

ILLINOIS POLLUTION CONTROL BOARD  
May 22, 1986

CITY OF BATAVIA, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 86-36  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter comes before the Board on the March 10, 1986 petition of the City of Batavia for variance from restricted status until January 1, 1990. The City requests variance from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 35 Ill. Adm. Code 602.106(b), Restricted Status, but only to the extent that those rules relate to 35 Ill. Adm. Code 604.301(a), combined radium-226 and radium-228. On April 15, 1986, the Illinois Environmental Protection Agency (Agency) filed a recommendation that variance be granted subject to certain conditions. Hearing was waived and none was held.

The City presently has a variance granted in PCB 85-11, April 4, 1985, from the maximum allowable concentration (MAC) for combined radium set in 35 Ill. Adm. Code 604.301(a) of 5 pico Curies per liter (pCi/l). The variance set a combined radium level of 15 pCi/l and is to expire on January 1, 1990. Batavia notes that the issuance of this variance is being contested as improper by the United States Environmental Protection Agency. Accordingly, the City is requesting the Board to amend the variance granted from the radium standard in PCB 85-11 to a variance from restricted status only. The City has requested incorporation of the opinion and record in PCB 85-11 as proof of an arbitrary or unreasonable hardship imposed by the conditions of Restricted Status.

The City of Batavia is located in Kane County, Illinois. It owns and operates its water distribution system which provides portable 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.

Sampling conducted by USEPA and reported to the Agency showed a radium-226 count of 6.6 pCi/l and a radium-228 count of 4.5 pCi/l for a combined level of 11.1 pCi/l in exceedance of the

5 pCi/l standard. Batavia was advised of these violations on January 25, 1984 and was placed on the Agency's restricted status list for public water supplies. This status has been lifted by grant of the variance in PCB 85-11.

Batavia has investigated various compliance alternatives including treating its raw water by softening through ion exchange, addition of calcium oxide or hydroxide, or by reverse osmosis. As noted in PCB 85-11, however, each of these treatment options would require large plant construction estimated at \$5 million which expenditures would cause the City to exceed its maximum bonding power. In addition, the ion exchange process would create a waste disposal problem while softening processes increase the sodium content of the water thereby posing a significant risk to people who are hypertensive or have heart problems.

Batavia has also investigated alternate water sources such as the Fox River and Lake Michigan. However, the City does not currently possess an allotment for lake water and does not anticipate receipt of such an allotment for five years. Actual hook-up and delivery of the water would require an additional five years. The possibility of using the Fox River as a water source was rejected as infeasible because it would require the construction of a river water treatment plant estimated at over \$5 million.

In its current petition, Batavia states that it has determined that the best compliance option is to blend the radium tainted deep well water with shallow well water. To this end, Batavia has already invested \$6,325.00 as its share of a cooperative study of the geophysical and hydrologic properties of the shallow groundwater resources in Kane County. The study has tentatively located a "very good" shallow aquifer in the buried Newark Bedrock Valley about 1 1/2 miles west of the City's corporate limits on the west side of the Fox River. The study is scheduled for completion in 1987.

As to the environmental impact of granting the variance, the Agency states that while radiation at any level creates some risk, the risk associated with this level is very low. The Agency states that the maximum allowable concentration for combined radium is currently under review at the federal level although no conclusions are expected before 1987 or early 1988. The Agency also cites the testimony and exhibits presented by Richard E. Toohey, Ph.D. of the Argonne National Laboratory in R85-14, Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code 602.105 and 602.106 for the proposition that:

an incremental increase in the allowable concentration for the contaminant in question even up to a maximum of four times the level

of the maximum allowable concentration ("MAC") for the contaminant in question, should cause no significant health risk for the limited population served by new water main extensions for the time period of this recommended variance.  
(Rec. at 6) (emphasis in original).

The Agency also agrees with the City's assessment of compliance alternatives and their costs and recommends that variance be granted. (Rec. at 6-7). The Board previously found in PCB 85-11 that compliance with the MAC for combined radium would impose an arbitrary or unreasonable hardship "[c]onsidering the great expense to comply and the minimal threat to the public health." PCB 85-11, 63 PCB 323, 325, April 4, 1985. There is no evidence to contravene this finding today. In fact, Batavia is now seeking a variance only from restricted status which is more limited in scope than the variance currently in operation under PCB 85-11. This request is apparently precipitated by USEPA's proposal to revoke several variances, including Batavia's, as published at 51 Fed. Reg. 3253, January 24, 1986. The Agency states that the uncertainty caused by USEPA's proposed revocation has jeopardized future construction and caused confusion among developers.

Batavia's requested variance here is from the state regulations establishing the restricted status mechanism and not from the national primary drinking water regulations. Thus, the variance will not insulate the City from the possibility of enforcement actions for violations of the underlying radiological standards.

The Board concludes that in light of the minimal environmental impact for the time period of this variance, the cost to the City of treating its current water supply and the likelihood of confusion over potential USEPA variance revocations that denial of variance from the effects of Restricted Status would impose an arbitrary or unreasonable hardship upon Petitioner. Thus, the Board will grant the requested variance, subject to conditions. However, as Petitioner has previously been granted relief from the underlying radiological standard in PCB 85-11 by presenting adequate proof under state law, the Board sees no reason to revoke this relief. Rather, the Board will treat Batavia's request as a petition to terminate the previous variance effective as of the effective date of this variance. That petition is hereby granted. The Board points out that this termination means that any conditions imposed in PCB 85-11 are superseded by those imposed here.

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

ORDER

The variance granted to the City of Batavia in PCB 85-11, April 4, 1985 is hereby terminated. The City of Batavia is hereby granted a variance from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(b), Restricted Status, but only as they relate to the contaminant in question, subject to the following conditions:

1. That this variance expires when analysis pursuant to 35 Ill. Code 605.105(a) shows compliance with the MAC in question or on January 1, 1990, whichever comes first.
2. In consultation with the Agency, Petitioner shall continue its sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water. Testing for radium 226 and 228 shall be continued.
3. Petitioner shall continue to have professional assistance (either from present staff or an outside consultant) in investigating compliance options, including the possibility and feasibility of achieving compliance by blending water from its shallow well(s) with that of its deep well(s).
4. Within nine months of the grant of the variance, the Petitioner shall complete investigating compliance methods, including those treatment techniques described in the Manual of Treatment Techniques for Meeting the Interim Primary Drinking Water Regulations, USEPA, May 1977, EPA-600/8-77-005, and prepare a detailed Compliance Report showing how compliance shall be achieved with the shortest practicable time, but not later than January 1, 1990.
5. This Compliance Report shall be submitted within ten months of the grant of this variance to IEPA, DPWS.
6. Within three months of its submission, or within any written extension of approval time made by IEPA, then within three months after said time Petitioner shall apply to IEPA, DPWS, Permit Section, for all permits necessary for construction of installations, changes or additions to the Petitioner's public water supply needed for achieving compliance with the maximum allowable concentration for the standard in question.
7. Within three months after each construction permit is issued by IEPA, DPWS, Petitioner shall advertise for bids from contractors to do the necessary work described

in the construction permit and shall accept appropriate bids within a reasonable time.

8. Construction allowed on said construction permits shall begin within a reasonable time of bids accepted, but in any case, construction of all installations, changes or additions necessary to achieve compliance with the maximum allowable concentration in question shall begin no later than two and one-half years from the grant of this variance and shall be completed no later than January 1, 1990.
9. Compliance shall be achieved with the maximum allowable concentration in question no later than January 1, 1990.
10. Pursuant to 35 Ill. Adm. Code 606.201, in its first set of water bills or within three months after the date of this Variance 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. 602.105(a) Standards of Issuance and 35 Ill. Adm. Code 602.106(b) Restricted Status, as it relates to the MAC standard in question.
11. 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.
12. The Petitioner shall take all reasonable measures with its existing equipment to minimize the level of contaminant in question in its finished water.
13. 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. The form of the 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 86-36, 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, Clerk  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board