

ILLINOIS POLLUTION CONTROL BOARD

October 17, 1974

CITY OF CARTHAGE, )  
 )  
Petitioner, )  
 )  
vs. )  
 )  
ENVIRONMENTAL PROTECTION AGENCY, ) PCB 74-272  
 )  
Respondent. )

OPINION AND ORDER OF THE BOARD (by Mr. Seaman):

The City of Carthage (hereinafter Petitioner), filed its Petition for a Variance with the Environmental Protection Agency (hereinafter Agency) on July 17, 1974.

Petitioner seeks a variance from Rule 203(h) of Chapter 3, Part II of the Pollution Control Board Water Pollution Rules and Regulations.

Petitioner seeks a variance to treat its water supply reservoir, Carthage Lake, with a fish toxicant to remove the present fish population as part of a program in conjunction with the Illinois Department of Conservation to restock the Lake with game fish.

Petitioner operates a public water supply serving the residents of the City of Carthage. The public water supply presently meets the requirements of the Environmental Protection Act and relevant rules and regulations in force thereunder.

Carthage Lake has a surface area of approximately 44 acres with a capacity estimated by the Agency to be approximately 66 million gallons.

Petitioner seeks approval to make a single application of 100 gallons of a solution of two and one half percent liquid rotenone to the entire reservoir. According to Agency calculations this would result in a concentration of approximately 1.5 milligrams per liter of solution or 0.06 milligrams per liter of rotenone.

The Agency has confirmed the Petitioner's allegations that the Department of Conservation of the State of Illinois has recommended the treatment program set forth above and that the Department of Conservation will be involved in proposed application of the rotenone solution.

Rotenone is generally applied with a petroleum base carrier which increases its solubility with water. The carrier has been known to cause minor taste and odor problems in public water supplies, which can be treated in the same manner as possible taste and odor problems resulting from the killed fish.

An effective fish removal program can result in considerably diminishing if not eliminating the problem of taste and odor from killed fish and the Department of Conservation has indicated to the Agency that a general requirement of their toxicant application program is the removal of the fish killed.

Feeding activated carbon at the water treatment plant is an effective remedy for taste and odor problems that might arise from the fish kill or the petroleum based carrier of the rotenone. Petitioner's water treatment plant is presently equipped with carbon feeding equipment.

Petitioner presently pre-chlorinates its water in its normal treatment process. Chlorination of petroleum products can enhance taste and odor problems and carbon tends to absorb chlorine. Since petitioner's water treatment plant has the capability of post-chlorinating its treated supply, a use of this method of chlorination during a period of carbon feeding could eliminate the possible problems created by pre-chlorination.

The Agency recommends that the Pollution Control Board grant a variance to Petitioner subject to certain conditions. We concur.

This Opinion constitutes the findings of fact and conclusions of law of the Board.

IT IS THE ORDER of the Pollution Control Board that:

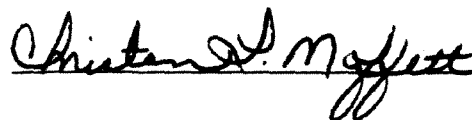
1. The Petition for a Variance be granted subject to the following conditions:

- a. That the rotenone treatment of Carthage Lake be limited to one application during the months of September through December of 1974.
- b. That the application of rotenone not exceed 100 gallons of solution of two and one half percent liquid rotenone.
- c. That the application of rotenone be applied by personnel of the Illinois Department of Conservation.
- d. That the Agency be notified at least twenty-four hours prior to the time of application.
- e. That the Petitioner effectively remove all fish killed by the rotenone treatment from the water supply reservoir.
- f. That no rotenone be applied to the reservoir within fifty feet of the raw water intake pipe.
- g. That petitioner institute carbon feeding at its water treatment plant for a period of one week following the application of rotenone.

- h. That during the time of carbon feeding the Petitioner discontinue pre-chlorination of its supply and institute post-chlorination of the water distributed from the supply. Prior to the institution of post-chlorination, petitioner shall measure the level of chlorine immediately before the point in its system where post-chlorination will be instituted. After activated carbon feeding is discontinued Petitioner should both pre and post-chlorinate the supply until the chlorine residual at the point in the system where the previous measurement was made reaches the same level as the sample taken prior to the institution of post-chlorination.
- i. That Petitioner take a sample of its finished water three days after the application of rotenone on its reservoir and forward the sample to the Agency for analysis. The Petitioner shall also forward additional samples of its finished water as may be required by the Agency.

Mr. Dumelle dissents.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted on this 17<sup>th</sup> day of October, 1974 by a vote of 3-1.

  
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