

ILLINOIS POLLUTION CONTROL BOARD
June 30, 1988

VILLAGE OF CHANNAHON)
)
 Petitioner,)
)
 v.) PCB 88-42
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

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

This matter is before the Board on petition for variance filed by the Village of Channahon (Village) on March 4, 1988 as amended May 5, 1988. The Village seeks variance until July 1, 1991 from 35 Ill. Adm. Code 602.105(a) "Standards for Issuance" and from 35 Ill. Adm. Code 602.106(b) "Restricted Status", to the extent these rules relate to the 5.0 pCi/l standard for combined radium-226 and radium-228 (combined radium) contained in 35 Ill. Adm. Code 604.301(a) and the 15.0 pCi/l standard for gross alpha particle activity contained in 35 Ill. Adm. Code 604.301(b).

On June 6, 1988, the Village filed a motion for expedited consideration in this matter, which gives, among other reasons for its request, the fact that the Village has received grant funds for extension of its water system to serve an industrial development. On June 10, 1988, the Illinois Environmental Protection Agency (Agency) filed its Recommendation in support of grant of variance. Hearing was waived and none has been held. Decision in this case has been expedited as requested by the Village.

The System and History of Violation

The Village of Channahon, whose 1980 population was 3788, supplies potable water to 80 customers, all of which are residential ones located within its corporate limits; the total population served by the water supply system is 280 residents. The Village's water supply system consists of one deep well, placed into service in 1978, a 250,000 gallon elevated water storage tank, pumps and distribution facilities.

The Village learned of exceedances of the gross alpha standard in 1984, and of the combined radium standard in 1986; this is its first petition for variance from either standard. As

to gross alpha, by letter of December 18, 1984, the Agency advised the Village of its violation of the standard. An analysis of an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals showed gross alpha particle activity content of 17.4 pCi/l, 2.4 pCi/l over the standard of 15.0. By letter of January 9, 1985, the Agency placed the Village on restricted status for this contaminant. The Village asserts that compliance with gross alpha standard may or may not have been achieved to date. Single samples, rather than composite samples were analyzed in August 1986, and August 21, 1987 by the Agency with gross alpha particle activity with concentrations of 8 pCi/l and 7 pCi/l respectively.

As to combined radium, by letter of August 5, 1986, the Agency advised the Village of its violation of the standard. An analysis of an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals showed a radium-226 content of 6.2 pCi/l and a radium-228 content of 4.4 pCi/l. The combined radium content of 10.6 pCi/l is 5.6 pCi/l over the standard of 5.0 pCi/l. By letter of August 14, 1986, the Agency placed the Village on restricted status for this contaminant. The Village continues to be on restricted status for gross alpha as well as combined radium.

On January 22, 1988, as part of its "enhanced enforcement" program, the Agency sent the Village an Enforcement Notice Letter and Letter of Commitment. The enforcement notice letter advised the Village, as required by Section 31(d) of the Act, that the Agency intended to initiate formal enforcement proceedings. It went on to note the Village's opportunity to meet with the Agency and to resolve the matter by signing a Letter of Commitment to a compliance program. The draft Letter of Commitment would require that compliance be obtained by January 22, 1992, and would require the Village to develop and implement a compliance program, consistent with interim compliance milestones/deadlines. The draft Letter of Commitment goes on to explain that the compliance plan would be incorporated into a Stipulation which, along with a Complaint, would be submitted to the Board. Paragraph 9 of the Letter states that the Board's Order would not include civil penalties for past penalties, but would include provisions for contingent penalties for missed compliance milestones/deadlines.

The Agency notes in its Recommendation that the Village has not executed a draft Letter of Commitment. The Board wishes to make clear at this juncture that there is no linkage between a petition for variance and any Agency pre-enforcement activity in this or any other case; the Board is required by Section 37 of the Act to determine on the basis of the pleadings before the Board whether denial of variance would impose an arbitrary or

unreasonable hardship. The Board also wishes to note that the Letter of Commitment, particularly in paragraphs 9 and 10, could lead a reader to conclude, incorrectly, that the Board had predetermined that it would enter the Order described. The Board has made no such determination, and has not as yet been presented with any enforcement case in which the parties have sought to have such a stipulation incorporated into a Board Order. The Board is required by Section 33 of the Act to base its decisions on enforcement cases solely on the record before it at that time; it is not appropriate for the Board to consider here the enforcement aspects of the draft Letter of Commitment.

Proposed Compliance Plan

The Village currently has no controls in place for treatment of the waters of its single deep well to achieve compliance with the radiological quality standards, and has made no past efforts to achieve compliance. The Village has not yet chosen a compliance option, and has stated its intention to retain a consulting engineer to review and evaluate its situation over the course of the next six months. At this juncture, the Village cannot provide accurate costs or time figures, but states that it presently envisions implementing one of three compliance options, with Option A being the currently preferred one:

- (A) Using shallows wells for blending and dilution purposes. The estimated construction cost for each shallow well is \$80,000 and it is anticipated that one (1) such well would be necessary to reduce the combined Radium-226 and Radium-228 and gross alpha particle concentration presently found in the Petitioner's water supply below the maximum allowable concentration. However, the exact number of wells required is unknown at this time since there is no guarantee of the pumping capacity of the wells. The estimated time for implementation is 24 months.
- (B) Connecting to the water distribution system currently being proposed by the City of Joliet which will be fed from the Kankakee River and treated near Elwood, Illinois. According to the City of Joliet, they are under order from the Illinois Pollution Control Board to deliver water to their customers from a source that is in compliance with all Federal and State regulations by 1993.

The City [of Joliet] has invited neighboring municipalities to join them in this endeavor and there are currently discussions being held concerning the possibility of the County of Will or the Will County Public Water Commission joining with the City to provide water to the surrounding municipalities. The Village of

Channahon is interested in this alternative and is willing to participate in the cost of analyzing the existing and future needs of the Village in regard to potable water as well as the costs involved in the actual construction of the water transmission and distribution systems. However, the estimated costs have not been determined at this time.

- (C) Constructing treatment facilities in order to properly treat all water supplied by the Petitioner. The estimated construction cost of the new treatment facilities is \$300,000 to \$500,000 depending upon the method of treatment utilized. The estimated time for implementation of this alternative is 36 months.

In conjunction with Option C, the Village notes that use of each of the two primary treatment methods--lime or lime soda softening and ion exchange softening--brings attendant problems of disposal of sludge containing concentrated radium. It also notes that the Agency is actively discouraging the use of the ion exchange method, which brings the additional problems of a) increased risks to persons with hypertension or heart problems as a result of increased sodium in the finished water if the softener is regenerated with salt, and b) increased risks to the supply operator in working with and disposing of the ion exchange material as a result of that materials' retention of radioactivity.

Alleged Hardship

The Village calculates that, if it chooses to implement Option C, the installation of a treatment system, the per capita construction costs to its water consumer population of 280 will range between \$1,072 and \$1,786. The Village has not estimated annual operation and maintenance costs for this option, and has not estimated economic effects on its population of implementation of Options A and B.

In its petition, the Village generally states that denial of variance would impose an arbitrary or unreasonable hardship because the restricted status ban prevents new construction which would require extension of its water supply system which "hurts prospective home purchases as well as business developers and Petitioner's tax base." In its June 6, 1988 letter, the Village was a bit more specific, stating "we have a proposal and improvement plans submitted to the Village for a new single family development and it is important that Board action be taken as soon as possible to allow completion of this development in this construction season. Also the Village has received a grant to extend its water system to serve an industrial area and here too, it is important that work be completed in this construction season.

Finally, the Village notes that USEPA has had the radiological quality standards under review since 1983. While admitting that it is unknown whether the standard will be more strict, less strict, or the same as current standards, the Village asserts that if the standard becomes less strict, construction of treatment facilities which could become obsolete would not be in the public interest.

Environmental Effects

The Village has made no formal assessment of the effects of grant of variance, although it is of the opinion that no significant adverse effects will occur.

The Agency in its Recommendation states that while radiation at any level creates some risk, the risk associated with these levels are low. Based on the evidence presented in the R85-14 proceeding, the Agency believes that an incremental increase in the allowable concentrations for the radiological contaminants even up to a maximum of four times should cause no significant health risk for the limited population served by new water main extensions for the time period of the variance as recommended, that is, until July 1, 1991.

Conclusion

The Board finds that, after weighing the lack of significant health risks, denial of variance would impose an arbitrary or unreasonable hardship, but does not believe that this record justifies grant of the three year variance sought. The Village has been on restricted status since 1984 for gross alpha violations, and since 1986 for combined radium violations, but does not appear to have even yet formally contracted for professional engineering services. The Village has presented no explanation for its four year delay in initiating compliance activities of any sort, and has presented a very thin record on hardship. However, given the Village's small size and the availability of grant funds to finance system enlargements, the Board feels that compliance would be better facilitated by grant of variance rather than by denial. However, given the Village's track record, and its lack of a firm commitment to a specific compliance option, the Board believes that only a 13 month variance, until July 30, 1990, is appropriate. This will allow the Village nine months to formally secure professional assistance, investigate compliance options and develop a compliance plan to which it is firmly committed, and submit a new petition for variance and four months for processing of that petition by the Agency and the Board. Grant of variance for this term is consistent with the Board's approach with other small public water supplies (See, e.g. Village of Elburn v. IEPA. PCB 88-4, April 21 and June 16, 1988).

As to conditions, the variance will terminate automatically if interim deadlines are not met. The Board notes that the Agency, in its Recommendation, has suggested compliance milestones. The Board will retain these dates, but will extend the one which has passed. Finally, the Board will also retain the proposed ultimate compliance deadline of January 22, 1993.

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

ORDER

The Village of Channahon (Village) is hereby granted a variance from 35 Ill. Adm. Code 602.105(a) "Standards for Issuance" and 602.106(b) "Restricted Status", but only as they relate to the combined radium-226 and radium-228 standard of 35 Ill. Adm. Code 604.301(a) and the gross alpha particle activity level standard of 35 Ill. Adm. Code 604.301(b). The variance is subject to the following conditions:

1. This variance expires on July 30, 1990, or when analysis pursuant to 35 Ill. Adm. Code 605.105(a) shows compliance with the standard for combined radium, which ever occurs first.
2. In consultation with the Agency, by July 22, 1988, the Village 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, the Village shall collect quarterly samples of its water from its distribution system, at locations approved by the Agency. The Village shall composite the quarterly samples from each location separately and shall analyze them annually by a laboratory certified by the State of Illinois for radiological analysis so as to determine the concentration of combined radium. The results of the analyses shall be reported to the Compliance Assurance Section, Division of Public Water Supplies, 2200 Churchill Road, IEPA, Springfield, Illinois 62794-9276, 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.
3. By July 22, 1988, the Village shall secure 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 shallow well(s) with that of its deep well.

4. By August 22, 1988, evidence that such professional assistance has been secured shall be submitted to the Agency's Division of Public Water Supplies, FOS, at 2200 Churchill Road, Springfield, Illinois 62794-9276.
5. By November 22, 1988, the Village shall submit to the Agency, DWPS (FOS) An Interim Compliance Report which shall briefly describe what compliance options the Village is investigating and a review of the financial resources being considered for use in achieving compliance.
6. By May 22, 1989, the Village 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 submit to IEPA, DPWS, a detailed Compliance Report showing how compliance shall be achieved within the shortest practicable time, but no later than January 22, 1993.
7. Failure to meet the deadlines in paragraphs 3, 4, 5 and 6 will result in the automatic termination of the variance.
8. 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, the Village shall send to each user of its public water supply a written notice to the effect that the Village 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 they relates to the standard the combined radium and gross alpha particle activity.
9. 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, the Village shall send to each user of its public water supply a written notice to the effect that the Village is not in compliance with the standard for combined radium and gross alpha particle activity. The notice shall state the average content of combined radium and gross alpha particle activity in samples taken since the last notice period during which samples were taken.

- 10 Until full compliance is reached, the Village of shall take all reasonable measures with its existing equipment to minimize the level of contaminant in question in its finished drinking water.
- 11. Within 45 days after the date of this Opinion and Order the Village shall execute and send to:

Attention: Scott O. Phillips
 Enforcement Programs
 P. O. Box 19276
 Illinois Environmental Protection Agency
 2200 Churchill Road
 Springfield, Illinois 62794-9276

a certificate of acceptance of this variance by which it agrees to be bound by the terms and conditions contained herein. This variance will be void if the Village fails to execute and forward the certificate within the 45 day period. The 45 day period shall be in abeyance for any period during which the matter is appealed. The form of the certification shall be as follows:

CERTIFICATION

I, (We), _____, having read the Order of the Illinois Pollution Control Board in PCB 88-42, dated June 30, 1988, understand and accept the said Opinion and Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

 Petitioner

 By: Authorized Agent

 Title

 Date

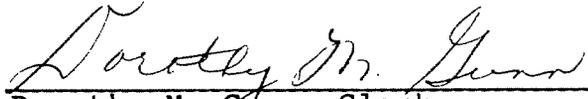
- 12. Section 41 of the Environmental Protection Act (Ill. Rev. Stat. 1985, ch. 111^{1/2} par. 1041) provides for appeal of final Orders of the Board within 35 days. The

Rules of the Supreme Court of Illinois establish filing requirements.

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 30th day of June, 1988, by a vote of 5-2.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board