional sludge drying beds and a new mechanical sludge dewatering system to address what it, and the IEPA, thought would allow the Plant to treat increased flows. (Tr. 3/22/00, PCB 98-164, p. 24).

When this did not result in the practicable ability to handle 16 MGD, Rock Island hired Huff and Huff, Inc. ("Huff & Huff") to conduct a review of the Plant's units to determine which, if any, were limiting. Huff & Huff determined that the final clarifiers were sized to achieve 8 MGD as a daily average flow but were only sized to handle 12 MGD as a daily maximum flow. (Tr. 3/22/00, PCB 98-164, pp. 25, 101-02). While Rock Island originally thought that this error had been made in the initial designation by Rock Island's consultant in the 1980's as part of the CSO study prepared by its consultants, Rock Island has learned, during the pendency of this proceeding, that this designation also dates back to the original Sanitary Water Board and IEPA issuance of the original construction permit and the initial operating permit. (Permit Record, PCB 00-073, pp. 00341-53).

Rock Island has embarked upon an expeditious schedule to upgrade the Plant so that the daily maximum flow is truly 16 MGD. (Tr. 3/22/00, PCB 98-164, p. 28). Rock Island advised the IEPA of work done by Huff and the discovery of the mistaken designation at a meeting on October 16, 1997, and obtained a favorable response as to the proposed scope of improvements. (Tr. 3/22/00, PCB 98-164, p. 26). At that meeting, in addition to proposing significant improvements, Rock Island also agreed to collect and catalog floatables on the shoreline, replace a sanitary sewer that runs through Blackhawk State Park, and to convert the existing storage basins (Fransiscan and Saukie) to treatment units. (Tr. 3/22/00, PCB 98-164, pp. 25, 42; see also Pet. Exh. 7). Rock Island also agreed to carry out certain actions with respect to the NPDES

permit's nine minimum CSO requirements, which Rock Island has been carrying out. (Tr. 3/22/00, PCB 98-164, pp. 26, 41-42). Rock Island advised IEPA at this time that it intended to seek temporary modification of the 16 MGD designation. (Pet. Exh. 7 & 9). Rock Island submitted a Preliminary Engineering Report, which was the first step toward obtaining the necessary permits to build the improvements, which the IEPA formally approved on February 5, 1998, and Rock Island began carrying out the plan to build the improvements. (Tr. 3/22/00, PCB 98-164, p. 32).

Rock Island has also demonstrated that granting the Variance while Rock Island continues to improve its Plant will have minimal impact on the environment. In 1984, the Illinois EPA concurred with Rock Island's consultants' conclusions that the existing CSO overflows from Rock Island "have a minimal impact on the water quality of the Mississippi River and do not restrict stream use." (Petition for Variance, Att. 2). The Illinois EPA further recognized that "there should be even less impact as a result of the further proposed modifications." (Petition for Variance, Att. 2, paragraph 1). In conjunction with Rock Island's commitment to the floatable collection and the nine minimum CSO requirements, the impact to the environment should remain minimal, and, as Mr. Huff testified, would be even less than expected in 1985. (Tr. 3/22/00, PCB 98-164, p. 101-07). In addition, the most recent studies of Rock Island's CSOs performed by Huff & Huff continues to demonstrate that no environmental impact exists. (Pet. Exh. 18).

In addition, since the Board made this finding, Rock Island has completed the required CSO exemption improvements and other improvements that have, in actuality, reduced CSOs. (Tr. 3/22/00, PCB 98-164, pp. 62-63). Therefore, as the IEPA agreed in the CSO Exemption

Petition, the impact should already have lessened and should continue to lessen with the completion of improvements identified herein.

2. There is No Independent Regulatory Requirement that the Plant be Capable of Treating a Design Maximum Flow of 16 MGD

As previously stated, apart from Rock Island's reliance upon the historical designation of the design maximum flow by its previous consultant, and pursuant to Sanitary Water Board and IEPA practice to double the design average flow rate to designate the maximum flow rate, and the resulting reliance upon the 16 MGD figure in the Board's Order in PCB 85-214 and IEPA documents, there is no independent regulatory requirement that the Plant have a design maximum flow of 16 MGD. According to Mr. McSwiggin, apart from the Board's Order, Rock Island could have pursued a program to simply rerate the Plant as having an 8 MGD and 12 MGD. (See Tr. 3/22/00, PCB 98-164, p. 69).

Instead, Rock Island chose to pursue the program of identifying the necessary improvements to achieve a design maximum flow of 16 MGD. Rock Island did not have any means to recognize the original consultant's mistake apart from authorizing a new engineering review of the Plant's treatment units. This was done when Rock Island had completed additional sludge handling facilities in early 1997, and still could not provide continued treatment of flows at the 16 MGD level without experiencing solids washout. (Tr. 3/22/00, PCB 98-164, pp. 23-25).

Rock Island and the Illinois EPA recognize that these proposed improvements are necessary before the Plant can provide continuous treatment of a design maximum flow of 16 MGD. The problem facing Rock Island is that it cannot immediately change the limiting units. The schedule that Rock Island has implemented and continues to implement is a reasonable, but extremely expeditious one. Condition 1.b. of the Board's Order granting the CSO exemption

required Rock Island to “implement all modifications to its sewer system as identified in paragraphs 14, 15 and 16 of the petition in this proceeding.” (69 PCB 432).

Rock Island promptly carried out all of the identified and agreed upon sewer system improvements in compliance with Condition 1.b. (Tr. 3/22/00, PCB 98-164, p. 20). The purpose of those improvements was to allow the maximum amount of flow to be directed to the Plant for treatment before bypassing through the CSO overflow. (Tr. 3/22/00, PCB 98-164, p. 21)

Rock Island is requesting a variance from the CSO rules and the Board’s CSO exception granted to Rock Island because the IEPA interprets the Order in PCB 85-214 to require that Rock Island must treat 16 MGD before bypassing. At the hearing, IEPA stipulated that because of differences in language between the Permit and letters from U.S. EPA and IEPA to Rock Island that discuss it, there is a possibility of confusion as to whether that requirement would be for Rock Island to physically treat 16 million gallons of wastewater on any day that it has a bypass. (Tr. 3/22/00, PCB 00-073, pp. 22-23). IEPA stipulated that the language in the permit would require that Rock Island provide a treatment of a flow rate of 16 MGD before it would be allowed to use the bypass. (Tr. 3/22/00, PCB 00-073, p. 24). Rock Island maintains that the draft NPDES permit, prior to revision in response to U.S. EPA comments, recognized that issue because it required Rock Island to treat the maximum flow practicable prior to using the CSO bypass. Because of this difference in interpretation, Rock Island remains subject to enforcement for utilizing the CSO bypass when flows exceed what is practical to treat without solids washout at levels less than 16 MGD. Therefore, Rock Island requests that the Board remand this issue to IEPA for clarification.

CONCLUSION

In summary, the Illinois EPA has not presented any convincing argument to support why Rock Island is ineligible for the requested relief or any reason why the Board should not grant the relief. Attempting to hold Rock Island subject to enforcement for not sending 16 MGD of flow through the Plant prior to utilizing the CSO bypass simply because the original CSO petition and Board Order were based upon such a mistaken designation is to subject Rock Island to an arbitrary and unreasonable hardship. The Plant was properly designed, permitted and constructed on the basis of a design average flow rate of 8 MGD, not a 16 MGD design maximum flow rate. IEPA's policy to require sewage treatment plants to only treat maximum practical flow before bypassing applies even to plants that actually were required to be designed, permitted and constructed to meet a design maximum flow rate. Even these plants are not required in their permits to treat their design maximum flow rate. Accordingly, it is unreasonable and technically infeasible to require Rock Island to direct 16 MGD through the Plant prior to the construction of the improvements under threat of enforcement for arguably violating the effluent limitations, when the 16 MGD designation is simply a result of IEPA policy, and not the actual design maximum flow rate of the Plant.

WHEREFORE, Rock Island respectfully requests that the Board grant the variance relief requested in the Amended Petition for Variance.

Respectfully Submitted,

CITY OF ROCK ISLAND.



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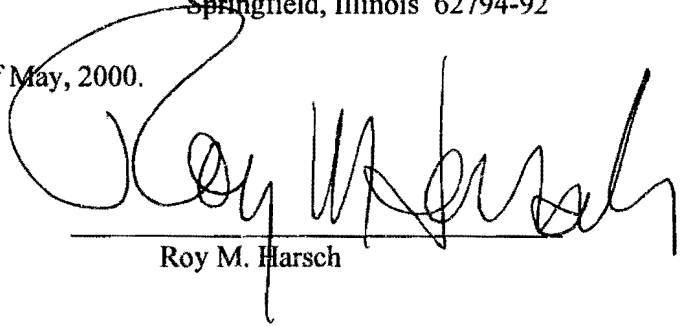
CERTIFICATE OF SERVICE

The undersigned, an attorney, certifies that he caused to be served a copy of the City of Rock Island's Post Hearing Brief of City of Rock Island on the following:

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