

ILLINOIS POLLUTION CONTROL BOARD
August 5, 1982

CITIZENS UTILITIES COMPANY OF ILLINOIS,)
)
) Petitioner,)
)
) v.) PCB 82-63
)
) ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,)
)
) Respondent.)

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

This matter comes before the Board on the petition for variance of Citizens Utilities Company of Illinois (Citizens) filed May 6, 1982 as amended June 4, 1982. Citizens seeks variance from the 15 pCi/l gross alpha particle activity and 5 pCi/l radium-226, 228 limitations of Rule 304(C)(1) of Chapter 6: Public Water Supplies. On June 22, 1982 the Environmental Protection Agency (Agency) filed its Recommendation in support of grant of variance until January 1, 1984. Hearing was waived and none has been held.

Citizens seeks variance on behalf of one of its service areas, the "Chicago Suburban" area serving 7,090 water service connections in portions of the Village of Mt. Prospect, the City of Prospect Heights, and unincorporated areas in Wheeling Township. The water needs of these users are supplied by four deep (1320' to 1468') wells, Nos. 2, 4, 5, and 6; while an additional shallow (213') well, No. 1, exists, it is not normally used due to the limited production capacity of the aquifer. A sixth well has been abandoned.

The gross alpha particle activity level of each deep well was determined by the Agency in 1974 or 1975; no data is available for Well No. 1. The respective activity levels for Wells 2, 4, 5, 6 in pCi/l are, respectively, 19.7 ± 4.2 , 19.1 ± 5.1 , 19.9 ± 4.9 , 11.2 ± 3.6 . In October, 1979, Citizens had Wells 2, 4, and 6 tested for gross alpha and radium 226 and 228 levels by Eberline, a private laboratory. In pCi/l, Well No. 2 showed levels of gross alpha of 22 ± 6 , radium 226 of 3.6 ± 0.2 and radium 228 of 4.4 ± 1.8 ; Well No. 4, in two tests showed levels of gross alpha of 20 ± 6 and 19 ± 2 , radium 226 of 2.8 ± 0.2 and 2.9 ± 0.1 , and radium 228 of 3.1 ± 2.1 and 5.0 ± 2.0 ; and Well No. 6 showed levels of gross alpha of 14 ± 2 , radium 226 of 3.3 ± 0.2 and radium 228 of 3.9 ± 2.3 .

An Agency analysis of a composite of four quarterly distribution system samples taken between November, 1980 and July, 1981 showed a gross alpha level of 16.0 ± 3.99 , but did not report radium levels. Subsequently, Agency single samples showed levels of 1.58 ± 1.44 pCi/l (sic) and 14.0 ± 3.83 pCi/l.

Citizens believed that there is no alternative complying groundwater source available to it. The shallow aquifer is viewed as infeasible either as a total replacement source or as a blending source, due to its unreliable production capacity, while the deep aquifer is generally believed to exceed radiological limitations. Compliance could be achieved by installation of treatment facilities at all 4 wells at a total capital cost of \$994,000. However, this installation and operation would impose additional yearly revenue requirements of \$535,091, which would be passed on to Citizens' customers. Each would be required to pay an additional \$73 per year, a 42% increase in rates.

Citizens' preferred compliance option is replacement of its well water supply with Lake Michigan water. It has received an allocation available to it in 1984, and is presently negotiating with two (unnamed) regional water supply systems concerning delivery. Depending upon with which system Citizens' contracts, this water could be available by November, 1983 or by July, 1984.

Finally, Citizens states its belief that no unreasonable health risks would be incurred by its customers if variance is granted. In support thereof, Citizens presents a statement by Dr. R.E. Rowland recommending an increase in the allowable radiological quality levels, and reminds the Board that it has taken prior notice of Dr. Rowland's opinions.

The Agency supports grant of variance until January 1, 1984, in view of the fact that no commitment has been made to a regional system which would make relief available until January 1, 1986. It suggests that since each of Citizens' wells has elevated radiological levels, that blending is unlikely to be a productive enterprise.

The Board finds that to require immediate compliance would impose an arbitrary or unreasonable hardship, particularly since there would appear to be little immediate threat to health from consumption of water containing radioactivity at the levels present in Citizens' water (see Village of Kirkwood v. IEPA, PCB 81-111, December 3, 1981 and Village of Lemont v. IEPA, PCB 80-48, April 30, 1981). Variance is granted until January 1, 1984 subject to the conditions outlined in the attached Order.

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

ORDER

1. Petitioner, Citizens Utilities Company of Illinois, is granted a variance from the 15 pCi/l gross alpha particle activity and 5 pCi/l radium-226, 228 limitations of Rule 304(C)(1)(a-b) of Chapter 6: Public Water Supply until January 1, 1984, subject to the following conditions:

a. Petitioner shall, in consultation with the Agency, 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.

b. Petitioner shall continue to pursue the option of replacing its well water supply with Lake Michigan water. As expeditiously after identification of a feasible compliance method as is practicable, but no later than January 1, 1984, Petitioner shall submit, to the Agency, a program (with increments of progress) for bringing its system into compliance with radiological quality standards.

c. Petitioner shall take all reasonable measures with its existing equipment to minimize the level of radioactivity in its water supply.

d. Pursuant to Rule 313(D)(1) of Chapter 6, 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 the 5 pCi/l radium-226, 228 standard and 15 pCi/l maximum gross alpha particle activity standard. The notice shall state the average content of gross alpha particle activity in samples taken since the last notice period during which samples were taken.

2. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, PWS Enforcement Programs, 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 certificate shall be as follows:

CERTIFICATE

I, (We), _____, having read the Order of the Illinois Pollution Control Board, in PCB 82-63 dated _____, understand and accept the said Order realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

Petitioner

By: Authorized Agent

Title

Date

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 5th day of August, 1982 by a vote of 5-0.

Christan L. Moffett
Christan L. Moffett, Clerk
Illinois Pollution Control Board