

ILLINOIS POLLUTION CONTROL BOARD
May 1, 1980

VILLAGE OF HARTSBURG,)
)
 Petitioner,)
)
 v.) PCB 80-26
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by Dr. Satchell):

This matter comes before the Board upon a petition for variance filed February 11, 1980 by the Village of Hartsburg. The petition requests for public water supply zeolite softening backwash a variance from the requirements of Rule 203 of Chapter 3: Water Pollution (Chapter 3) as they apply to total dissolved solids (TDS) and chloride. On March 24, 1980 the Environmental Protection Agency (Agency) recommended that, in addition, Hartsburg be granted a variance from the effluent standard for TDS contained in Rule 408(b) of Chapter 3. The hearing was waived and no public comment has been received.

Hartsburg operates a public water supply serving a population of about 363 persons in Logan County. The supply draws water from two wells. Treatment includes zeolite softening. The softener is backwashed daily resulting in a discharge of 2500 gallons (9500 l) through a 120 foot tile to the point of discharge into an unnamed ditch along the Illinois Central Gulf Railroad right of way. The ditch, 2.8 miles downstream, enters Sugar Creek, which is tributary to Salt Creek and the Sangamon River.

Hartsburg possesses NPDES permit No. IL 0053082 for the backwash discharge. This permit expired December 31, 1979 and is not renewable in part because of violations of standards by the backwash discharge (Pet. 3, Ex. III, p. 3; Rec. 1). Grab samples of the backwash have ranged from 1000 to 2870 mg/l TDS and 140 to 680 mg/l chloride, in excess of the water quality standards of 1000 mg/l TDS and 500 mg/l chloride of Rule 203 of Chapter 3 (Pet. Ex. II). Rule 402 of Chapter 3 provides that effluent not cause water quality violations. Since the railroad ditch is an intermittent stream, this discharge constitutes its entire flow at times, necessitating a variance from the water quality standards (Pet. 5).

The Agency had monitoring stations which were apparently eight miles upstream and eight miles downstream of the point where the unnamed ditch enters Sugar Creek. From 1975 through 1977 these showed 23 to 62 mg/l chloride upstream and 26 to 80 mg/l downstream. This is well within the Rule 203(f) water standard of 500 mg/l chloride and indicates probable compliance with the TDS standard.

Hartsburg alleges that elimination of the softening unit would be impractical because the water would be undrinkable. The unsoftened water would result in pipe corrosion, mineral deposits and increased soap use. This last could also cause septic tank problems (Pet. 3).

No sanitary sewer is available or anticipated which could receive the backwash (Pet. 2). Treatment for TDS and chloride would involve either reverse osmosis or flash distillation which are economically unrealistic (Pet. 9). Furthermore, these treatment techniques would produce concentrated brines requiring disposal.

Hartsburg's point of discharge is 77 and 140 feet from its wells (Pet. 3). Since 1972 the chloride and TDS concentrations in Hartsburg's raw water have increased considerably. The Agency believes the discharge point may be in the pumping cone of the wells and therefore a contributing factor to this increase (Rec. 2). In the petition Hartsburg proposed to move its point of discharge 300 feet southeast. The Agency believes this will still be in the pumping cone and asks that Hartsburg be ordered to consult with the State Water Survey and submit a relocation plan for Agency approval within ninety days.

Hartsburg proposes to begin regenerating its zeolite more frequently, twice instead of once per day, to reduce its discharge levels (Pet. 4). The Agency contends that this would result in more efficient softener operation and actually increase the amount of solids discharged in the backwash (Rec. 2). Since the effects would be mixed the Board will neither require nor prohibit the regeneration twice daily.

Although Hartsburg has not requested it, the Agency recommends a variance from the 3500 mg/l TDS effluent standard of Rule 408(b) (Rec. 2). However, of thirty-three samples, none exceeded 2900 mg/l TDS. Only one exceeded 2000 mg/l (Pet. Ex. II). The Agency's request that the Board grant a variance from Rule 408(b) will be denied. The Board will require that Hartsburg's discharge not cause the water in the receiving stream to exceed 2000 mg/l TDS.

Hartsburg's discharge ranges from 140 mg/l to 680 mg/l chloride. The second highest chloride concentration reported of thirty-four samples was 620 mg/l. The Board will require that Hartsburg's effluent not cause the receiving stream to exceed 650 mg/l chloride.

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

ORDER

Petitioner, the Village of Hartsburg, is granted a variance from the water quality standards for chloride and total dissolved solids (TDS) found in Rule 203(f) of Chapter 3: Water Pollution, as these apply to its discharge of zeolite softener backwash, subject to the following conditions:

1. This variance will expire on March 31, 1985.
2. Petitioner shall not cause the water quality in the unnamed ditch to exceed 2000 mg/l TDS or 650 mg/l chloride.
3. Petitioner shall consult with the Illinois State Water Survey concerning relocation of its discharge to a point outside the pumping cone of its wells. Within ninety days of the date of this Order, Petitioner shall present to the Environmental Protection Agency for approval a plan for such relocation.
4. Petitioner shall stay abreast of current treatment technology for TDS and chloride and submit to the Agency annual progress reports.
5. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Variance Section, 2200 Churchill Road, Springfield, Illinois 62706, a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five 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 fully read and understanding the Order in PCB 80-26, hereby accept that Order and agree to be bound by all of its terms and conditions.

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 1st day of May, 1980 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board