

ILLINOIS POLLUTION CONTROL BOARD  
November 16, 1995

CITY OF MONMOUTH )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 96-33  
 ) (Variance-Water)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter is before the Board on an August 4, 1995 Petition for Variance filed by the City of Monmouth (Monmouth). Monmouth seeks a variance from 35 Ill. Adm. Code 602.105(a), "Standards for Issuance", and 602.106(a), "Restricted Status", to the extent that they relate to 35 Ill. Adm. Code 611.330(a), combined radium-226, radium-228, and 611.330(b), gross alpha particle activity. (Pet. at 1.)<sup>1</sup> Monmouth seeks a five-year variance to allow the continued operation, and possible expansion, of its water supply and distribution system. (Id.) The Illinois Environmental Protection Agency (Agency) filed its recommendation on August 31, 1995, advising that the variance be granted, subject to certain conditions. Monmouth waived hearing and none was held.

**BACKGROUND**

Monmouth is city located in Warren County, Illinois with a population of 9,700. (Rec. at 3.) It owns and operates a water supply and distribution system, providing potable water to 3,721 residents, as well as 356 industrial, governmental and commercial businesses. (Id.) Monmouth's water supply currently serves a 4.5-mile area. (Id.)

Petitioner's water distribution system is comprised of five deep wells, pumps, and distribution facilities. (Pet. at 1.) The water is treated with chlorine, and a small amount of phosphate for rust control, prior to distribution. (Pet. at 2.) Approximately 1.89 million gallons of water are distributed daily, which results in approximately 689.8 million gallons per year. (Id.)

Monmouth first learned that its water supply exceeded the

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<sup>1</sup>Petitioner's Petition for Variance will be cited as (Pet. at \_\_\_\_). The Agency's recommendation will be cited as (Rec. at \_\_\_\_).

maximum contaminant level (MCL) for radium by a letter from the Agency dated September 18, 1984. (Pet. at 3.) Monmouth made changes in its water distribution system and achieved compliance as indicated by Agency letter dated November 13, 1991. (Id.) On September 7, 1993 the Agency notified Monmouth that it was once again out of compliance for the MCL for radium. (Id. at Exhibit C.) The report indicated a value of 6.4 pCi/L for combined radium-226 and radium-228 for Well #7, Tap 03. (Id.)

Quarterly sampling results for gross alpha particle activity revealed that Monmouth was out of compliance from the mid-1980s until August 20, 1990, when the Agency notified Monmouth of its compliance. (Pet. at Exhibit D.) The current reading for gross alpha particle activity at Well #6, Tap 2 is 16.5 pCi/L which is over the 15.0 standard. (Rec. at 4.)

Since notification of the violation, Monmouth has developed a program to reduce the contaminant to levels at or below the MCL, which is explained below. Petitioner is not on restricted status for exceeding any other contaminant. (Rec. at 5.)

#### **REGULATORY FRAMEWORK**

The United States Environmental Protection Agency (USEPA) has promulgated an MCL for drinking water of 5 pCi/l for radium, and an MCL of 15 pCi/L for gross alpha particle activity. (Rec. at 3.) Illinois subsequently adopted the same limits. (Id.) Pursuant to Section 17.6 of the Illinois Environmental Protection Act (Act), any revisions to these standards by the USEPA will automatically become the standard in Illinois.

Monmouth is not seeking a variance from the MCLs for radium and gross alpha particle activity, which remain applicable to its potable water supply. Rather, Monmouth is requesting a variance from the prohibitions imposed at 35 Ill. Adm. Code 602.105(a) and 602.106(a) until it can achieve compliance. 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 . . . Act or of this Chapter.

#### Section 602.106            Restricted Status

- a) Restricted status shall be defined as the Agency determination pursuant to Section 39(a) of the Act and Section 602.105, that a public water supply facility may no

longer be issued a construction permit without causing a violation of the Act or this Chapter.

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 the Illinois regulations and is not found in federal law. It is from this prohibition which Monmouth requests a variance. However, we emphasize that the duration of restricted status is linked to the length of time it takes the water supply to comply with the underlying standards. As such, the time frames for compliance with the underlying standards in the proposed compliance plan are an essential consideration in determining whether a restricted status variance will be granted. Thus, grant of variance from restricted status will be conditioned upon a schedule of compliance with the underlying standards.

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. (Caterpillar Tractor Co. v. Pollution Control Board, 48 Ill.App.3d 655, 363 N.E.2d 419 (3rd Dist. 1977).) Further, the burden is on the petitioner to show that its claimed arbitrary or unreasonable hardship outweighs the public interest in attaining compliance with regulations designed to protect human health and the environment. (Willowbrook Motel v. Illinois Pollution Control Board, 135 Ill.App.3d 343, 481 N.E.2d 1032 (1st Dist. 1985).)

Lastly, a variance by its nature is a temporary reprieve from compliance with the Board's regulations and compliance is to be sought regardless of the hardship which the task of eventual compliance presents an individual polluter. (Monsanto Co. v. IPCB, 67 Ill.2d 267, 367 N.E.2d 684 (1977).) 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.

#### **ALTERNATIVE COMPLIANCE OPTIONS**

To date, Monmouth has no equipment in place to control the radium or gross alpha particle activity levels in its water supply because it has limited blending capabilities that would sufficiently lower the radiological levels in its entire system. (Pet. at 3.) In addition, the radiological levels have fluctuated in and out of compliance over the past 10 years, creating confusion as to long-range planning and initiation of expensive compliance measures. (Pet. at 4.) However, Monmouth has investigated several compliance possibilities and envisions

the following alternatives in order to achieve compliance:

- (a) Utilize existing wells that are currently in compliance, which would require extensive piping installation for blending purposes at an estimated cost of \$2,000,000;
- (b) Construct a lime softening treatment facility at an estimated cost of \$1,500,000; and,
- (c) Apply ion exchange water softening at each well which could pose an increase in risks and problems for well operators, and a public health risk due to increases in sodium levels in the water supply.

(Pet. at 4-5.)

#### **COMPLIANCE PROGRAM**

Although Monmouth has investigated three compliance alternatives, the substantial anticipated expenditures, coupled with the USEPA's expected change in radionuclide standards, have postponed any long-range planning or implementation of any compliance alternatives. However, Monmouth states that it will undertake the following measures during the variance period to minimize the impact of the discharge in the affected area:

- (1) In consultation with the Agency, continue its sampling and testing program to determine as accurately as possible the level of radium in its wells and finished water.
- (2) Pursuant to 35 Ill. Adm. Code 611.851(b), in its bimonthly water bills, send to each user of its public water supply a written notice to the effect that Monmouth has been granted by the Pollution Control Board a variance from 35 Ill. Adm. Code 602.105(a), Standard of Issuance, and 35 Ill. Adm. Code 602.106(a), Restricted Status, as they relate to the radium and gross alpha particle activity standards.

(Pet. at 5-6.)

#### **HARDSHIP**

Both parties agree that denial of a variance from 35 Ill. Adm. Code 602.105(a), Standards for Issuance, and 35 Ill. Adm. Code 602.106(a), Restricted Status, would result in an arbitrary or unreasonable hardship for Monmouth. (Pet. at 6, Rec. at 9.) First, a denial would require the Agency to refuse construction and operating permits until compliance is achieved. (Rec. at 9.)

In turn, no new water main extensions could be issued permits which would prevent further growth from occurring in Monmouth.

(Id.) This would have a severely adverse economic impact on Monmouth. (Pet. at 6.) Specifically, two developments, Fair Acres Subdivision and Fairway Meadows Subdivision, will need to connect to Monmouth's water supply to provide water and fire protection to approximately 51 residences. (Pet. at Exhibit F.)

In addition, continued development of Monmouth's City Industrial Park is expected, as well as construction of housing for the elderly adjacent to Community Memorial Hospital, will require extension of Monmouth's water mains. (Id.)

The parties further assert that granting of a variance as to Section 602.105(a), then granting a variance from Section 602.106(a) is critical to restrain the Agency from publishing that Monmouth is on the restricted list for violating those standards. (Rec. at 9.) Publication on the restricted list would mislead developers and other persons about the compliance status of Monmouth's water supply, and could stifle the area's economic growth. (Id.)

#### **ENVIRONMENTAL IMPACT**

Although Monmouth made no formal assessment of the environmental effect of the requested variance, it contends that the water from its existing wells will result in only a minimal amount of radium entering its potable water system. (Pet. at 3.)

Further, Monmouth incorporated by reference the testimony of and exhibits presented by Richard E. Toohey, Ph.D. and Dr. James Stebbings at the 1985 hearings in R85-14, In the Matter of: Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code 602.105 and 602.106. (Id.) Based on that testimony, Monmouth asserts that there will be little, if any, adverse environmental or health impact caused by a grant of the requested variance. (Id.)

The Agency states that, while radiation at any level creates some risk, the risk associated with levels found in Monmouth's water supply is very low. (Rec. at 6.) In addition, the MCL for combined radium is currently under review by the USEPA, which has recommended a standard of 20 pCi/L for each isotope. (Id.) It had been anticipated that a new standard will be adopted in September 1995. (Id.) Mr. Joseph F. Harrison, chief of the Safe Drinking Water Division, USEPA, announced that as a result of the proposed relaxed standard, no municipalities would be required to spend funds preparing for final design and construction of a treatment system to achieve compliance with the current standard. (Id. at 7.)

The Agency concludes that 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. (Id. at 8.) The Agency observes that granting this

variance from restricted status should affect only those users who consume water drawn from any newly extended water lines. (Rec. at 11.) According to the Agency, also states that the variance should not affect the status of the rest of Monmouth's population drawing water from existing water lines, except if the variance, by its conditions, hastens compliance. (*Id.*) Finally, the Agency recommends that the variance terminate five years after the date the variance is granted, or two years following the date of USEPA action, whichever comes first. (*Id.* at 12.)

#### **CONSISTENCY WITH FEDERAL LAW**

Both Monmouth and the Agency state that Monmouth may be granted variance 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. 99-339, 100 Stat. 642 (1986)), and the USEPA National Interim Primary Drinking Water Regulations (40 CFR Part 141) because the requested relief would not be a variance from national primary drinking water regulations or a federal variance. (Pet. at 6, Rec. at 10.) Specifically, granting a variance from the effects of restricted status means that only the State's criteria for variances are relevant. (Rec. at 10.)

Both Monmouth and the Agency recognize that Monmouth remains subject to the possible enforcement actions for violating standards for the contaminant in question. (Pet. at 7, Rec. at 10.)

#### **TERMS OF VARIANCE**

Monmouth requests that the term of variance be from August 5, 1995 to August 5, 2000. (Pet. at 1.) The Agency recommends that an extension of the variance be granted until the earliest of the following dates: two years following the date of the USEPA action or August 5, 2000. (Rec. at 11-12.)

#### **CONCLUSION**

After considering all the facts and circumstances of this case, the Board finds that Monmouth has presented adequate proof that immediate compliance with 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(a), Restricted Status, would impose an arbitrary or unreasonable hardship upon Monmouth. The Board therefore will allow Monmouth until November 16, 2000 to achieve compliance, subject to conditions listed in this opinion and order.

The Board agrees with the parties that granting this variance will pose no significant health risk to either the persons served by Monmouth's potable water supply, or the

surrounding environment, assuming that compliance is timely forthcoming. Although Monmouth requested a retroactive application of this variance, no evidence was provided to support this request. The Board will accordingly grant a variance from November 16, 1995 to November 16, 2000, consistent with this opinion and order.

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

#### ORDER

Petitioner, the City of Monmouth (Monmouth), is hereby granted variance from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(a), Restricted Status, but only as they relate to the 5 pCi/L radium standard of 35 Ill. Adm. Code 611.330(a), and the 15 pCi/L gross alpha particle activity standard of 35 Ill. Adm. Code 611.330(b), subject to the following conditions:

- (1) For purposes of this variance, the date of the United States Environmental Protection Agency (USEPA) action shall consist of the earlier date of the:
  - (a) date the regulation is promulgated by the USEPA which amends the maximum contaminant level (MCL) for combined radium, either of the isotopes of radium, or the method by which compliance with a radium MCL is demonstrated; or
  - (b) 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.
- (2) This variance shall terminate on the earliest of the following dates:
  - (a) two years following the date of USEPA action; or
  - (b) five years after the date the variance is granted.
- (3) In consultation with the Illinois Environmental Protection Agency (Agency), Monmouth shall continue its sampling program to determine as accurately as possible the level of radium in its wells and finished water. Until this variance terminates, Monmouth shall collect and analyze quarterly samples of its water from its entry point into the distribution system at locations approved by the Agency. Monmouth 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 the contaminants in question. Results of the analyses shall be reported within 30 days of receipt of each analysis to:

Illinois Environmental Protection Agency  
Bureau of Water, Drinking Water Quality Unit  
Compliance Assurance Section  
P.O. Box 19276  
Springfield, Illinois 62794-9276

If Monmouth elects, the quarterly samples may be analyzed when collected. The running average of the most recent four quarterly sample results shall be reported to the above address within 30 days of receipt of the most recent quarterly sample.

- (4) Within 3 (three) months of USEPA action, Monmouth shall apply to the Agency at the address below for all permits necessary for the construction, installation, changes, or additions to Monmouth's public water supply needed for achieving compliance with the MCL for combined radium or with any other standard for radium in drinking water then in effect:

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

- (5) Within 3 (three) months of the issuance of each construction permit by the Agency, Monmouth shall advertise for bids, to be submitted within 60 days, from contractors to do the necessary work described in the construction permit. Monmouth shall accept appropriate bids within a reasonable time, and shall notify the Agency, Division of Public Water Supplies (DPWS) within 30 days, of each of the following actions:
- (a) advertisements for bids;
  - (b) names of successful bidders; and,
  - (c) whether Monmouth accepted the bids.
- (6) Construction allowed on said construction permits shall commence within a reasonable time of bids being accepted, but in any event, construction of all installations, changes or additions necessary to achieve compliance with the MCL in question shall be completed no later than two years following USEPA action. One year will be necessary to prove



compliance.

- (7) 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, Monmouth shall send to each user of its public water supply a written notice to the effect that Monmouth is not in compliance with the standard in question. The notice shall state the average content of the contaminants in samples taken since the last notice period during which samples were taken.
- (8) 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, Monmouth shall send to each user of its public water supply a written notice to the effect that Monmouth has been granted by the Pollution Control Board a variance from 35 Ill. Adm. Code 602.105(a), Standard of Issuance, and 35 Ill. Adm. Code 602.106(a), Restricted Status, as it relates to the MCL standard in question.
- (9) Until full compliance is reached, Monmouth shall take all reasonable measures with existing equipment to minimize the level of contaminants in its finished drinking water.
- (10) Monmouth shall provide written progress reports to the Agency's DPWS, FOS every six months concerning steps taken to comply with paragraphs 3, 4, 5, 6, 7, 8 and 9. Progress reports shall quote each of said paragraphs and immediately below each paragraph state what steps have been taken to comply with each paragraph.

IT IS SO ORDERED.

If Monmouth chooses, to accept this variance subject to the above order, within 45 days of the date of this order, an officer of Monmouth properly authorized to bind Monmouth to all the terms and conditions of the variance, shall execute and forward the attached Certificate of Acceptance and Agreement to:

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

Once executed and received, the Certification of Acceptance

and Agreement shall bind petitioner 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. 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 Illinois Pollution Control Board, in PCB 96-33, November 16, 1995.

Petitioner: \_\_\_\_\_

By: Authorized Agent

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1994)) provides for the appeal of final Board orders within 35 days of the date of service of this order. The Rule of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill. Adm. Code 101.246, Motions for Reconsideration.)

I, Dorothy Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the \_\_\_\_\_ day of \_\_\_\_\_, 1995, by a vote of \_\_\_\_\_.

\_\_\_\_\_  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board