

ILLINOIS POLLUTION CONTROL BOARD
April 4, 1985

CITY OF BATAVIA,)
)
 Petitioner,)
)
 v.) PCB 85-11
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

OPINION AND ORDER OF THE BOARD (by J. Theodore Meyer):

This matter comes before the Board on a petition filed by the City of Batavia (Batavia) seeking a variance from the combined radium standard in 35 Ill. Adm. Code 604.301(a).^{*} The petition was filed on January 25, 1985 and amended on March 18, 1985, pursuant to Board Order (February 7, 1985). The Illinois Environmental Protection Agency (Agency) filed its recommendation that variance be granted on April 3, 1985 subject to conditions. The City waived hearing and none has been held.

The City of Batavia is located in Kane County, Illinois. Batavia owns and operates its water distribution system which provides potable water to approximately 13,000 people, including residential, commercial and industrial users. The system consists of four deep wells, ground level and elevated storage tanks, pumps and distribution facilities.

Section 604.301(a) provides for maximum allowable concentrations for combined radium activity in community water supplies of 5 picoCuries/liter (pCi/l). Analyses done by USEPA and reported to IEPA showed a radium-226 count of 6.6 pCi/l and a radium-228 count at 4.5 pCi/l. The combined count was therefore 11.1 pCi/l, exceeding the 5 pCi/l standard.

^{*}Petitioner originally requested variance from 35 Ill. Adm. Code 604.301(b) (gross alpha). However, the supplemental information provided per Board order refers to the radium standard and Petitioner has indicated to the Agency its intent was to seek variance from the radium standard. Apparently, Batavia is on the restricted status list only for radium. However, the Board notes the likelihood that Batavia is also in violation of gross alpha standards although the only evidence before the Board on this point consists of reported samples taken in 1976. The Board points out that a single sample can serve as the basis for seeking a variance. See City of Rolling Meadows v. IEPA, PCB 80-70, July 10, 1980. The Board does not require an average of four samples obtained at quarterly intervals before a petitioner can demonstrate non-compliance with the rules.

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Batavia was advised of these violations on January 25, 1984 and was placed on the Agency's Restricted Status List for public water supplies. The variance is requested to allow the continued operation of the water supply and distribution system, the expansion or extension of the system as necessary and removal of the facility from the Agency's Restricted Status List. The variance is requested through January 1, 1990.

Batavia contends that it will suffer an arbitrary and unreasonable hardship if it is required to immediately comply with the combined radium standard. To support this contention Batavia has investigated various compliance alternatives but has determined that each is infeasible as requiring expenditures beyond its maximum bonding power.*

Each of the projects considered would cost approximately \$5,000,000. The alternatives investigated included treating the water by softening through ion exchange, addition of calcium oxide or hydroxide, or by reverse osmosis. Each of these treatment methods, however, would require large plant construction estimated at \$5 million. Moreover, a radio-active waste disposal problem would be created by the resultant concentration of radium through the ion exchange process. Additionally, softening processes increase the water sodium content posing a significant risk to persons who are hypertensive or who have heart problems. Batavia also considered the Fox River as a water source but construction of a river water treatment plant was also estimated in excess of \$5 million. Finally, the installation of shallow blending wells was similarly estimated to cost \$4.2 million.

Also investigated was the possibility of using water from Lake Michigan. However, the city does not presently possess an allotment for lake water and does not anticipate receipt of an allotment for five years. Actual hook-up and delivery of the water itself is not estimated to occur for ten years.

Illinois has been delegated primary enforcement responsibility for the radium standard. Under Section 35 of the Environmental Protection Act, Ill. Rev. Stat. 1983, ch. 111-1/2,

*Batavia's maximum bonding power is approximately \$9,280,000 and its total outstanding indebtedness is currently about \$5,975,000. The city also faces infrastructure costs for street bridge and public buildings repair and for sludge digestion facilities totaling approximately \$4,450,000.

In granting what amounts to a federal variance under Section 1415 of the SDWA a State with primary enforcement responsibility must find that:

(a) Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the maximum contaminant levels of the drinking water regulations despite application of the best technology, treatment techniques, and other means, which the (USEPA) Administrator finds are generally available (taking costs into consideration); and

(b) The granting of a variance will not result in an unreasonable risk to the health of persons served by the system. (Section 1415 of the Safe Drinking Water Act, 42 U.S.C. Section 300(g)-4).

As determined previously by the Board in City of Crystal Lake v. I.E.P.A., PCB 84-2, May 29, 1984, since the Administrator has issued no regulation under Section 1415(a)(1)(A) the Board has the authority to grant individual variances consistent with a federal variance to both small and large water systems provided that there is a demonstration of arbitrary or unreasonable hardship. Although the alternative treatment methods may be technically feasible, Batavia has demonstrated that these methods are economically infeasible at this time.

"There is no evidence that granting the variance will result in an "unreasonable risk to the health of persons served by the system" at these concentrations. As noted in the City's petition, the current radium standard is the subject of controversy. The Agency states that although radiation at any level creates some risk, the risk associated with this level is very low. This conclusion reflects research demonstrating that the human body disposes of more radium than originally thought when the federal standard was established. See Village of Lemont v. IEPA, PCB 80-48, May 1, 1981. The current standard is now under review by USEPA.

Considering the great expense to comply and the minimal threat to the public health, the Board finds that to require immediate compliance with the radium standard would impose an arbitrary and unreasonable hardship. Variance is hereby granted from 35 Ill. Adm. Code 604.301(a) subject to conditions.

The Agency recommends a maximum allowable concentration for combined radium of 30 pCi/l. The Board points out that Batavia's current combined concentration is 11.1 pCi/l and as no reason is given for allowing such an increase over current levels, the Board will set a limit of 15 pCi/l.

ORDER

The City of Batavia is hereby granted a variance from 35 Ill. Adm. Code 604.301(a) until January 1, 1990 subject to the following conditions:

1. That the maximum allowable combined concentration for radium-226 and radium-228 in Petitioner's public water supply shall be 15 pCi/l.
2. Within three and one-half months of the grant of the variance, the Petitioner shall secure professional assistance (either from present staff or an outside consultant) in investigating compliance options, including a review of the possibility and feasibility of achieving compliance by blending water from shallow wells with that of its deep wells. Within four and one-half months of the grant of the variance, evidence that such professional assistance has been secured shall be submitted to the Agency's Division of Public Water Supplies, FOS, at 2200 Churchill Road, Springfield, Illinois 62706.
3. As expeditiously after identification of a feasible compliance method as is practicable, but no later than three years after grant of the variance, Petitioner shall submit a program (with increments of progress) for bringing its system into compliance with radiological quality standards to the Agency's Division of Public Water Supplies, Permit Section, at 2200 Churchill Road, Springfield, Illinois 62706.
4. That pursuant to 35 Ill. Adm. Code 606.201, Petitioner shall send to each user of its public water supply a written notice to the effect that Petitioner has been granted by the Pollution Control Board a variance from the radium-226 and radium-228 standard in the first set of water bills issued after the grant of this variance and every three months thereafter. The notice shall state the average content of radium in samples most recently taken since the last notice period.

- 5. Petitioner shall take all reasonable measures with its existing equipment to minimize the level of combined radium-226 and radium-228 in its finished water.
- 6. That within forty-five days of the date of this order, Petitioner shall execute and forward to Wayne Wiemerslage, Enforcement Programs, Illinois Environmental Protection Agency, 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.

CERTIFICATION

I, (We) _____, hereby accept and agree to be bound by all terms and conditions of the Order of the Pollution Control Board in PCB 85-11, April 4, 1985.

Petitioner

Authorized Agent

Title

Date

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 4th day of April, 1985, by a vote of 6-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board