

ILLINOIS POLLUTION CONTROL BOARD  
May 23, 1991

CITY OF MINONK, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 91-22  
 ) (Variance)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter comes before the Board upon the filing by the City of Minonk ("Minonk") on February 5, 1991 of a Petition for Variance ("Pet."). Minonk seeks relief 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 Minonk' public water supply of the 5 picocuries per liter ("pCi/l") combined radium-226 and radium-228 standard and the 15 pCi/l gross alpha particle activity of 35 Ill. Adm. Code.Subtitle F<sup>1</sup>. Minonk requests variance for five years.

The Illinois Environmental Protection Agency ("Agency") filed its Variance Recommendation ("Rec.") on March 11, 1991<sup>2</sup>. The Agency recommends that variance be granted, subject to conditions. Minonk waived hearing and no hearing has been held.

Based on the record before it, the Board finds that Minonk has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary or unreasonable hardship. Accordingly, the variance will be granted, subject to conditions consistent with this Opinion and as set forth in the attached Order.

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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 to 35 Ill. Adm. Code 611.330(a). The standard for gross alpha particle activity was formerly found at 35 Ill. Adm. Code 604.301(b); effective September 20, 1990 it was recodified to 35 Ill. Adm. Code 611.330(b). (see Illinois Register, Volume 14, Issue 40, October 5, 1990).

<sup>2</sup> The Agency's filing is accompanied by a motion to file instantler. The motion was granted by the Board on March 14, 1991.

## BACKGROUND

Minonk is a municipality located in Woodford County. Minonk provides public services including potable water supply and distribution for a current estimated population of 2,050 persons. There are approximately 896 water customers currently served; 828 residential, 60 businesses, 6 churches, and 2 schools (Pet. ¶7).

The Minonk water system has three water wells, plus storages and distribution facilities. The three wells are all deep wells, drawing from the St. Peter Formation and finished at depths ranging from 1850 to 2005 feet (Pet. ¶9). The oldest of the wells dates from 1897; the newest well was place in operation in 1985 (Id.).

Minonk has previously been before the Board with three variance requests related in part or wholly to radiological standards. In the initial request, PCB 80-136 (see City of Minonk v. IEPA, 39 PCB 550, October 2, 1980), Minonk sought variance from the standards for both gross alpha particle activity and fluoride. The Board granted the fluoride variance, but denied the gross alpha particle variance as unnecessary based on the absence of reliable data showing violation of the gross alpha particle standard. Minonk returned to the Board in PCB 81-32 Minonk with a renewed request for variance from the gross alpha particle standard based upon a new analytical result. This variance request was granted for the period May 28, 1981 to October 2, 1985 (see City of Minonk v. IEPA, 41 PCB 489, May 28, 1981).

Minonk's first request both with respect to combined radium and from Restricted Status was placed before the Board in PCB 89-140. This request was denied based on the speculative nature of Minonk's compliance plan (see City of Minonk v. IEPA, PCB 89-140, 110 PCB 347, April 26, 1990).

The sample result upon which the original (PCB 81-32) gross alpha variance was based indicated a gross alpha particle activity of  $39.0 \pm 11.8$  pCi/l (41 PCB 489), or more than two-and-a-half times the 15 pCi/l standard. This high value has not been confirmed in any of the later analyses, however (Pet. Attachment 2). Moreover, the sampling record is characterized by substantial variation in concentration, with eleven of the nineteen results

and many of the four-consecutive-quarter samples below the 15 pCi/l standard (Id.)<sup>3</sup>.

In contrast to the record of gross alpha particle activity, the analytical record for radium in the Minonk water system is relatively meager: only three results are reported (Pet. Attachment 2; Rec. ¶11). These are:

<u>Date</u>	<u>Ra-226</u>	<u>Ra-228</u>	<u>Total</u>
10/85	6.4	2.0	8.4
11/84	7.2	6.9	14.1
7/89	7.1	3.3	10.4

REGULATORY FRAMEWORK

In recognition of a variety of possible health effects occasioned by exposure to radioactivity, the United States Environmental Protection Agency ("USEPA") has promulgated a maximum concentration limits for drinking water of 5 pCi/l of combined radium-226 and radium-228 and 15 pCi/l of gross alpha particle activity. Illinois subsequently adopted these limits as the maximum allowable concentrations under Illinois law. Pursuant to Section 17.6 of the Illinois Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 ½, par. 1017.6), any revision of the combined radium standard by the USEPA will automatically become the standard in Illinois.

The action that Minonk requests here is not variance from the maximum allowable concentrations for either radium or gross alpha particle activity. Regardless of the action taken by the Board in the instant matter, these standards will remain applicable to Minonk. Rather, the action Minonk 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

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<sup>3</sup> The Agency reports the most recent gross alpha particle activity analysis, that of July 11, 1989, as being 25.5 pCi/l (Rec. ¶11). Minonk, however, reports that the sample of that date was split and sent to two different labs for gross alpha analysis. One of the labs (Illinois Department of Nuclear Safety) reported gross alpha particle activity at 9.7 pCi/l; the second lab (Radiation Measurements, Inc.) reported gross alpha particle activity at 15.8 pCi/l (Pet. Attachment 2). It is apparently the sum of these two analyses which the Agency reports.

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 ½, 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.

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 Minonk requests be lifted. Moreover, grant of the requested variance would not absolve Minonk from compliance with the combined radium or gross alpha particle activity standards, nor insulate Minonk from possible enforcement action brought for violation of those standards, as Minonk itself notes (Pet. ¶33).

In consideration of any variance, the Board determines 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. 111½, 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), 135 Ill.App.3d, 481 N.E.2d, 1032). Only with such showing can the claimed hardship rise to the level of arbitrary or unreasonable hardship.

Lastly, 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 that 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 that is reasonably calculated to achieve compliance within the term of the variance.

COMPLIANCE PROGRAM

Minonk proposes to achieve compliance by constructing a treatment plant which will use the reverse osmosis procedure to remove radium from its water supply (Pet. at ¶21). Minonk has taken several steps constructing such a plant. Those steps include approval of a \$300,000 General Bond Obligation referendum

and authorizing the sale of such bonds (Pet. at ¶24A). The proceeds from that sale are now on deposit and available to Minonk. Minonk applied to the Department of Commerce and Community Affairs (DCCA) for a Community Development Assistance Program Grant ("CDAP Grant"). Minonk reports that DCCA approved a \$300,000 grant for construction of their water treatment plant, Grant No. 90-24215. Minonk states that the engineering agreement for the design and preparation of construction plans and specifications for the reverse osmosis water treatment plant was approved by the City Council on January 7, 1991 (Pet. at ¶24A 6-7). Minonk, in its petition, lists the following steps to be taken during the variance period:

1. Continue the quarterly sampling program and testing for radium and gross alpha.
2. Issuance of public notification every three months as required to comply with Board rules.
3. By June 1991, complete construction plans and specifications, and apply for an Agency construction permit.
4. By September 1991, expected approval of Agency construction permit, and advertise for bids from contractors and suppliers.
5. By November 1991, award the contract for construction to a successful bidder.
6. By October 1992, complete construction and begin operation of the water treatment plant.
7. By September 1993, complete one year compliance sampling and testing program to prove compliance with Board standards.
8. Submission of progress reports to the Agency every six months during the variance period concerning completion of each of the steps listed in the paragraphs above. (Pet. at ¶24B)

The Board denied Minonk's previous variance request because it found Minonk's variance speculative. In general, the Board found the variance request speculative because Minonk developed its compliance plan relying on the receipt of grant funds from DCCA, which it had no assurance of receiving. Now that the grant funds are received, Minonk stands ready to embark upon construction and operation of its water treatment plant. The Board finds that the compliance plan submitted in the instant proceeding is not speculative.

HARDSHIP

Minonk contends that denial of variance would constitute an arbitrary or unreasonable hardship. It notes that:

Failure to obtain a variance means that no construction within Petitioner's service area requiring the extension of the water supply system could take place. This hurts prospective home construction as well as business developers and Petitioner's tax base. This problem is especially acute at the present time because new I-39 is currently under construction along the west side of the City. Petitioner will be excluded from growth opportunities that will occur in other communities along this corridor if developers are discouraged because the petitioner (sic) is on restricted status. The time involved for the engineering and construction of water treatment facilities prevents immediate compliance . . . In the interim period, there is a great need for expansion of the present water system in order to serve the domestic and fire protection requirements of the local population (Pet. at ¶27-¶28).

In its immediately previous variance request, Minonk also claimed hardship citing the construction of I-39 and Minonk's inability to extend its water system to accommodate any new construction. The Board found that because Minonk had over eight years to achieve compliance, any hardship which Minonk may experience from the denial for variance was largely self-imposed. In so finding, the Board related that Minonk knew it was on restricted status and could have foreseen the result of economic growth with the development of I-39. Consequently, Minonk could have better prepared its water treatment plant for that growth. However, the Board also specifically noted that the record did not indicate steps toward compliance beyond searching out alternative water supplies and development of an engineering report. In the instant proceeding, Minonk has shown significant progress toward compliance with the obtaining of funds committed to the construction of the plant, approval of the engineering agreement, and compliance schedule outlined above. Therefore, the Board finds no reason that any hardship should continue to be considered self-imposed.

The Agency also contends that denial of variance would constitute an arbitrary and unreasonable hardship (Rec. ¶19).

PUBLIC INTEREST

Although Minonk has not undertaken a formal assessment of the environmental effect of its requested variance, it contends that there will be little or no adverse impact caused by the granting of variance (Pet. ¶22). The Agency contends likewise

(Rec. ¶16). In support of their contention, Minonk (Pet. ¶22) and the Agency (Rec. ¶15) reference testimony presented by Richard E. Toohey, Ph.D. 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, to the testimony of Dr. James Stebbings in the same proceeding, and to updated testimony presented by Dr. Toohey in the Board's hearing on the Braidwood variance, PCB 89-212.

The Agency believes that while radiation at any level creates some risk, the risk associated with Minonk's water is very low (Rec. ¶14). 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 contaminant in question in the Petitioner's water for the limited time period of the variance, and the possibility of compliance with a new MCL standard by less expensive means if the standard is revised upward, 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. Grant of variance may also, in the interim, lessen exposure for that portion of the population which will be consuming more effectively blended water. In so saying, the Agency emphasizes that it continues to place a high priority on compliance with the standards.

(Rec. ¶27 and ¶28)

#### CONCLUSION

The Board finds that, in light of the facts and circumstances in this case, denial of variance would impose an arbitrary or unreasonable hardship upon Minonk. 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. Accordingly, the variance will be granted.

However, the Board finds that the five-year term of variance requested by Minonk is neither necessary nor advisable. By Minonk's own admission, it can likely complete construction of its water treatment plant, begin operation of the plant, and demonstrate compliance in a time period less than five years. Thus, a reasonable time period would be three years, which is in accord with the Agency's recommendation.

However, the Board also recognizes that promulgation of a new radium standard by the USEPA might significantly alter Minonk's compliance circumstance, even perhaps removing the need for continued variance from Restricted Status<sup>4</sup>. Although it is now uncertain whether USEPA will complete promulgation of a new radium standard during the three-year variance period, the Board will also make the termination of variance dependent upon the date of USEPA alteration (or notice of refusal to alter) of the radium standard.

Minonk is to bear in mind that today's action is solely a grant of variance from standards of issuance and Restricted Status. Minonk is not being granted variance from compliance with either the radium or gross alpha particle standard, nor does today's action insulate Minonk in any manner against enforcement for violation of that standard.

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

#### ORDER

Petitioner, City of Minonk, is hereby granted variance for its water system from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(b), Restricted Status, as they relate to the standard for radium and gross alpha particle activity in drinking water of 35 Ill. Adm. Code. Subtitle F, subject to the following conditions:

- (A) For the purposes of this Order, the date of USEPA action shall consist of the earlier of the:
  - 1) Effective date on any regulation promulgated by the U.S. Environmental Protection Agency ("USEPA") 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 concentration level is demonstrated; or

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<sup>4</sup> The Board notes that in a Federal Register notice published April 22, 1991, USEPA states that it will publish a Notice of Proposed Rulemaking ("NPRM") in June 1991, and expects to issue final action on a new radium standard in April 1993 (56 Fed. Reg. 18014, April 22, 1991).



- 2) Date of publication of notice by the USEPA that no amendments to the 5 pCi/1 combined radium standard or the method for demonstrating compliance with the 5 pCi/1 standard will be promulgated.
- (B) Variance shall terminate on the earliest of the following dates:
- (1) May 23, 1994; or
  - (2) When analysis pursuant to 35 Ill. Adm. Code 611.Subpart Q, or any compliance demonstration method then in effect, shows compliance with any standards for radium and gross alpha particle activity in drinking water then in effect; or
  - (3) Two years following the date of USEPA action.
- (C) Compliance shall be achieved with any standards for radium and gross alpha particle activity 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 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 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 to determine the concentration of radium-226, 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  
P.O. Box 19276  
2200 Churchill Road  
Springfield, Illinois 62794-9276
- (D) Within three months of USEPA action or one year after the grant of this variance, whichever is sooner, 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 concentration for combined radium and gross alpha particle activity, or with any standards for radium in drinking water then in effect:

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

- (E) 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 (E) of each of the following actions: 1) advertisement for bids, 2) names of successful bidders, and 3) whether Petitioner accepted the bids.
- (F) Construction allowed on said construction permits shall begin within a reasonable time of bids being accepted. In any case, construction of all installations, changes or additions necessary to achieve compliance with the maximum allowable concentration of combined radium and gross alpha particle activity, or with any standards for radium and gross alpha particle activity in drinking water then in effect, shall be completed no later than one year following the date of USEPA action or May 23, 1993, whichever is earlier.
- (G) 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 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 radium and gross alpha particle activity standard.
- (H) 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 shall send to each user of its public water supply a written notice to the effect that Petitioner is not in compliance with standard for radium and gross alpha particle activity. The notice

shall state the average content of radium and gross alpha particle activity in samples taken since the last notice period during which samples were taken.

- (I) Until full compliance is achieved, Petitioner shall take all reasonable measures with its existing equipment to minimize the level of combined radium, radium-226, radium-228, and gross alpha particle activity in its finished drinking water.
- (J) 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 45 days of the date of this Order, Petitioner shall execute and forward to Stephen C. Ewart, Division of Legal Counsel, 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 91-22, May 23, 1991.

\_\_\_\_\_  
 Petitioner

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

\_\_\_\_\_  
 Title

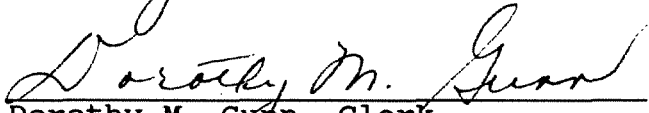
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 Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989 ch. 111 ½ 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 Member 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 23<sup>rd</sup> day of May, 1991, by a vote of 5-1.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board