

ILLINOIS POLLUTION CONTROL BOARD
September 25, 1986

VILLAGE OF OAK BROOK)	
A MUNICIPAL CORPORATION,)	
)	
Petitioner,)	
)	
v.)	PCB 86-97
)	
ILLINOIS ENVIRONMENTAL PROTECTION)	
AGENCY,)	
)	
Respondent.)	

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

This matter comes before the Board upon a July 1, 1986 petition for variance from restricted status filed by the Village of Oak Brook. 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) (combined radium-226 and radium-228). On July 11, the Board, by its own motion, set this matter for hearing. On July 31, the Board denied Petitioner's motion to waive and cancel the hearing, which had been scheduled for August 8, 1986. The Illinois Environmental Protection Agency (Agency) filed its variance recommendation with the Board on August 4, 1986. The Agency recommended granting the variance subject to certain conditions. On August 8, 1986, the hearing was held, at which members of the public were present.

The Village of Oak Brook (the Village) is located in DuPage County, Illinois. The Village owns and operates a public water supply and distribution system which includes five deep wells, one shallow well, pumps and distribution facilities. (Pet. p. 4).

The depths, ages, production, and location of these wells in Oak Brook are as follows:

<u>Well No.</u>	<u>Depth</u>	<u>Placed in Operation</u>	<u>Gallons per Minute</u>	<u>Location</u>
1	1521'	1961	834	1219 22nd St.
2	1540'	1961	887	1519 22nd St.
3	250'	1970	1000	2213 Tower Dr
5	1502'	1976	1313	2011 Windsor Dr.
6	1522'	1977	1256	2915 Oakbrook Rd.
7	1513'	1978	1160	2415 Midwest Rd.

(Pet p. 5)

The Village provides potable water to 4,397 residential and 372 commercial customers. This represents a population served by the well and distribution system of approximately 20,000. (Pet. p. 4). It should be noted that in PCB 82-27, the Board granted the Village a variance for gross alpha particle activity for the period from June 10, 1982 to January 1, 1986. (Pet. p. 9). The Village, however, attained compliance with that standard about one year after the variance had been granted. (R. p. 13).

An Agency letter dated October 4, 1985 first advised the Village that the maximum allowable concentration (MAC) for radium-226 and radium-228 was exceeded. The Agency report indicated a combined radium content concentration of 7 pCi/l. (Pet. p. 5). That concentration is 2 pCi/l in excess of the 5 pCi/l standard. 35 Ill. Adm. Code 604.301(a).

The Village claims that the variance would allow water main extensions and development. It specifically cites the I.C. Harbour Office Building (a two story, 65,000 square foot office building, currently under construction (R. p. 27)) as a new user if the variance is granted. Due to the Village's Restricted Status, the Agency has refused to grant a permit for the specific water main extension that would serve the I.C. Harbour Office Building. (Pet. p. 5). The Harbour building project manager claims that if the variance is denied, there would be "no economically feasible way to supply water to the project." (R. p. 29).

The Village also emphasizes that as a member of the DuPage County Water Commission, it fully expects to replace its well water supply with water taken from Lake Michigan by 1992 (Pet. p. 7) or late 1991 (R. p. 16). It points out that once it begins using Lake Michigan water, the water supply will no longer exceed the radium MAC standards. (Pet. p. 7). The Village contends that the DuPage Water Commission has already executed a contract with the City of Chicago for providing Lake Michigan water, and the members of the Commission are investing over \$350,000,000 in a transportation system to deliver the water from Chicago to DuPage County. (Pet. p. 6). The DuPage Water Commission asserts that 12 percent of the transportation line has already been installed. Also, the Village "should be one of the first communities served by the Commission's system," when it comes on line after the "latter half of 1991." (Letter from James J. Holzwart, DuPage Water Commission to Wayne Wiemerslage, IEPA, dated July 21, 1986).

The Village discussed two possible primary treatment methods that could be used to remove most of the radium. The first is lime softening. This method can remove 80 to 90 percent of the radium. However, the Village points out that this method creates large quantities of sludge and concentrates that need proper disposal. The Village claims that such disposal will cause further problems and expenses. The second treatment method is ion exchange softening which can remove more than 90 percent of the radium. However, using this method, the sodium content of the water increases greatly. The Village contends that this could add further risk to persons who are

hypertensive or who have heart problems. The waste stream from this method also contains the concentrated radioactivity obtained from the exchange, which the Village claims may be more of a hazard than the original water with radium. Also it is contended that the waste product is difficult to dispose of. The softener, itself, also retains some of the radioactivity in the ion material. The Village concludes that this would create a hazard to anyone working on the softener as well as creating additional problems for disposal of the ion exchange material. (Pet. p. 7,8).

The Village has not conducted a formal assessment of the effect of this variance on the environment. However, it refers the Board to and incorporates by reference the testimony and exhibits presented by Richard E. Toohey, Ph.D. and James Stebbings, Ph.D., both of Argonne National Laboratory, on July 30 and August 2, 1985 in R85-14, Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code 602.105 and 602.106. (Pet. p. 8).

In its recommendation, favoring the granting of this five-year variance, the Agency concludes that "an incremental increase in the allowable concentration for the contaminant in question even up to a maximum of four times the 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. p. 7). The Agency, then lists nine conditions under which the variance should be granted.

The Village claims that if it was not granted the variance, it would suffer arbitrary or unreasonable hardship. Without a variance, most further construction and development within the Village would be halted. The Village asserts that future homeowners as well as business developers would be harmed by this. This in turn, the Village claims, would also have a negative impact upon the Village's tax base. Even if the construction of treatment facilities was begun, the Village believes that it would still need the ability to expand its water system during the construction period. Also, the Village views the construction of such treatment facilities as an arbitrary or unreasonable hardship, because the facilities would be rendered obsolete as soon as the Village transfers to a Lake Michigan water supply, which could occur as soon as 1992. (Pet. p. 11).

Findings

The Board agrees that the Village will suffer hardship if this variance is not granted. Without the variance, most further expansion and development of the Village's water distribution system will cease. Such an effect will adversely impact upon the Village and its economy. Also specific developers, who began their developments prior to restricted status being imposed, will suffer greatly if a variance is not granted. In light of the fact that the variance will have minimal environmental impact, it would also be unreasonable for the Village to build treatment facilities and later

abandon them when the Village replaces its well water supply with Lake Michigan water. These factors are viewed with the knowledge that the Village only recently discovered that its water exceeded the combined radium-226 and radium-228 MAC. There is also no evidence of bad faith or delay on the part of the Village. Assessing the situation in total, the Board finds that the Village would suffer arbitrary or unreasonable hardship if denied this variance.

The Board notes that the Village is committed to a firm compliance plan. Specifically, the Board is persuaded that the Village will diligently continue the process by which it will obtain Lake Michigan water through the Village's membership in the DuPage Water Commission. The Board also finds that a five-year variance from the combined radium standard would have minimal environmental impact. The Village expects to replace its well water with Lake Michigan water by 1992 or late 1991 at the earliest. Once such a replacement is made, the Village will be in compliance with the MAC. The Board notes that a short variance extension may be needed if Lake Michigan water is available after September 25, 1991.

Given the arbitrary or unreasonable hardship, minimal environmental impact and the Village's strong commitment to a firm compliance plan, the Board will grant the Village a five-year variance contingent upon conditions which are set forth in the Order. The Board cannot overemphasize the importance of the condition requiring the Village to "take all necessary and appropriate steps to obtain sufficient Lake Michigan water through the DuPage Water Commission..." (Infra, Order pt. 3). If, for any reason, the Village fails to fulfill this or any other condition or withdraws from its present commitment to this compliance plan, any interested person could commence an enforcement proceeding against the Village. It should also be noted that the Board is deleting the Agency's recommended condition which sets a 15 pCi/l maximum limit. The Board is granting a variance to the Village relieving it of its restricted status due to combined radium content. The Village cannot control the combined radium content as it occurs naturally in the Village wells. Consequently, the Board will not set a maximum allowable concentration of combined radium as a condition for this variance from restricted status.

The Board is also requiring that the Village, on a quarterly basis, sample and have analyzed water from each of its wells evaluating the water for combined radium content. The Village shall maintain this data for each well and also forward copies of it to the Agency. After considering this data, the Village shall utilize, to the maximum extent feasible, the water from wells with lower combined radium levels as opposed to wells with higher combined radium levels. Such action will help to minimize exposure of the Village's water users to radium while the variance is operative.

The Board would also like to point out that the United States Environmental Protection Agency (USEPA) has challenged several Board issued variances from the radiological standards as being

inconsistent with the state's obligation under the Safe Drinking Water Act (SDWA). 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. Consequently, this variance will not insulate the Village from the possibility of enforcement 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 Oak Brook is hereby granted a variance from 35 Ill. Adm. Code 602.105(a) Standards of Issuance, and 602.106(b) Restricted Status, as these rules relate to exceedances from the combined radium-226 and radium-228 limitation of 35 Ill. Adm. Code 604.301(a) subject to the following conditions:

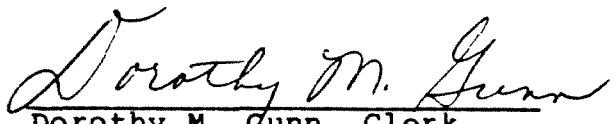
- 1) That this variance expires on September 25, 1991.
- 2) In consultation with the Agency, Petitioner shall continue its sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water. Until this variance expires, Petitioner shall collect quarterly samples of its water from its distribution system, shall composite and shall analyze them annually by a laboratory certified by the State of Illinois for radiological analysis so as to determine the concentration of the contaminant in question. The results of the analyses shall be reported to the Water Quality Unit, Division of Public Water Supplies, 2200 Churchill Road, IEPA, Springfield, Illinois 62706, within 30 days of receipt of each analysis. At the option of Petitioner, the quarterly samples may be analyzed when collected. The running average of the most recent four quarterly sample results shall be reported to the above address within 30 days of receipt of the most recent quarterly sample. Also, on a quarterly basis, the Petitioner shall sample and have analyzed, for combined radium content, water from each individual well. The data for each well shall be maintained by the Petitioner as well as copied and forwarded to the Agency at the above address. After considering the individual well sample analyses, the Petitioner shall utilize, to the maximum extent feasible, water from wells which have relatively lower combined radium content in order to minimize radium exposure to the Petitioner's water users.
- 3) Petitioner shall take all necessary and appropriate steps to obtain sufficient Lake Michigan water through the DuPage Water Commission so that the concentration of combined radium 226 and 228 in Petitioner's distribution system shall not exceed 5 pCi/l five years from the grant of this variance.

- 4) Compliance shall be achieved with the maximum allowable concentration in question no later than September 25, 1991.
- 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 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. Code 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.
- 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 combined radium standard. 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 and the applicable standard.
- 7) That Petitioner shall take all reasonable measures with its existing equipment to minimize the level of contaminant in question in its finished water during the pendency of this variance.
- 8) 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.

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 25th day of September, 1986, by a vote of 4-2.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board