

ILLINOIS POLLUTION CONTROL BOARD
July 26, 1983

CITY OF SPRING VALLEY,)
)
 Petitioner,)
)
 v.) PCB 83-97
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by W.J. Nega):

This provisional variance request comes before the Board upon a July 26, 1983 Recommendation of the Illinois Environmental Protection Agency (Agency). The Agency recommends that a 45-day provisional variance be granted to the City of Spring Valley (Spring Valley) to allow it to draw down and bypass its aerated lagoon during which time the lagoon's aeration equipment can be repaired. A similar provisional variance was granted to Spring Valley on April 29, 1982 in PCB 82-56 for a period of 45 days to allow Spring Valley to draw down and bypass its aerated lagoon in order to facilitate repairs to one of the main air headers in its aeration system.

Spring Valley owns and operates a wastewater treatment plant (WWTP) which serves about 6,000 people plus several industries. The WWTP includes a bar screen, grit chamber, primary clarifier, aerated lagoon and chlorination with a DAF of 1.39 MGD and a DMF of 13.9 MGD. The WWTP discharges directly into the Illinois River pursuant to its NPDES Permit No. IL 0031216. (Rec.1).

The Petitioner's secondary treatment facilities include a single cell aerated lagoon which provides biological treatment and sedimentation. The lagoon has a surface area of 14.1 acres and a capacity of 42.3 million gallons at its normal operating depth of 10 feet. However, the lagoon has a surface area of 15.5 acres and a capacity of 66.0 million gallons at its high level of 15 feet. The lagoon's maximum operating depth is 16 feet. Lagoon aeration is accomplished via a series of parallel perforated pipes that are connected to 6-inch diameter headers anchored to the lagoon bottom. The aeration system produces fine streams of diffused air which, if disrupted, could reduce treatment efficiency and result in a degraded effluent. (Rec. 2).

Spring Valley began drawing down and bypassing its aerated lagoon on May 12, 1982 pursuant to the Board's Order in PCB 82-56. On June 14, 1982, draw down was completed. On June 23, 1982, the repairs to the air header were completed and bypassing ceased. The Agency has noted that, during the period of the provisional variance in PCB 82-56, Spring Valley sampled its discharge for BOD and TSS and properly reported the results to the Agency pursuant to Condition 4 of the Board's Order in PCB 82-56. (Rec. 2).

On May 18, 1983, the Agency received a request from the Petitioner for a provisional variance to draw down and bypass the aerated lagoon in order to repair the broken air header. On June 2, 1983, the Agency denied this requested provisional variance because it was concerned about: (1) the direct discharge of industrial slug loads during the period of bypassing; and (2) the septic conditions and poor quality of the wastewater contained in the aerated lagoon (which was attributed to industrial slug discharges rather than the broken air header). (Rec. 3).

On June 8, 1983, the Agency received another request from Spring Valley for a provisional variance. The Petitioner claimed that since the aerated lagoon was septic, producing a poor quality effluent, and causing odors, a provisional variance was needed to allow Spring Valley to bypass the lagoon, pump it down, and refill the lagoon in order to restore the biological treatment process that had been lost. (Rec. 3). Although the environmental problems with the aerated lagoon as described by the Petitioner were known by the Agency to have existed, an Agency inspection on June 13, 1983 revealed that the lagoon was no longer septic and that recovery was beginning. (Rec. 3). Accordingly, the Agency denied the second provisional variance request on June 16, 1983.

Since June 2, 1983, the Petitioner has been able to restore its aerated lagoon to an acceptable operating condition by: (1) enacting a sewer use ordinance; (2) enforcing the sewer use ordinance by disconnecting one of its contributing industries that was believed to be causing upsets at Spring Valley's WWTP; and (3) adding sodium nitrate to the aerated lagoon to restore the lagoon to an aerobic condition (this practice was stopped on June 30, 1983 because dissolved oxygen levels began to rise). (Rec. 3-4).

At the present time, the Petitioner's easterly main air header is ruptured and apparently breaking loose to the surface and causing a loss of air to the distribution system. So far, there are no noticeable problems with treatment efficiency, but failure to make the requisite repairs could possibly result in future problems which might occur abruptly at any time. (Rec. 4). The aerated lagoon needs to be bypassed and drawn down to approximately the 2 foot level in order to facilitate the necessary repairs. The draining process will require the draining of about 34 million gallons from the aerated lagoon, while bypassing after receiving primary treatment will be at an approximate rate of 1.3

million gallons per day based on the average effluent discharge rate of prior years. Levels of BOD might range from a minimum of 49 mg/l to a maximum of 250 mg/l, while levels of TSS might range from a minimum of 28 mg/l to a maximum of 94 mg/l over a relatively short period of time. (Rec. 2; 4).

The Agency believes that any adverse environmental impact upon the Illinois River should be minimized through the actions of Spring Valley in bringing about the recovery of its aerated lagoon. Moreover, the Agency has noted that if the Petitioner is not allowed to expeditiously proceed with the necessary maintenance of its WWTP, the system could again degrade to its prior septic conditions and result in a greater adverse environmental impact by the discharge of a degraded effluent over a prolonged period of time. (Rec. 4). Complete recovery from the recent septic conditions took about 5 months, and a recurrence of such an environmentally detrimental situation is to be avoided by proper preventive maintenance. Additionally, should the lagoon again become septic or further breakdowns occur in the aeration system, unnecessary extra expenses might result. (Rec. 4).

The Agency has concluded that compliance on a short-term basis with the provisions of 35 Ill. Adm. Code 306.305 would impose an arbitrary or unreasonable hardship. It, therefore, recommends that the Board grant the City of Spring Valley a provisional variance from Section 306.305 for a period of 45 days to begin on the date draw down and bypassing begin, but no later than 10 days after the Board's Order, subject to certain conditions.

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

ORDER

The City of Spring Valley is hereby granted a provisional variance from 35 Ill. Adm. Code 306.305 for a period of 45 days to begin on the date draw down and bypassing of its aerated lagoon begin, but no later than 10 days after the Board's Order, subject to the following conditions:

1. Spring Valley shall notify Robert E. Broms, P.E., Manager, Compliance Assurance Section, Division of Water Pollution Control (at 217/782-9720):

- a.) the day draw down begins;
- b.) the day repairs are initiated;
- c.) the day repairs are completed and the system returned to operation;

2. Spring Valley shall provide primary treatment and chlorination to all flows prior to discharge.

3. Spring Valley shall sample its discharge for the parameters listed in its NPDES permit with the same sample frequency and type.

4. Spring Valley shall submit results of the above-mentioned samples within 7 days after the end of each week of discharging to:

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

5. Spring Valley shall not discharge any sludge; however, removal and proper disposal of any lagoon sludge is acceptable while the lagoon is out of operation.

6. Spring Valley shall continue to monitor its Industrial contributors and, at such time as any discharge of toxic pollutants is discovered in violation of its sewer use ordinance, bypassing shall cease until determined by the Agency to be acceptable to resume.

7. Within 10 days of the date of the Board's Order, Spring Valley shall execute a Certificate of Acceptance and Agreement which shall be sent to: 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:

CERTIFICATION

I, (We) _____,
having read the Order of the Illinois Pollution Control Board in PCB 83-97 dated July 26, 1983, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

Title

Date

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board hereby certify that the above Opinion and Order was adopted on the 27th day of July, 1983 by a vote of 5-0.

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