

Village now seeks variance in order to qualify for construction and operating permits for water main extensions and for additional construction and initial operating permits for Wells 6 and 7, and also to continue operating Wells 2, 3, 4.

The Agency's analysis for gross alpha particle activity of a sample taken from the Village's distribution system March 28, 1979 showed activity of $18.2 \text{ pCi/l} \pm 4.5 \text{ pCi/l}$; a sample taken June 17, 1979 showed activity of 13.2 pCi/l (sic). Agency records disclose considerably higher activity levels in single samples taken in 1975 from Well 2 ($32.0 \pm 7.1 \text{ pCi/l}$), Well 3 ($46.5 \pm 4.1 \text{ pCi/l}$), Well 4 (43.0 pCi/l)(sic), and Well 5 ($40.0 \pm 6.1 \text{ pCi/l}$). The Agency admits that it is difficult to reconcile the 1975 results with those of 1979, and that this discrepancy confirms the need for additional and regular sampling and radiological analysis. No tests have yet been done for radium 226 and 228 (Rec. 4).

While the Board agrees that further tests are needed to determine more precisely the level of radiation in Petitioner's water supply, the Board finds that the 1975 and 1979 test results are sufficient to indicate non-compliance with Rule 304 and thus the need for variance relief. (See City of Rolling Meadows v. EPA, PCB 80-70, July 14, 1980, interpreting Rule 309.)

There are four known methods of reaching compliance with radium standards. Bensenville's prospects for using the first of these, dilution of deep well water with water obtained from shallow wells from a shallow aquifer, "are not very favorable," according to the Illinois State Water Survey, due to the area's geological characteristics (Pet. Ex. 4, Rec. 3). The second and third involve the use of a zeolite or lime softening treatment. Zeolite softening is discouraged by the Agency because of the lack of Illinois disposal sites for the waste product generated and because of "the likelihood that USEPA will promulgate a sodium standard in the reasonably near future" (Rec. 4). This method also is costly. Petitioner estimated a cost of \$200,000 per well, and cited Agency estimates of \$150,000 to \$400,00 per well for similar facilities plus the cost of out-of-state waste disposal. Lime softening is even more expensive, and there are also waste disposal problems. Lime softening is, however, favored by the Agency if another source of water is unavailable (Pet. 5-6, Rec. 4).

The fourth compliance method is development of a replacement water supply. The Village has taken steps in this direction. The Village has already obtained one full allocation of Lake Michigan water sufficient to remove their present dependence on well water; the Division of Waterways of the Illinois Dept. of Transportation has recommended that the Village obtain another full allocation, and the Village intends to do so this summer. Bensenville is also a member of the DuPage County Water Commission and has participated in the Commission's study of alternative means of delivering Lake Michigan water to DuPage County sites.

Currently it is projected that the most optimum completion date of the transport system ultimately selected will be late 1983 (Pet. 6-7). The costs for the various proposed regional systems range from \$46-421 million (Am. Pet. 6).

The Agency confirms Bensenville's membership in the regional water commission, and suggests that variance be granted until January 1, 1983, in accord with Section 14(a)(2)(b) of the Safe Drinking Water Act, which allows exemptions until that time for water systems which have entered into an enforceable agreement to become part of a regional water system (Rec. 3).

Finally, the Agency states that "any health threats to consumers" are "at worst minimal and would be long range in their effect if there is any effect at all" (Rec. 4, and Attachment A).

Variance is granted until January 1, 1983. The Board finds that the public health risks of this relatively short variance are low. The costs of immediate compliance through blending or softening treatments are high, and Bensenville's need for immediate new well water sources is great. Bensenville will be required to continue to pursue the Lake Michigan allocation and transport alternatives, and to contact the Agency twice yearly regarding the availability of landfill sites able to accept the wastes generated by the lime softening process. Bensenville will also be required to continue testing its current water supply and to periodically advise system users of this variance.

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

ORDER

Petitioner, the Village of Bensenville, is granted variance from the 15 pCi/l gross alpha particle activity limitation of Rule 304(C)(1) of Chapter 6: Public Water Supplies, until January 1, 1983, subject to the following conditions:

1. 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 commenced.
2. Petitioner shall contact the Agency twice yearly to learn which Illinois landfill sites if any are able to accept wastes generated by the lime softening process.
3. Petitioner shall continue its efforts to receive a Lake Michigan water allocation and shall report quarterly to the Agency as to the progress of its efforts.

- 4. Petitioner shall provide notice of this variance to its customers in writing at least once every three months in accordance with Chapter 6, Rule 313(D)(1).
- 5. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Division of Public Water Supplies, 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:

CERTIFICATION

I, (We), _____, having read and fully understanding the Order in PCB 80-51, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED _____

TITLE _____

DATE _____

IT IS SO ORDERED.

Mr. Dumelle concurs.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 21st day of August, 1980 by a vote of 5-0.

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