

ILLINOIS POLLUTION CONTROL BOARD

May 26 , 1977

VILLAGE OF DUNLAP,)
)
 Petitioner,)
)
 v.) PCB 77-67
)
 ENVIRONMENTAL PROTECTION AGENCY,)
)
 Respondent.)

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

The Village of Dunlap filed a petition for variance with the Board on February 28, 1977. Petitioner seeks a variance from Rule 203(f) of Chapter 3: Water Pollution Regulations (Chapter 3). The Agency interpreted the request as also seeking relief from Rule 402 of Chapter 3. The Agency recommendation in this matter was filed April 7, 1977.

According to the 1970 U.S. Census, Dunlap's population was 656. The Village owns and operates its own public water supply and distribution system. Water is obtained from a well that is 1600 feet deep. The well water is shown in the petition to have 2.8 mg/l fluorides, 1250 mg/l chlorides and 2800 mg/l total dissolved solids; all concentrations are above those allowable by Rule 203(f). Treatment consists of chlorination and aeration for hydrogen-sulfide removal.

Petitioner's sewage treatment plant (STP) was constructed in 1971 and consists of a three cell lagoon with chlorination. Discharge is to Kickapoo Creek a few miles downstream from its headwaters. According to the Agency Petitioner's STP is new and underloaded and its treatment performance is typical for a system of this type. Results of Agency grab sampling and excerpts from Petitioner's discharge monitoring reports are set forth as follows:

AGENCY GRAB SAMPLES

DATE	BOD ₅ (mg/l)	TSS (mg/l)	Amm-N (mg/l)	FECAL COLI. (N/100 ml)
05/76	9	52	6.0	-0-
08/76	4	-0-	0.01	-0-
09/76	10	2	0.01	-0-
10/76	3	10	0.06	-0-
01/77	13	2	2.7	---

DMR REPORTS

DATE	BOD ₅ (mg/l) Ave/Max	TSS (mg/l) Ave/Max
10/76	6/10	3.5/6
11/76	6/10	4/6
12/76	4/6	4/7

During the latter half of 1976 the Agency had consultants conduct a biological survey of the Kickapoo Creek watershed. This survey showed that Kickapoo Creek was semi-polluted upstream of the Village's discharge, unbalanced 1.75 miles downstream of Petitioner's discharge, semi-polluted 3 miles downstream and unbalanced 6 miles downstream. The upstream semi-polluted conditions were attributed to very low flows in Kickapoo Creek during the survey. The discharge from the treatment plant was apparently the cause of improvement in the stream condition from semi-polluted to unbalanced. The Agency's grab samples reveal that Petitioner's STP was achieving a high degree of nitrification during the latter half of 1976. The recommendation states that deteriorating stream conditions downstream of Petitioner's discharge were attributable, not to a dissolved oxygen sag due to nitrification, but rather to the low flow conditions of Kickapoo Creek. Kickapoo Creek is classified as an intermittent stream at the point of Petitioner's discharge. An Agency sampling station approximately 10 miles downstream on Kickapoo Creek shows that on seven different sampling dates from March 17, 1975 to December 14, 1976 the chloride and sulfate measurements were within the general water quality standards of Rule 203(f) (Rec. 3).

The Agency believes there is no technically feasible and economically reasonable treatment available for removal of total dissolved solids from Petitioner's STP effluent.

The Village estimates that to develop a new water supply would cost \$176,000 and improvements would cost \$58,400. The Agency concurs with the cost estimate on the alternate source of water supply. The alternate source, according to the Agency, is a shallow 40 foot thick glacial drift formation, the edge of which is approximately two miles from Dunlap. Most of the cost associated with this alternate source would be the cost of transmission facilities from the well site to the community.

Based on the previously mentioned biological survey the Agency assesses the environmental impact of Petitioner's discharge upon Kickapoo Creek as small but positive. The Agency states that normally domestic use of water is expected to increase the strength of some of its chemical constituents. Fluoride strength would not be expected to increase. Chloride and total dissolved solids would be expected to increase. Chloride may increase in an increment range of approximately 20 to 50 milligrams per liter and total dissolved solids would increase in an increment range of 100 to 300 milligrams per liter. The Agency further states that high total dissolved solids can be a source of citizen complaints. No written complaints have been filed with the Agency. During a December 1975 inspection an Agency inspector noted several verbal complaints concerning the salty taste of Petitioner's water.

The Agency believes that requiring Petitioner to install a new public water supply or provide treatment for the removal of total dissolved solids from its present water supply would place an economic burden on Petitioner which would be arbitrary and unreasonable. This is particularly true in view of the lack of adverse environmental impact. The Agency recommends granting a five year variance subject to conditions.

The Board agrees with the Agency's assessment. The heavy cost of compliance for a small village balanced against little environmental impact would be an arbitrary and unreasonable burden. The Board will grant a five year variance from the date of this Order, subject to the Agency's recommended conditions.

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

ORDER

The Pollution Control Board grants the Village of Dunlap a variance from Rule 402 of the Chapter 3: Water Pollution Regulations and the provisions of Rule 203(f) of Chapter 3 applicable to fluoride, chloride and total dissolved solids for five years from the date of this Order.

1. Fluoride is not to exceed background levels;
2. Chloride is not to exceed 50 mg/l above background levels;
3. Total dissolved solids are not to exceed 300 mg/l above background levels.

4. Petitioner shall, within thirty (30) days of the date of this Order, submit a Certificate of Acceptance, in the format shown, to the Environmental Protection Agency at the following address:

Environmental Protection Agency
Control Program Coordinator
2200 Churchill Road
Springfield, Illinois 62706

CERTIFICATE OF ACCEPTANCE

I, (We), _____ having read the Order of the Illinois Pollution Control Board in case number PCB77-67, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

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 26th day of May, 1977, by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board