

ILLINOIS POLLUTION CONTROL BOARD  
May 22, 1986

VILLAGE OF BENSENVILLE, )  
 )  
 Petitioner, )  
 )  
 v. )  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

PCB 86-42

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

This matter comes before the Board on a March 18, 1986 petition for variance from restricted status filed by the Village of Bensenville. The Village is requesting variance for a period of five years from 35 Ill. Adm. Code 602.105(a), Standards for Issuance, and from 35 Ill. Adm. Code 602.106(b), Restricted Status, but only to the extent that those rules involve 35 Ill. Adm. Code 604.301(a) (radium content). The Illinois Environmental Protection Agency (Agency) filed its recommendation that variance be granted, subject to conditions, on April 29, 1986. Hearing was waived and none has been held.

The Village of Bensenville is located in DuPage County, Illinois. The Village owns and operates a public water supply distribution system which includes 5 deep wells, pumps and distribution facilities.

The ages and depths of these wells are as follows:

	<u>Depth</u>	<u>Date placed in operation</u>
Well No. 2	1,450 feet	1929
Well No. 3	1,450 feet	1954
Well No. 4	1,450 feet	1961
Well No. 6	1,900 feet	1984
Well No. 7	1,900 feet	1984

The water supply system potable water to a population of 10,270 residential and 1,100 industrial and commercial utility customers representing some 17,800 residents and some 1,100 businesses employing approximately 10,000 people, estimated as of 1984.

The Village was first advised by the Agency that the maximum allowable concentration (MAC) for radium-226 and radium-228 was exceeded by letter dated December 9, 1985. Agency analyses

showed a radium-226 count of 7.1 picoCuries per liter (pCi/l) and a radium-228 count of 2.7 pCi/l for a combined concentration of 9.8 pCi/l in exceedance of the 5 pCi/l standard. The Agency states that the Village has been placed on its April 1986 Restricted Status List.

The Village states the purpose of the requested variance is to allow the continued operation of its water supply and distribution system and expansion or extension to the distribution system as necessary. The Village states that without a variance all construction within its service area requiring extension of the water supply system could not resume thereby hurting prospective home purchasers, business developers and the Village's tax base. The Village argues that the time involved for planning, financing, engineering and construction of water treatment facilities prevents immediate compliance. In the interim, the Village argues that there is a great need for expansion of the water distribution system in order to serve the domestic and fire protection requirements of the local population. (Pet. at 11). To assure an adequate supply the Village has determined that certain improvements will be necessary including: 1) construction of approximately 4,600 feet of 12-inch water main to eliminate severe flow restrictions, 2) construction of 36,250 feet of water main to provide the Village with 12-inch water main loops, and 3) construction of 7,950 feet of water mains to eliminate dead end water mains. This replacement program is scheduled for 1986 through 1990; some of the construction is already underway.

The Village envisions one alternative for complying with the radium standard which is to utilize its allocation for Lake Michigan water to replace its deep wells. The Village states that, in conjunction with DuPage County and several neighboring municipalities, it has begun planning to design, construct, and operate a Lake Michigan water transmission system. The Village and its partners have been securing rights of way to this end, and have executed contracts with several construction contractors. A bond referendum for this purpose was passed in DuPage County in November, 1985. Together the Village and its partners will be investing more than \$350,000,000 in the water transmission system which is expected to meet water needs into the 21st century. Delivery of lake water is expected to begin in 1991 with the system fully operational in 1992. At that time, the Village will cease using its groundwater supplies and rely on Lake Michigan water for the entire community. The Village does not intend to investigate any other compliance alternatives other than switching to Lake Michigan water.

The Agency notes that treatment alternatives including lime or lime soda softening and ion-exchange water softening do exist. These methods are approximately 90% effective, however,

lime softening creates large quantities of sludge and concentrates the radium creating waste disposal problems. Ion exchange softeners utilizing salt significantly increase the sodium content of water posing a significant risk to persons who are hypertensive or who have heart problems. Ion exchangers also concentrate the radium in the waste stream and some radioactivity remains in the exchange material creating additional hazards and posing waste disposal problems. The Village argues that the expense associated with utilizing a treatment alternative is unwarranted for the limited time period between issuance of the variance and the delivery of Lake Michigan water.

The Village has not performed a formal assessment of the environmental effect of this variance, but refers the Board to testimony and exhibits presented by Dr. Richard E. Toohey, Ph.D. and Dr. James Stebbings, Ph.D., both of Argonne National Laboratory, in R85-14, Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code 602.105 and 602.106. This testimony is cited for the proposition that granting of the variance will not cause any significant harm to the environment or the people served by the water system for the limited time period of the requested variance. The Agency agrees with this assessment. (Rec. at 5-6).

The Board finds that it would pose an arbitrary or unreasonable hardship upon the Village to require treatment of its water supply to avoid the effect of being on Restricted Status given the anticipated delivery of Lake Michigan water by the expiration of this variance. The Board finds that this hardship outweighs the minimal environmental impact for the time period of the variance, thus the Board will grant the Village's request for variance. The Board would like to point out, however, that it shares the Agency's concern that Petitioner did not comply with its prior gross alpha particle activity variance granted in PCB 80-151. This variance expired as of January 1, 1983 but required, inter alia, the Village to submit quarterly reports concerning its efforts to obtain Lake Michigan water, to contact the Agency semi-annually concerning the availability of waste disposal sites to accept radioactive wastes generated through softening, and to commence testing for combined radium. The Village's current variance petition does not explain why the Village failed to comply with these conditions. Although this variance is not from the same standard as that granted in PCB 80-51, the Board wishes to strongly impress upon the Village the necessity of complying with all the conditions imposed herein.

Lastly, the Board would like to note that the United States Environmental Agency (USEPA) has challenged several Board issued variances from the radiological standards as being inconsistent with the Safe Drinking Water Act. However, the variance requested here is solely from the state regulations

establishing the restricted status mechanism and not from the national primary drinking water regulations. Thus, this variance will not insulate the Village from the possibility of an enforcement action for violations of the underlying radiological standards.

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

ORDER

The Village of Bensenville is hereby granted variance from 35 Ill. Adm. Code 602.106(b) and 602.105(a) but only insofar those rules involve 35 Ill. Adm. Code 604.301(a), combined radium, subject to the following conditions:

1. This variance expires when analysis pursuant to 35 Ill. Adm. Code 605.105(a) show compliance with 35 Ill. Adm. Code 604.301(a) or when five years has passed from grant of this variance, whichever comes first;
2. In consultation with the Agency, Petitioner shall within thirty days initiate a sampling and analysis program at its own cost to determine as accurately as possible the level of radioactivity, including radium-226 and radium-228, in its wells and finished water. Analyses shall be reported within 14 days of receipt of said analysis.
3. Petitioner shall continue its effort to receive a Lake Michigan water allocation and shall report quarterly to the Agency as to the progress of its efforts.
4. Compliance shall be achieved with the maximum allowable concentration for combined radium no later than five years from grant of this variance.
5. Pursuant to 35 Ill. Adm. Code 606.201, in its first set of water bills or within three months after the date of this order, whichever occurs first, and every three months thereafter, Petitioner will 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 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 35 Ill. Adm. Code 602.106(b), Restricted Status, as it relates to the contaminant in question.
6. Pursuant to 35 Ill. Adm. Code 606.201, in its first set of water bills or within three months after the date of

this order, whichever occurs first, and every three months thereafter, Petitioner will send to each user of its public water supply a written notice to the effect that Petitioner is not in compliance with the standard in question. The notice shall state the average content of the contaminant in question in samples taken since the last notice period during which samples were taken.

- 7. Petitioner shall take all reasonable measures with its existing equipment to minimize the level of its contaminant in question in its finished water.
- 8. Within 45 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. The form of Certification shall be as follows:

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 86-42, May 22, 1986.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
Authorized Agent

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

IT IS SO ORDERED.

J. D. Dumelle and B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 22 day of May, 1986, by a vote of 5-2.

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