

ILLINOIS POLLUTION CONTROL BOARD  
January 23, 1992

CITY OF KNOXVILLE, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 91-126  
 ) (Variance)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter is before the Board on the October 8, 1991 filing by petitioner City of Knoxville (Village) of a petition for variance. The Village seeks relief from 35 Ill. Adm. Code 602.105(a), "Standards for Issuance", and 602.106(a), "Restricted Status", to the extent those rules relate to violation by the Village's public water supply of the 5 picocuries per liter ("pCi/l") combined radium-226 and radium-228 standards.<sup>1</sup> The Village requests a variance for five years up to and including December 19, 1996.

On November 22, 1991, the Illinois Environmental Protection Agency (Agency) filed its variance recommendation ("Rec."). By today's Opinion and Order that motion is granted. The Agency recommends that the variance be granted subject to certain conditions. In a filing dated November 25, 1991 the Village requested that the Board's decision in this matter be expedited and waived its hearing request. The Board granted the Village's motion on December 6, 1991.

For the following reasons, the Board finds that the Village has presented adequate proof that immediate compliance with the Board's regulations for "Standards for Issuance" and "Restricted Status" would result in the imposition of an arbitrary or unreasonable hardship. Accordingly, the variance is granted, subject to conditions set forth in the attached order.

BACKGROUND

The Village is a municipality which provides a potable water supply and distribution for a population of 4600 residential and 250 commercial and 25 industrial utility customers, representing

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<sup>1</sup>The standard for combined radium was formerly found at 35 Ill. Adm. Code 604.301(a); effective September 20, 1990 it was recodified at 35 Ill. Adm. Cod 611.330(a).

approximately 15,000 residents. The water system includes 4 deep wells (Nos. 7,8,9 and 10), 3 storage tanks and pumps. (Pet. 9)

The Agency states that the Village was granted a prior variance in PCB 86-41 which expired on May 1, 1991 at which time the Village was not in violation of the radium standards. (Rec. 7). The Village states that it was first advised that its water supply currently exceeded the maximum allowable concentration for combined radium in a May 16, 1991 letter from the Agency. An analysis showed a combined radium content of 12.7 pCi/l for Well No. 7 only. (Pet. 5) The Village asserts that since 1986, its public water supply system had achieved full compliance with the applicable combined radium standards.

#### REGULATORY FRAMEWORK

The instant variance request concerns two features of the Board's public water supply regulations: "Standards for Issuance" and "Restricted Status". These features are found at 35 Ill. Adm. Code 602.105 and 602.106, which in pertinent part 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. 1989, ch. 111 1/2, pars. 1001 et seq.) (Act), or of this Chapter.

##### Section 602.106           Restricted Status

- 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.

The principal effect of these regulations is to provide that public water supply systems are prohibited from extending water service, by virtue of not being able to obtain the requisite permits, unless and until their water meets all of the standards for finished water supplies. The Village requests that it be allowed to extend its water service while it pursues compliance with the radium standards, as opposed to extending service only after attaining compliance.

In determining whether any variance is to be granted, the Act requires the Board to determine whether a petitioner has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary or unreasonable hardship. (Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1035(a)). Furthermore, the burden is upon the petitioner to show that its

claimed hardship outweighs the public interest in attaining compliance with regulations designed to protect the public (Willowbrook Motel v. Pollution Control Board (1977), 133 Ill.App.3d 343, 481 N.E.2d, 1032). Only with such showing can the claimed hardship rise to the level of arbitrary or unreasonable hardship. Where, as here, the petitioner seeks to extend a variance, the petitioner must show satisfactory progress.

A further feature of a variance is that it is, by its nature, 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, except in certain special circumstances, a variance petitioner is required, as a condition to grant of variance, to commit to a plan which is reasonably calculated to achieve compliance within the term of the variance.

It is to be noted that grant of variance from "Standards for Issuance" and "Restricted Status" does not absolve a petitioner from compliance with the drinking water standards at issue, nor does it insulate a petitioner from possible enforcement action brought for violation of those standards. The underlying standards remain applicable to the petitioner regardless of whether variance is granted or denied.

Standards for radium in drinking water were first adopted as National Interim Primary Drinking Water Regulations (NIPDWRs) by the USEPA in 1976. The standards adopted were 5 pCi/l for the sum of the two isotopes of radium, radium-226 and radium-228 (combined radium). Shortly thereafter Illinois adopted the same limits. Although characterized as "interim" limits, these standards nevertheless are the maximum allowable concentrations under both federal and Illinois law, and will remain so unless modified by the USEPA.<sup>2</sup>

Over much of the fifteen years since their original promulgation, the current radium standards have been under review at the federal level. The USEPA first proposed revision of the standards in October 1983 in an advance notice of proposed rulemaking (48 Fed.Reg. 45502). It later republished this advance notice in September 1986 (51 Fed.Reg. 34836). Most recently, on June 19, 1991, USEPA announced a proposal to modify

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<sup>2</sup>In anticipation of USEPA revision of the radium standard, the legislature amended the Illinois Environmental Protection Act at Section 17.6 in 1988 to provide that any new federal radium standard immediately supersedes the current Illinois standard.

the radium standards.<sup>3</sup> USEPA proposes to replace the 5 pCi/l combined radium standard by separate standards of 20 pCi/l each for radium-226 and radium-228. Under the USEPA's calendar, these standards are scheduled for promulgation by April 1993 with an effective date of October 1994.

#### COMPLIANCE PLAN

The Village intends to retain a consulting engineer to assist it in reviewing and evaluating compliance alternatives. It anticipates a six month period to accomplish this task. (Pet. 20)

Two alternatives are envisioned. The first is the use of shallow wells for blending and dilution. The estimated construction cost for drilling and development of each of the four shallow wells is \$400,000 to \$600,000. (Id.)

The second alternative is construction of treatment facilities to treat all the water supplied by the Village. Estimated construction costs per well of the new facilities is \$400,000. The Village would implement this plan should the federal radium standard not change. (Id.)

#### HARDSHIP

The Village contends that the hardship resulting from denial of the requested variance outweighs any injury to the public from granting the variance. (Pet. 25) The Village argues that denial of the requested variance would result in an arbitrary or unreasonable hardship as it would negatively impact the Village's entire development community including home builders and buyers, commercial and industrial enterprises and retail businesses that may wish to locate within the Village's municipal boundaries. The Village would suffer not only a loss of tax revenues in the period before compliance is achieved but for many years thereafter. (Pet. 30) The Village also contends that it has a need for expansion of the water distribution system in order to reinforce and upgrade the existing system and to provide water to new areas within the Village's service area. (Id.)

The Agency agrees that denial of the variance would impose an arbitrary or unreasonable hardship on the Village. (Rec. 19, 20)

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<sup>3</sup>Publication occurred at 56 Fed.Reg. 33050, July 18, 1991.

ENVIRONMENTAL IMPACT

Although the Village has not undertaken a formal assessment of the environmental effects of its requested variance, it contends that there will be minimal or no adverse impact cause by the granting of the variance. (Pet. 21) The Agency agrees with the Village's assertion. (Rec. 14, 18) The Agency cites the testimony presented by Richard E. Toohey, Ph.D., of Argonne National Laboratory, at the July 30 and August 2, 1985 hearings for the Proposed Amendments to Public Water Supply Regulations 35 Ill. Adm. Code 602.105 and 602.106 (R85-14) in support of the assertion that the variance will not result in any adverse environmental impact. (Id.) The Agency also refers to updated testimony presented by Dr. Toohey in the Board's hearing on a variance requested by the City of Braidwood in PCB 89-212. (Id.)

While the Agency believes that radiation at any level creates some risk, the risk associated with the Village's water supply is very low. (Id.) In summary, the Agency states as follows:

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 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, 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.

(Rec. 28)

CONSISTENCY WITH FEDERAL LAW

The Agency states that the requested variance may be granted consistent with the Safe Drinking Water Act (42 U.S.C. 300(f)) and corresponding regulations (40 CFR Part 141) because the

variance does not grant relief from compliance with the federal primary drinking regulations. (Rec. 22)

#### CONCLUSION

Based upon the record, the Board finds that immediate compliance with the "Standards for Issuance" and "Restricted Status" regulations would impose an arbitrary or unreasonable hardship on the City of Knoxville. Lake Zurich has committed to a schedule which will result in compliance at the end of the variance term. The Board will grant this variance for the requested period of five years.

Today's action is solely a grant of variance from Standards of Issuance and Restricted Status. The Village is not granted variance from compliance with the combined radium standard, nor does today's action insulate the Village in any manner against enforcement for violation of these standards.

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

#### ORDER

The City of Knoxville is hereby granted a variance from 35 Ill. Adm Code 602.105(a), "Standards for Issuance", and 602.106(b), "Restricted Status", as they relate to the standards for combined radium-226 and radium-228 in drinking water as set forth in 35 Ill. Adm. Code 611.330(a), for a period of five years subject to the following conditions:

- (A) For purposes of this Order, the date of USEPA action shall consist of the earlier date of the:
  - (1) Date of promulgation by the U.S. Environmental Protection Agency ("USEPA") of any regulation which amends the maximum concentration level for combined radium, either of the isotopes of radium, or the method by which compliance with a radium maximum contaminant level is demonstrated; or
  - (2) Date of publication of notice by the USEPA that no amendments to the 5 pCi/l combined radium standard or the method for demonstrating compliance with the standard will be promulgated.
- (B) Variance shall terminate on the earliest of the following dates:
  - (1) Two years following the date of USEPA action; or
  - (2) December 19, 1996; or

- (3) When analysis pursuant to 35 Ill. Adm. Code 611 Subpart Q, or any compliance with standards then in effect, shows compliance with standards for radium in drinking water then in effect.
- (C) Compliance shall be achieved with any standards for radium then in effect no later than the date on which this variance terminates.
- (D) In consultation with the Illinois Environmental Protection Agency ("Agency"), Petitioner shall continue its sampling 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 from each location separately and shall analyze them annually by a laboratory certified by the State of Illinois radiological analysis so as to determine the concentration of combined radium-226 and radium-228 and gross alpha particle activity. 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 result to:

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

- (E) Petitioner shall submit a written report to the Agency 6 months from the date of this variance as to the selection of a compliance alternative. The Village shall provide the Agency with a copy of the consultant's report prepared pursuant to this paragraph.
- (F) Petitioner shall apply for all necessary permits for the construction of any required facilities no later than two years prior to the expiration of this variance, and shall install and have operational said facilities no later than one year prior to the expiration of this variance.
- (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 paragraph (D) within 30 days of each of the following: (1) advertisement for bids; (2) names of successful bidders; and (3) whether petitioner accepted said 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 standards in question shall begin no later than two years prior to the expiration of the variance and shall be completed no later than one year prior to the expiration of this variance, with the final year being solely for the purposes of testing to demonstrate compliance.
- (I) Pursuant to 35 Ill. Adm. Code 611.851(b) (formerly 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 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(a) Restricted Status, as they relate to the radium standard.
- (J) Pursuant to 35 Ill. Adm. Code 611.851(b) (formerly 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 standard 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 combined radium-226 and radium-228, in its finished drinking water.
- (L) Petitioner shall provide written progress reports to the Agency at the address below every six months concerning steps taken to comply with the paragraphs of this Order. Progress reports shall quote each of said paragraphs and immediately below each paragraph state what steps have been taken to comply with each

paragraph:



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

Within forty-five days of the date of this Order, Petitioner shall execute and forward to:

Stephen C. Ewart  
Division of Legal Counsel  
Illinois Environmental Protection Agency  
P.O. Box 19276  
2200 Churchill Road  
Springfield, Illinois 62794-9276

a Certificate of Acceptance and agreement to be bound to all terms and conditions of the granted variance. The 45-day period shall be held in abeyance during any period that this matter is 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 this variance is granted. The form of Certificate is as follows.

I (We), \_\_\_\_\_,  
hereby accept and agree to be bound by all terms and conditions of the Order of the Pollution Control Board in PCB 91-126, January 23, 1992.

\_\_\_\_\_  
Petitioner

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

\_\_\_\_\_  
Title

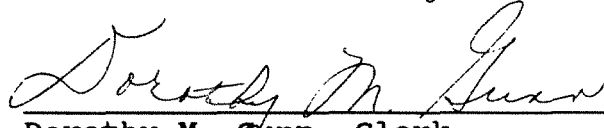
\_\_\_\_\_  
Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989 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.

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 23<sup>rd</sup> day of January, 1992 by a vote of 4-1.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board