

ILLINOIS POLLUTION CONTROL BOARD  
January 11, 1990

VILLAGE OF CHENOA )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 89-139  
 ) (Variance)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

OPINION AND ORDER OF THE BOARD (by R. C. Flemal):

This matter comes before the Board on an Amended Petition for Variance ("Amended Pet.") filed September 28, 1989 by the Village of Chenoa ("Chenoa"). Chenoa seeks extension of variance from 35 Ill. Adm. Code 602.105(a) "Standards For Issuance" and 602.106(b) "Restricted Status" to the extent those rules relate to violation by Chenoa's public water supply of the 5 picocuries per liter ("pCi/l") combined radium-226 and radium-228 standard of 35 Ill. Adm. Code 604.301(a) and the 15 pCi/l gross alpha particle activity standard of 35 Ill. Adm. Code 604.302(b). The variance is requested for a period of four years from the date variance is granted.

Based on the record before it, the Board finds that Chenoa would incur an arbitrary or unreasonable hardship if variance was denied. Accordingly, the variance will be granted, subject to conditions.

PROCEDURAL HISTORY

On September 8, 1989 Chenoa filed a Petition for Variance. On September 28, 1989 Chenoa filed an Amended Petition. Hearing was waived and no hearing has been held. On November 13, 1989 the Illinois Environmental Protection Agency ("Agency") filed a Variance Recommendation ("Recommendation") in support of grant of variance subject to conditions as proposed by Chenoa.

Chenoa has sought no variances from regulations governing public water supplies prior to the instant request (Recommendation at par. 3).

## BACKGROUND

Chenoa is a municipality located in McLean County. Among other services, Chenoa provides a potable public water supply derived from two deep wells and two shallow wells and supplied through a system which includes aeration, settling, chlorination, filtering, pump, elevated tank, and distribution facilities (Amended Pet. at par. 12). The system provides water to 2,000 residents and to 20 industries and businesses employing approximately 300 people (Id. at par. 10).

An analysis of a quarterly sample of the radium isotopes was reported to Chenoa on August 5, 1986; this analysis showed a radium-226 content of 7.8 pCi/l and a radium-228 content of 5.4 pCi/l, for a combined value of 13.2 pCi/l (Recommendation at par. 10). A subsequent analysis of a composite of four consecutive quarterly samples received on November 30, 1987 showed a radium-226 content of 7.0 pCi/l and a radium-228 content of 7.2 pCi/l, for a combined content of 14.2 pCi/l (Id.). Based upon these analyses, Chenoa was notified of placement on restricted status by letter from the Agency dated March 14, 1989 (Id. at par. 11). The restricted status pertains only to exceedance of the combined radium standard.

A single sample collected on July 12, 1989 showed a gross alpha activity of 22.0 pCi/l. Chenoa has not been placed on restricted status based on this single sample. However, the Agency opines that if a single sample can be considered a violation sufficient to enable Chenoa to seek variance, then variance from restricted status as it relates to gross alpha activity would also be appropriate (Recommendation at par. 12).

## REGULATORY FRAMEWORK

In recognition of a variety of possible health effects occasioned by exposure to radioactivity, the U.S. Environmental Protection Agency has promulgated maximum concentration limits for drinking water of 5 pCi/l of combined radium-226 and radium-228 and 15 pCi/l for gross alpha particle activity. Illinois subsequently adopted these same limits as the maximum allowable concentrations under Illinois law.

The action that Chenoa requests here is not variance from these two maximum allowable concentrations. Regardless of the action taken by the Board in the instant matter, these standards will remain applicable to Chenoa. Rather, the action Chenoa requests is the temporary lifting of prohibitions imposed pursuant to 35 Ill. Adm. Code 602.105 and 602.106. In pertinent part these Sections read:

Section 602.105 Standards for Issuance

- a) The Agency shall not grant any construction or operating permit required by this Part unless the applicant submits adequate proof that the public water supply will be constructed, modified or operated so as not to cause a violation of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 $\frac{1}{2}$ , pars. 1001 et seq.) (Act), or of this Chapter.

Section 602.106 Restricted Status

- a) Restricted status shall be defined by the Agency determination pursuant to Section 39(a) of the Act and Section 602.105, that a public water supply facility may no longer be issued a construction permit without causing a violation of the Act or this Chapter.
- b) The Agency shall publish and make available to the public, at intervals of not more than six months, a comprehensive and up-to-date list of supplies subject to restrictive status and the reasons why.
- c) The Agency shall notify the owners or official custodians of supplies when the supply is initially placed on restricted status by the Agency.

Illinois regulations thus provide that communities are prohibited from extending water service, by virtue of not being able to obtain the requisite permits, if their water fails to meet any of the several standards for finished water supplies. This provision is a feature of Illinois regulations not found in federal law. It is this prohibition which Chenoa requests be lifted. Moreover, as Chenoa properly notes (Amended Pet. at par. 46), grant of the requested variance would not absolve Chenoa from compliance with the combined radium and gross alpha particle activity standards, nor insulate Chenoa from possible enforcement action brought for violation of those standards.

In consideration of any variance, the Board is required to determine whether the petitioner would suffer an arbitrary or unreasonable hardship if required to comply with the Board's regulations at issue (Ill.Rev.Stat.1987, ch. 111 $\frac{1}{2}$ , par. 1035(a)). It is normally not difficult to make a showing that compliance with regulations involves some hardship, since compliance with regulations usually requires some effort and expenditure. However, demonstration of such simple hardship alone is insufficient to allow the Board to find for a

petitioner. A petitioner must go further by demonstrating that the hardship resulting from denial of variance would outweigh the injury of the public from a grant of the petition (Caterpillar Tractor Co. v. IPCB (1977), 48 Ill. App. 3d 655, 363 N.E. 2d 419). Only with such showing can hardship rise to the level of arbitrary or unreasonable hardship.

Moreover, a variance by its nature is a temporary reprieve from compliance with the Board's regulations (Monsanto Co. v. IPCB (1977), 67 Ill. 2d 276, 367 N.E.2d 684), and compliance is to be sought regardless of the hardship which the task of eventual compliance presents an individual polluter (Id.). Accordingly, a variance petitioner is required, as a condition to grant of variance, to commit to a plan which is reasonably calculated to achieved compliance within the term of the variance.

#### HARDSHIP

Chenoa believes that a requirement to come into immediate compliance would impose an arbitrary or unreasonable hardship. Chenoa and the Agency both note that by virtue of Chenoa's inability to receive permits for water main extensions, any economic growth dependent on those water main extensions would not be allowed. Chenoa contends:

Failure to obtain a variance would mean that all construction within Petitioner's service area requiring the extension of the water supply system could not resume. This hurts prospective home purchasers as well as business developers and Petitioner's tax base. (Amended Pet. at par. 40).

Among facilities which Chenoa views as currently requiring water main extensions are a McDonald's Restaurant and a truck stop located at the junction of I-55 and Rte. 24 (Id. at par. 13).

Chenoa also asserts that there is great need for expansion of its water distribution system to serve the domestic and fire protection requirements of the local population (Amended Pet. at par. 41). Lastly, Chenoa contends that the hardship resulting from denial of the requested variance would outweigh the injury of the public (see below), and thus rises to the level of arbitrary or unreasonable hardship (Id. at par. 42). The Agency agrees that denial of variance would constitute an arbitrary or unreasonable hardship (Recommendation at par. 21).

PUBLIC INJURY

Although Chenoa has not undertaken a formal assessment of the environmental effect of its requested variance, it contends that extension of its watermains will not cause any significant harm to the environment or to the people served by the potential watermain extensions (Amended Pet. at par. 29). The Agency contends likewise (Recommendation at par. 20). In support of these contentions, Chenoa and the Agency reference testimony presented by Richard E. Toohey, Ph.D. and James Stebbins, Ph.D., both of Argonne National Laboratory, at the hearing held on July 30 and August 2, 1985 in R85-14, Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code at 602.105 and 602.106.

The Agency believes that while radiation at any level creates some risk, the risk associated with Chenoa's water is low (Recommendation at par. 15). In summary, the Agency states:

The Agency believes that the hardship resulting from denial of the recommended variance from the effect of being on Restricted Status would outweigh the injury of the public from grant of that variance. In light of the cost to the Petitioner of treatment of its current water supply, the likelihood of no significant injury to the public from continuation of the present level of the contaminants in question in the Petitioner's water for the limited time period of the variance, and the possibility of compliance with the MAC standard, the Agency concludes that denial of a variance from the effects of Restricted Status would impose an arbitrary or unreasonable hardship upon Petitioner.

The Agency observes that this grant of variance from restricted status should affect only those users who consume water drawn from any newly extended water lines. This variance should not affect the status of the rest of Petitioner's population drawing water from existing water lines, except insofar as the variance by its conditions may hasten compliance. In so saying, the Agency emphasizes that it continues to place a high priority on compliance with the standards.

(Recommendation at par. 28 and 29).

### COMPLIANCE PROGRAM

Chenoa intends to achieve compliance with the combined radium and gross alpha particle activity standards through use of a reverse osmosis treatment unit (Amended Pet. at par. 22). An outside consultant has been retained to prepare plans and specifications for the unit (Id. at par. 23). Chenoa estimates that a total of 30 to 36 months will be necessary to fully implement this compliance program, including 18 months involved in the construction phase (Id. at par. 22, 27).

Chenoa has also considered various other compliance options, including lime or lime-soda softening and ion exchange softening (Amended Pet. at par. 32-33). However, Chenoa rejects these alternatives as being unnecessarily costly and presenting potential health and disposal problems (Id.).

### CONSISTENCY WITH FEDERAL LAW

The Agency believes that Chenoa may be granted variance consistent with the requirements of the Safe Drinking Water Act (42 U.S.C. §300(f)) and corresponding regulations because the requested relief is not variance from a national primary drinking water regulation (Recommendation at par. 23).

The Agency further notes that "until very recently, the Agency believed that USEPA might well object to any variance extending beyond September 30, 1993" (Recommendation at par. 27). However, USEPA policy, in part occasioned by a proposed change in the federal combined radium standard<sup>1</sup>, apparently is now such that the USEPA does not propose to object to longer variances if a community can demonstrate that it is making good faith, expedient efforts towards compliance and that the community's construction schedule is the most appropriate considering expected promulgation of the new standards.

<sup>1</sup> There is currently a proposal before the USEPA to revise the radium standard to 5 pCi/l for each of the two radium radionuclides, rather than for their sum. Final action on these proposed new standards is currently expected in December 1991. These standards would also simultaneously become Illinois standards pursuant to Section 17.6 of the Illinois Environmental Protection Act. The Board notes that, based on the currently available analyses of both radium-226 and radium-228, Chenoa would still be out of compliance with the proposed revised standards.

### CONCLUSION

The Board finds that, in light of all the facts and circumstances of this case, denial of variance would impose an arbitrary or unreasonable hardship upon Petitioner. The Board also agrees with the parties that no significant health risk will be incurred by persons who are served by any new water main extensions, assuming that compliance is timely forthcoming.

On the matter of variance related to gross alpha particle activity, the Board notes that it normally does not grant variance where there is no showing of violation. The single available analysis of gross alpha particle activity is insufficient to show violation, since, pursuant to 35 Ill. Adm. Code 605.105(a), compliance with this standard is to be determined based on the analysis of an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals. Nevertheless, the Board believes that the instant matter presents a special circumstance wherein variance is warranted. Gross alpha particle activity is strongly correlated with radium concentration, and, given the high radium concentration, there is thus good reason to believe that further analyses of gross alpha particle activity would confirm the elevated level shown in the single sample. Moreover, both the hardship demonstration and the compliance program herein directed toward radium would be the same should the gross alpha particle activity non-compliance be confirmed. For Chenoa to have to thereby essentially repeat the instant pleading after confirmation thorough additional analysis would constitute a duplicative and useless exercise.

On the matter of the term of variance, the Board notes that Chenoa commits to having compliance facilities operable within a period of 36 months, but asks for a 48-month variance. The Board believes that the requested term of variance is appropriate given the requirement that four quarterly samples are necessary to demonstrate compliance; these samples can only reasonably be collected after the compliance facilities are operable.

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

### ORDER

1. Petitioner, the Village of Chenoa, is hereby granted 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 5 pCi/l combined radium-226 and radium-228 standard of 35 Ill. Adm. Code 604.301(a) and the 15 pCi/l gross alpha particle activity standard of 35 Ill. Adm. Code 604.301(b) (hereinafter the "contaminants in

question"), subject to the following conditions:

- (A) Compliance shall be achieved with the maximum allowable concentrations of the contaminants in question no later than four years from the date of this Order.
- (B) This variance expires four years from the date of this Order or when analysis pursuant to 35 Ill. Adm. Code 605.104(a) shows compliance with the standards for the contaminants in question, whichever occurs first.
- (C) In consultation with the Illinois Environmental Protection Agency ("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 terminates, Petitioner shall collect quarterly samples of its water from its distribution system at locations approved by the Agency. Petitioner shall composite the quarterly samples for each location separately and shall have them analyzed annually by a laboratory certified by the State of Illinois for radiological analysis so as to determine the concentration of the contaminants in question. At the option of Petitioner the quarterly samples may be analyzed when collected. The results of the analyses shall be reported within 30 days of receipt of the most recent analysis to:

Illinois Environmental Protection Agency  
Compliance Assurance Section  
Division of Public Water Supplies  
2200 Churchill Road  
Springfield, Illinois 62794-9276

- (D) Within three months of the grant of this variance, Petitioner shall submit evidence to the Agency at the address below that Petitioner has secured professional assistance from an outside consultant (as described in Paragraph 23 of the Amended Petition).

Illinois Environmental Protection Agency  
Division of Public Water Supply  
Field Operations Section  
2200 Churchill Road  
Springfield, Illinois 62794-9276.

- (E) Within ten months of this grant of variance, Petitioner shall complete investigation of compliance methods, including those treatment techniques described in the Manual of Treatment Techniques for Meeting the Interim Primary Drinking Water Regulations, USEP-A, May 1977, EPA-600/8-77-005, and submit to the Agency at the



address in (D) a detailed Compliance Report showing how compliance shall be achieved within the shortest practicable time, but no later than four years from the date of grant of this variance.

- (F) Within twelve months of this grant of variance, unless there has been a written extension by the Agency, Petitioner shall apply to the Agency at the address below for all permits necessary for construction of installations, changes, or additions to Petitioner's public water supply needed for achieving compliance with the maximum allowable concentrations for the contaminants in question.

Illinois Environmental Protection Agency  
Division of Public Water Supply  
Permit Section  
2200 Churchill Road  
Springfield, Illinois 62794-9276.

- (G) Within three months after each construction permit is issued by the Agency, Petitioner shall advertise for bids, to be submitted within 60 days, from contractors to do the necessary work described in the construction permit. Petitioner shall accept appropriate bids within a reasonable time. Petitioner shall notify the Agency at the address in condition (D) of each of the following actions: 1) advertisement for bids, 2) names of successful bidders, and 3) whether Petitioner accepted the bids.
- (H) Construction allowed on said construction permits shall begin within a reasonable time of bids being accepted, but in any case, construction of all installations, changes or additions necessary to achieve compliance with the maximum allowable concentration of the contaminants in question shall begin no later than eighteen months from this grant of variance and shall be completed no later than three years from this grant of variance.
- (I) 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 shall 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 they relate to the contaminants in question.

- (J) 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 shall send to each user of its public water supply a written notice to the effect that Petitioner is not in compliance with standards for contaminants in question. The notice shall state the average content of the contaminants in question in samples taken since the last notice period during which samples were taken.
  - (K) Until full compliance is achieved, Petitioner shall take all reasonable measures with its existing equipment to minimize the level of the contaminants in question in its finished drinking water.
  - (L) Petitioner shall provide written progress reports to the Agency at the address in condition (D) every six months concerning steps taken to comply with this Order. Progress reports shall quote each of the above paragraphs and immediately below each paragraph state what steps have been taken to comply with each paragraph.
- 2) Within 45 days of the date of this Order, Petitioner shall execute and forward to Bobella Glatz, Enforcement Programs, Illinois Environmental Protection Agency, 2200 Churchill Road, Post Office Box 19276, Springfield, Illinois 62794-9276, a Certification of Acceptance and Agreement to be bound to all terms and conditions of this variance. The 45-day period shall be held in abeyance during any period that this matter is being appealed. Failure to execute and forward the Certificate within 45 days renders this variance void and of no force and effect as a shield against enforcement of rules from which variance was granted. The form of said 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 89-139, January 11, 1990.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
Authorized Agent

\_\_\_\_\_  
Title

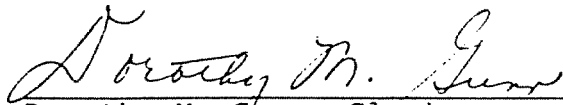
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Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987 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.

Board Members Jacob D. Dumelle and Bill 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 11<sup>th</sup> day of January, 1990, by a vote of 5-2.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board