

ILLINOIS POLLUTION CONTROL BOARD  
February 27, 1992

CITY OF JOLIET, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 91-246  
 ) (Variance)  
 )  
 ILLINOIS, ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter is before the Board on the December 16, 1991 filing by petitioner City of Joliet (City) of a petition for variance. The City 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 City's public water supply of the standards for combined radium-226 and radium-228 and for gross alpha particle activity.<sup>1</sup> The City requests a five-year variance.

On January 29, 1992, the Illinois Environmental Protection Agency (Agency) filed its variance recommendation, with a motion to file instanter. On February 3, 1992 the City filed a motion for expedited review. Both motions were granted by Board order on February 6, 1992. The Agency recommends that the variance be granted subject to certain conditions. The City waived hearing and none has been held.

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

BACKGROUND

The City is a municipality located in Will County. The City provides potable water supply and distribution for 20,935 residential and 2,088 industrial and commercial utility

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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. Code 611.330 (a).

customers, representing some 76,000 residents and some 2,000 industries and businesses employing approximately 18,000 people, as of 1991. (Pet. par. 10; Rec. par. 6) The water system includes eleven deep wells, six shallow wells, pumps and distribution facilities. (Pet. par.12; Rec. par. 6)

The City was first advised that its water supply exceeded the maximum allowable concentration for combined radium in a December 9, 1985 letter from the Agency. The Agency report showed a combined radium-226 and radium-228 concentration of 6.5 pCi/l. (Pet. par. 15) On November 6, 1986 a variance was granted by the Board relating to the combined radium concentrations, which terminated on November 6, 1991. (Pet. par. 20; Rec. par. 7) On September 13, 1991 the City was first advised that the maximum allowable concentration for gross alpha particle activity exceeded the maximum allowable concentration in a letter from the Agency. (Pet. par. 17) The most recent analyses of Petitioner's water taken in July of 1991 revealed continuing non-compliance with the combined radium and gross alpha particle standards. (Pet. par. 18) This is Petitioner's second request for a variance involving the combined radium limitations and its first request for a variance involving the combined gross alpha particle activity limitations. (Rec. par. 7)

#### 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 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 City 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 had 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, 135 Ill. App. 3d 343, 481 N.E. 2d 1032 (1977)). 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 the 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, 67 Ill. 2d 276, 367 N.E. 2d 684 (1977)), 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 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 City has proceeded with many of the required actions set out in the variance granted to them by the Board on November 6, 1986, to attain compliance with the combined radium-226 and radium-228 standard. The City states in attachment No. 4 of its petition (Pet. Att.) that it is also continuing with the development of plans and specifications for the construction of the necessary facilities to implement the Kankakee River as a water source. (Pet. par. 21) In order to comply with the Board Order of November 6, 1986, the City is continuing its water sampling program through the IEPA. (Pet. Att. p. 1) The City also hired a professional consulting company to investigate its compliance options as required by the Board Order of November 6, 1986. Based upon the results of the study, the City has made a decision to continue developing the Kankakee River as a water source. (Pet. Att. p. 1 and 4)

The City has encountered delays in obtaining necessary permits because of objections to Joliet using the Kankakee River as a water source and the implementation of a protected flow standard. A protected flow standard would prohibit the City from withdrawing water from the river during drought periods. (Pet. par. 21 and Att. p. 1) The City has also had difficulties in obtaining right-of-way(s) necessary to place pipe along the Kankakee River. The right of way for the withdrawal point has

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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.

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

been purchased and the routing has been identified, however, other right-of-way(s) will not be purchased nor will additional expenditures be made by the City until the withdrawal permit is obtained. (Pet. Att. p. 1)

Additionally, because the City has not yet obtained the withdrawal permit, it has not begun construction or advertised for construction bids. (Pet. Att. p. 2-3)

In an attempt to obtain a withdrawal permit, the City has conducted environmental studies on mussels and various varieties of fish in the river, including an analysis of the 1988 drought and its impact on fishing in subsequent years. The City has also held discussions with the Division of Water Resources and the Illinois Department of Conservation in an attempt to find a solution which will result in the issuance of a withdrawal permit. The City feels that the following solution will result in the issuance of a permit. (Pet. Att. p. 2-3)

Petitioner expects to apply for a withdrawal permit allowing withdrawal of water when the flow at the withdrawal site is greater than the seven-day 10-year low flow. When the flow is greater than the seven-day 10-year low flow, the City will be allowed to withdraw fifty percent of the difference between the actual flow and the seven-day 10-year low flow. Additionally, the City plans to use its deep wells and shallow wells during periods when there is not an adequate water amount to meet the City's needs. (Pet. Att. p. 2-3) The City is also considering constructing a reservoir/lake to provide storage for use in drought periods. (Pet. Att. p. 2-3)

Developing the Kankakee River as a water source will allow the City to attain compliance with the combined radium standards. This will be achieved through blending with the existing shallow wells and some of the existing deep wells, resulting in water which complies with the USEPA proposed maximum contaminant levels for gross alpha particle activity as well as for radium-226 and radium-228. (Pet. par. 23) Petitioner estimates the total cost for the development of the Kankakee River as a water source at \$40 million and expects the time for implementation to be 60 months. (Pet. par. 24)

#### HARDSHIP

The City contends that the hardship resulting from the denial of the requested variance outweighs any injury to the public from granting the variance. (Pet. par. 38) Failure of the Board to grant a variance would mean that all construction within the City's service area requiring an extension of the water supply system would stop. The City states that nine major projects within the service area, which will require public water for domestic and fire needs are currently in the active

development stage. These projects would have to be discontinued if a variance is not granted. (Pet. par. 36 and Attachment 6) The City maintains that a restriction on extension of water supply in Joliet would harm land developers, potential home purchasers, and the general public, as construction is an important part of the community's economy. (Pet. par. 36) Further, imposition of restrictions on extensions of water supply would harm the increased industrial plant development which is taking place in Joliet, by excluding the area from consideration for industrial plant relocations. (Pet. par. 36) Additionally, the City is limited in its financial ability to pay for improvements immediately. Cash reserves were established for the project through the sale of revenue bonds for construction and only around \$19,000,000 is currently on hand (Pet. par. 34) In sum, the City maintains that restricted status would result in economic decline in the community but would do little to protect public health. (Pet. par. 38)

The Agency agrees that denial of the variance would impose an arbitrary or unreasonable hardship on the City. (Rec. par. 21)

#### ENVIRONMENTAL IMPACT

Although, the City 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 caused by the granting of the variance. (Pet. par. 29) The Agency agrees with the City's assertion. (Rec. par. 21) Both the City and the Agency cite the testimony presented by Richard E. Toohey, Ph.D., of Argonne National Laboratory, on July 30 and August 2, 1985 in R85-14 hearings for the Proposed Amendments to Public Water Supply Regulations 35 Ill. Adm. Code 602.105 and 602.106 in support of the assertion that the variance will not result in any adverse environmental impact. (Pet. par. 29; Rec. par. 16) The Agency also refers to the updated testimony presented by Dr. Toohey in the Board's hearing on a variance requested by the City of Braidwood in PCB 89-212. (Rec. par. 16)

While the Agency believes that radiation at any level creates some risk, it contends that the risk associated with the City's water supply is very low. (Rec. par. 15) The Agency states as follows:

The Agency believes an increase in the allowable concentration for the contaminants in question should cause no significant health risk for a limited population served by new water main extensions for the time period of this recommended variance. (Rec. par. 20)

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. par. 24)

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 Joliet. The City is proceeding with its plan to develop the Kankakee River as a water source, which has a low radium content. As the City points out, the time required to obtain the necessary permits, financing, and to construct the facilities prevents immediate compliance. However, in the interim period a need exists to expand the water distribution system so as not to jeopardize current and future economic growth through land development. (Pet. par. 37)

The Board notes that the City has requested a five-year variance which the City maintains will give it enough time to complete the facilities and come into compliance with the proposed USEPA standards. The Agency also recommends that a five year variance be granted. Accordingly, the Board grants the variance as recommended

Today's action is solely a grant of variance from standards of issuance and restricted status. The City is not granted variance from compliance with the combined radium or gross alpha particle activity standards, nor does today's action insulate the City 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 Joliet 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 and for gross alpha particle activity in drinking water set forth in 35 Ill. Adm. Code 611.330, subject to the following conditions:

- (A) For purposes of this variance, the date of USEPA action shall consist of the earlier

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 5pCi/l combined radium standard or the method for demonstrating compliance with the 5pCi/l 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) February 27, 1997; or
  - (3) When analysis pursuant to 35 Ill. Adm. Code 611.720(d), or any compliance demonstration method then in effect, shows compliance with any standards from radium in drinking water.
- (C) Compliance shall be achieved with any standards for radium then in effect no later than February 27, 1997.
- (D) In consultation with the 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 expires, 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 for radiological analysis so as to determine the concentration of radium-226, radium-228, and gross alpha particle activity. At the option of the City, the quarterly samples may be analyzed when collected. The results of the analyses shall be reported within 30 days of the receipt of the most recent results to:



City, the quarterly samples may be analyzed when collected. The results of the analyses shall be reported within 30 days of the receipt of the most recent results to:

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

- (E) Within three months of USEPA action, Petitioner shall apply to the Agency at the address below for all permits necessary for the construction, installation, changes, or additions to the Petitioner's public water supply needed for achieving compliance with the Maximum Contaminant Level for combined radium, and gross alpha particle activity or with any other standard for radium in drinking water then in effect:

Illinois Environmental Protection Agency  
Public Water Supply Program  
Division of Public Water Supplies:  
220 Churchill Road  
Springfield, IL 62794-9276

- (F) Within six months of USEPA action after each construction permit is issued by IEPA, Petitioner shall advertise for bids, to be submitted within 60 days, from contractors to do the necessary work described in the construction permit. The Petitioner shall accept appropriate bids within a reasonable time. Petitioner shall notify IEPA, DPWS, within 30 days, of each of the following actions:

- (1) advertisements for bids,
- (2) names of successful bidders, and
- (3) whether Petitioner accepted the bids.

- (G) 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 Contaminant Level in question shall be completed no later than

two years following USEPA action.

- (H) Pursuant to 35 Ill. Adm. Code 611.852 (b), 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, written notice to the effect that the 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.
- (I) Pursuant to 35 Ill. Adm. Code 611.851(b), 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, 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 it relates to the MCL standard in question.
- (J) Until full compliance is reached, Petitioner shall take all reasonable measures with its existing equipment to minimize the level of contaminants in question in its finished drinking water.
- (K) The Petitioner shall provide written progress reports to IEPA, DPWS, and FOS every six months concerning steps taken to comply with paragraphs D, E, F, G, H, and I. Progress reports shall quote each of said paragraphs and immediately below each paragraph state what steps have been taken to comply with each paragraph.
- (L) That within forty-five days of the grant of the variance, 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, IL 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. 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 91-246, February 27, 1992.

\_\_\_\_\_  
Petitioner

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

\_\_\_\_\_  
Title

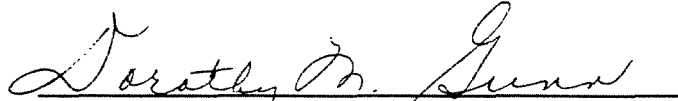
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Date

IT IS SO ORDERED.

B. Forcade dissented.

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.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 27<sup>th</sup> day of February, 1992, by a vote of 6-1.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board