

ILLINOIS POLLUTION CONTROL BOARD
June 20, 1991

CITY OF DEKALB,)
)
 Petitioner,)
)
 v.) PCB 91-34
) (Variance)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

RONALD G. MATEKAITIS, ESQ. APPEARED ON BEHALF OF THE PETITIONER.

STEPHEN C. EWART, ESQ. APPEARED ON BEHALF OF THE RESPONDENT.

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

This matter comes before the Board on the February 26, 1991 filing of a petition for variance ("Pet.") by the City of DeKalb ("DeKalb"). DeKalb 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 DeKalb's public water supply of the 5 picocuries per liter ("pCi/l") combined radium-226 and radium-228 standard of 35 Ill. Adm. Code.Subtitle F¹. Variance is requested for five years.

On March 21, 1991 and March 26, 1991, the Board received letters objecting to the request for variance. The March 26, 1991 letter was signed by seventeen people. Pursuant to 35 Ill. Adm. Code 104.160(c)(2), which requires a hearing be held when a timely objection is made to a petition for variance, the Board accepted this matter for hearing on March 28, 1991. Hearing was held on May 13, 1991 at the Municipal Building, DeKalb, Illinois. Present at the hearing were the parties, members of the public, the press, and Board Member Ronald C. Flemal and Board Attorney Michelle Dresdow. Dr. Flemal, who lives and works in DeKalb, has recused himself from these proceedings.

¹ 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) (see Illinois Register, Volume 14, Issue 40, October 5, 1990).

The Illinois Environmental Protection Agency ("Agency") filed its variance recommendation ("Rec.") on April 1, 1991.² The Agency recommends that variance be granted, subject to conditions.

On June 10, 1991, the DeKalb Citizen's Environmental Committee requested that the Board withhold voting on the petition for variance until June 20, 1991. Since the Board must take final action by that date anyway, the request is moot.

On June 19, 1991, the Concerned Citizen's of DeKalb filed a "Request for Denial of Petition for Variance" with the Board. Pursuant to 35 Ill. Adm. Code 101.181, the request has been filed too late to be considered in the Board's decision making process. In addition, since the Concerned Citizen's of DeKalb is not a party to the proceeding, the Board is not required to consider the request. The Board notes that many of the concerns in the June 19, 1991 request were properly raised at hearing and have been considered by the Board.

Based on the record before it, the Board finds that DeKalb 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 as set forth in this Opinion and Order.

BACKGROUND

DeKalb is a municipality located in DeKalb County. Among other services, DeKalb provides potable water supply and distribution to 6,075 residential, 625 commercial, and 50 industrial utility customers (Pet. ¶10, Tr. at 6). DeKalb's water supply system is a deep well system composed of nine deep wells, four storage tanks and ninety miles of water distribution system (Pet. ¶10, Tr. at 7). The wells range in depth from 949 feet to 1,328 feet, with the oldest well placed in operation in 1921 and the newest well in 1988 (Pet. ¶14).

DeKalb was first advised that its water supply exceeded the maximum allowable concentration for combined radium in a letter dated December 26, 1990 (Pet. ¶16, Tr. at 8). The Agency reported that a December 1990 analyses of four samples showed a combined radium content of 9.8 pCi/l (Rec. ¶11). DeKalb was notified of being placed on restricted status by letter from the Agency dated January 4, 1991 (Pet. ¶16).

DeKalb has no prior history of noncompliance for radium, gross alpha activity or other contaminants (Pet. ¶26, Tr. at 9).

² The Agency Recommendation was accompanied by a motion to file instanter. That motion was granted on April 11, 1991.

The present petition for variance was filed within sixty days of Agency notification of restricted status.

REGULATORY FRAMEWORK

In recognition of a variety of possible health effects occasioned by exposure to radioactivity, the USEPA has promulgated a maximum concentration limit for drinking water of 5 pCi/l of combined radium-226 and radium-228. Illinois subsequently adopted this same limit 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 $\frac{1}{2}$, par. 1017.6), any revision of the 5 pCi/l standard by the USEPA will automatically become the standard in Illinois.

Two features of Illinois regulations not found in federal law and intended to promote compliance are "Standards for Issuance" and "Restricted Status". These features are found at 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. 1989, ch. 111 $\frac{1}{2}$, 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.

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. It is this prohibition which DeKalb requests be lifted. Grant of the requested variance would not absolve DeKalb from compliance with the combined radium standard, nor insulate DeKalb from possible enforcement action brought for violation of those standards, as DeKalb itself notes (Pet. ¶41). The action that DeKalb requests here is not variance from the maximum allowable concentration for radium. Regardless of the action taken by the Board in the instant matter, this standard will remain applicable to DeKalb.

After a petition for variance is filed, the Act requires that the Board 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 ½, 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 343, 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 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.

COMPLIANCE PROGRAM

DeKalb is considering two compliance options, including constructing treatment facilities for the deep well water, and searching for alternative sources of supply, such as the construction of shallow wells (Pet. ¶21). DeKalb is considering retaining the services of an outside consultant to assist with reviewing and evaluating the alternatives and to prepare recommendations for resolving the radium problem. DeKalb has not developed a detailed timetable for resolving the problem but proposed a schedule of activities to be undertaken during the variance period. (Pet. ¶22).

At hearing, Mr. Lawrence Thomas of Baxter & Woodman Environmental Engineers, testified about the alternatives available to DeKalb. Mr. Thomas estimated that treatment facilities would cost approximately \$700,000 to \$800,000 per well or approximately six or seven million dollars total (Tr. at 17, 19). Mr. Thomas did not seem to think one treatment facility with connecting water mains from all wells would be significantly cheaper (Tr. at 20). Shallow wells would cost approximately one million dollars per well, for a total of approximately ten million dollars (Tr. at 18).

HARDSHIP

DeKalb contends that denial of variance would constitute an arbitrary or unreasonable hardship. If the variance is not granted, DeKalb lists eight developments, containing

approximately 19 apartment buildings and over three hundred single family units, which will be denied water service (Pet ¶ 13). DeKalb also states that denial of the variance would stop water system improvements for the city and for Northern Illinois University (Pet. ¶36). DeKalb contends that loss of any of the development or improvement projects creates a serious economic impact upon the city (Pet ¶36). It notes that:

Failure to obtain a variance means that all construction within the Petitioner's service area requiring the extension of the water supply system, could not resume. This negatively impacts prospective home purchasers as well as business developers and Petitioner's tax base... The time involved for the planning, financing, 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 distribution system in order to serve the domestic and fire protection requirements of the local population. (Pet. ¶35-36).

DeKalb further contends that the expenditure of public funds for treatment facilities which may become obsolescent in the near future due to revision of the radium standard is not in the public interest and does not grant a corresponding benefit to the public (Pet. ¶34). The Agency also contends that denial of variance would constitute an arbitrary or unreasonable hardship (Rec. ¶19).

ENVIRONMENTAL EFFECTS

Although DeKalb 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. ¶25). The Agency contends likewise (Rec. ¶16). In support of their contention, DeKalb (Pet. ¶ 25) and the Agency (Rec. ¶15) reference testimony presented by Richard E. Toohey, Ph.D. of Argonne National Laboratory at hearings held for PCB 85-54 and R85-14 and to updated testimony presented by Dr. Toohey in the Board's hearing on the Braidwood variance, PCB 89-212.

Dr. Toohey also appeared at hearing to testify on the health risks associated with a 9.8 pC/l radium level. Dr. Toohey stated that, depending on the risk model used, the risk to a population of 2,025³ in a five year period would be either 0.028 additional cancers induced (current EPA risk model) or 0.007 additional cases of cancer (Dr. Toohey's risk model). These figures assume

³ This is the estimated population which will be served by new water connections after the variance is granted.

consumption of contaminated water begins immediately and continuously for the entire five year period (Tr. at 26).

As to the possibility of USEPA changing the standards for radium in drinking water, Dr. Toohey does not believe the supposed change will increase the risk. He stated that the lifetime risk for a person will not change if the radium standard is eased because USEPA used an inappropriate method of risk assessment to calculate the present standard (Tr. at 28-29).

In its recommendation, the Agency states that while radiation at any level creates some risk, the risk associated with DeKalb's water is very low (Rec. ¶16). 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 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. In so saying, the Agency emphasizes that it continues to place a high priority on compliance with the standards.

(Rec. ¶27 and ¶28)

PUBLIC INTEREST

Approximately twenty members of the public attended the hearing. Eight people made statements on the record expressing their concern about the radium in the DeKalb water. Several people asked questions concerning the effects of radium on children, methods to treat tap water, the potential for higher radium levels in the area water, and the accuracy of the cost estimates for the compliance alternatives. Several people supported the 5 pCi/l combined radium concentration standard; several others saw little harm in the USEPA's proposed change.

The Board again notes that the variance requested by DeKalb is not from the effective radium standard. That standard remains applicable against DeKalb. A variance is a temporary reprieve from the Board's regulations until compliance is achieved. DeKalb is not avoiding compliance and has in fact agreed to make every effort to achieve compliance by the terms of the variance.

CONSISTENCY WITH FEDERAL LAW

The Board can grant variance from restricted status consistent with the requirements of the Safe Drinking Water Act (42 U.S.C. 300(f) et seq.), as amended by the Safe Drinking Water Act Amendments of 1986 (Pub. Law 99-339, 100 Stat. 642 (1986)), and the USEPA National Interim Primary Drinking Water Regulations (40 CFR Part 141) because such relief would not constitute a variance from national primary drinking water regulations nor a federal variance. (Rec. ¶¶ 22-24; Pet. ¶38-40). Specifically, grant of variance from restricted status means that only the State's criteria for variances are relevant.

The Agency states that grant of variance leaves DeKalb subject to the possibility of federal enforcement for violations of the radium standards (Rec. ¶25). The Agency believes that it is unlikely that USEPA will object to the issuance of variance because of the current review of radium standards.

CONCLUSION

The Board finds that, in light of all the facts and circumstances in this case, denial of variance would impose an arbitrary or unreasonable hardship upon DeKalb. 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.

The Board notes that timely compliance by DeKalb may be affected by pending USEPA action to promulgate new standards for radionuclides in drinking water. USEPA recently proposed to publish its Notice of Proposed Rulemaking ("NPRM") in June 1991, and expects to issue final action on new radionuclide standards in April, 1993 (56 Fed. Reg. 18014, April 22, 1991). New radionuclide standards from USEPA could significantly alter DeKalb's need for a variance or DeKalb's alternatives for achieving compliance. In recognition of this situation, the Board's variance will contain suitable timeframes to account for the effects of any USEPA alteration (or notice of refusal to alter) of the radium standard.

DeKalb is to bear in mind that today's action is solely a grant of variance from standards of issuance and restricted status. DeKalb is not being granted variance from compliance with the radium standard, nor does today's action insulate DeKalb 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 DeKalb, is hereby granted variance 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 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
 - (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 5 pCi/l standard will be promulgated.
- (B) Variance shall terminate on the earliest of the following dates:
 - (1) When analysis pursuant to 35 Ill. Adm. Code 611.731(a), or any compliance demonstration method then in effect, shows compliance with any standards for radium in drinking water then in effect;
 - (2) Two years following the date of USEPA action; or
 - (3) June 20, 1996.
- (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 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 so as to determine the concentration of radium-226 and radium-228. 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) Within three months of this grant of variance, Petitioner shall secure professional assistance (either from present staff or an outside consultant) in investigating compliance options, including the possibility and feasibility of achieving compliance by blending water from its shallow well(s) with that of its deep well(s).

(F) Within four months of this grant of variance, evidence that such professional assistance has been secured shall be submitted to the Agency at the following address:

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

(G) Within ten months of this grant of variance, or three months after revision of the USEPA standard for combined radium or publication that the standard will be unchanged, Petitioner shall complete investigating compliance methods and prepare a detailed Compliance Report showing how compliance will be achieved within the shortest practicable time, but not later than five years from the date of grant of this variance.

(H) Within twelve months of this grant of variance, or four months after revision of the USEPA standard for combined radium or publication that the standard will be unchanged, Petitioner shall submit such Compliance Report to the Agency at the address identified in Condition D.

(I) Within eighteen months of this grant of variance, or six months after revision of the USEPA standard for combined radium or publication that the standard will

be unchanged, 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, 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.

- (J) 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.
- (K) 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 combined radium, or with any standards for radium in drinking water then in effect, shall begin no later than eighteen months after USEPA action. If there is no USEPA action within two years of grant of this variance, Petitioner shall begin construction no later than three years after grant of this variance. Construction shall be completed no later than four years from the grant of this variance, one year will be necessary to prove compliance.
- (L) 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 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 standard.
- (M) 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 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. The notice shall state the average content of radium in samples taken since the last notice period during which samples were taken.

- (N) Until full compliance is achieved, Petitioner shall take all reasonable measures with its existing equipment to minimize the level of combined radium, radium-226, and radium-228 in its finished drinking water.
- (O) Petitioner shall provide written progress reports to the Agency at the address in Condition D every six months concerning steps taken to comply with paragraphs B-N. Progress reports shall quote each of said paragraphs and immediately below each paragraph state what steps have been taken to comply with each paragraph.

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 91-34, June 20, 1991.

Petitioner

Authorized Agent

Title

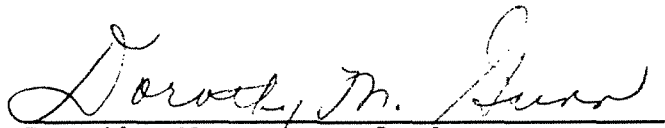
Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989 ch. 111 $\frac{1}{2}$ 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 J. D. Dumelle and B. Forcade dissented. Board Member R. Flemal abstained.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 20th day of June, 1991, by a vote of 4-2.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board