

ILLINOIS POLLUTION CONTROL BOARD  
October 11, 1990

VILLAGE OF MAPLE PARK, )  
 )  
 Petitioner, )  
 )  
 v. ) PCB 90-134  
 ) (Variance)  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

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

This matter comes before the Board on a Petition for Variance ("Petition") filed by the Village of Maple Park ("Maple Park") on July 19, 1990. Maple Park seeks variance from 35 Ill. Adm. Code 602.105(a), "Standards For Issuance", and 602.106(b), "Restricted Status", to the extent that the rules relate to the 1.0 milligrams per liter ("mg/l") barium standard of 35 Ill. Adm. Code 604.202. Maple Park seeks a three year variance to allow for the continued operation of its water supply and distribution system, the issuance of permits for the expansion or extension of the distribution system as necessary during the period of its non-compliance with the barium standard rather than a variance from the barium standard itself, and the removal of its water supply from the Agency's Restricted Status List for barium. The Environmental Protection Agency ("Agency") filed its Variance Recommendation on September 17, 1990. The Agency recommends that variance be granted, but that it be subject to conditions. Maple Park waived hearing and none was held.

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

BACKGROUND

The Village of Maple Park is located in Kane County, Illinois. It owns and operates a potable water supply and distribution system that serves 233 customers which, in turn, represents some 650 residents. (Pet., par. 12). The system is comprised of one deep well (Well No. 4), two shallow wells (Well Nos. 2 and 3), pumps, and distribution facilities. (Pet., par. 10). Maple Park describes the wells as follows:

Well No. 2 - This well is a back-up or stand-by source of supply for drinking water for Maple Park and is marginally capable of providing water on a continuous basis. Water obtained from this well has a maximum barium content of 0.1 mg/l. The well extends to a depth of 134 feet and is open to a sand and gravel aquifer. The well is equipped with a ten horsepower submersible pump and produces approximately 70 gallons of water per minute. During construction of Well No. 4, this well was used and there was evidence that the well screen opposite the aquifer had a hole in it as sand and gravel were pumped into the distribution system.

Well No. 3 - This well was the primary source of drinking water for Maple Park between 1971 and 1983. It extends to a depth of 182 feet and is open to a sand and gravel aquifer. Due to declining capacity, this well was removed from service in 1983 and is currently out of service.

Well No. 4 - This well is the primary source of drinking water for Maple Park and is adequately capable of providing water on a continuous basis. Water obtained from this well has a maximum barium content of 1.53 mg/l. The well extends to a depth of 960 feet and is open to the Galena-Platteville Dolomite (limestone) and Glenwood-St. Peter (sandstone) aquifer. The well is equipped with thirty horsepower submersible pump and produces approximately 190 gallons of water per minute.

(Pet., par. 13)

The Agency first advised Maple Park that it exceeded the maximum allowable concentration for barium by letter dated March 19, 1990. (Pet., par. 17, Attachment 1; Rec., par. 12). On March 22, 1990, the Agency notified Maple Park that it was going to be placed on Restricted Status. (Pet., par. 17, Attachment 2; Rec. par. 12). Maple Park is on the July, 1990 Restricted Status List for barium, but is not on restricted status for exceeding any other contaminant. (Rec., par. 12).

#### REGULATORY FRAMEWORK

The United States Environmental Protection Agency ("USEPA") has promulgated a maximum concentration limit for drinking water of 1.0 mg/l of barium. Illinois subsequently adopted the same limit as the maximum allowable concentration limit under Illinois law. Moreover, pursuant to Section 17.6 of the Illinois Environmental Protection Act ("Act") (Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1017.6 (1989)), any revisions to the 1.0 mg/l standard by the USEPA will automatically become the standard in Illinois.

The action that Maple Park requests here is not variance from the maximum allowable concentration for barium. Regardless of the action taken by the Board in the instant matter, this standard will remain applicable to Maple Park. Rather, Maple Park requests variance from the prohibitions imposed pursuant to 35 Ill. Adm. Code 602.105(a) and 602.106(b) 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 Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1001 et seq.) (Act), or of this Chapter.

Section 602.106 Restricted Status

- b) The Agency shall publish and make available to the public, at intervals of not more than six months, a comprehensive and up-to-date list of supplies subject to restrictive status and the reasons why.

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 Maple Park request a variance. However, we emphasize that, because the duration of restricted status is linked to the length of time it takes the water supply to come into compliance with the underlying standards, the time frames in the proposed compliance plan itself are a concomitant, indeed an essential, consideration in a restricted status variance determination, whether or not variance is being requested from those standards. Thus, grant of variance from restricted status will be conditioned on a schedule of compliance with the 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. Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1035(a). Further, the burden is not upon the Board to show that the harm to the public outweighs petitioner's hardships; the burden is upon 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 with the term of the variance.

#### ALTERNATIVE COMPLIANCE OPTIONS

Maple Park envisions the following three alternatives in order to achieve compliance:

- a. Construction of a new well into a low barium content groundwater source to be used for blending purposes with existing wells;
- b. Construction of a new well into a low barium content groundwater source to serve as primary water supply, or
- c. Construction of treatment facilities in order to properly treat all water supplied by the existing deep well.

(Pet., par. 20)

With regard to the treatment option, Maple Park states that the following are the three treatment methods that are Best Available Technologies ("BAT") for barium removal: ion exchange, lime softening, and reverse osmosis. (Pet. par. 24). Maple Park notes that ion exchange water softening is the cheapest option and that it will remove over 75 percent of the barium. (Pet., par. 25). It contends, however, that the sodium content of the water will be increased if a softener that is regenerated with salt is used and that this, in turn, may create a risk to those persons who are hypertensive or who have heart problems. (Pet., par. 25). It also contends that it may be difficult to legally dispose of the waste from routine softening, particularly because Maple Park is an unsewered community. (Pet., par. 25).

#### COMPLIANCE PROGRAM

Maple Park anticipates that the implementation of alternative a) or b) above will meet all applicable standards, but notes that accurate costs and time figures for each option are not currently available. (Pet., par. 21). It has retained Engineering Enterprises, Inc. in Elburn, Illinois, to review and evaluate the three options and to recommend a course of action to resolve the problem. (Pet., par. 21). Maple Park anticipates a three month period to accomplish this task, although no accurate time table has been developed. (Pet., par. 21).

Maple Park states that it will take the following steps during the variance term to minimize the impact of the excess barium:

- a. In consultation with the Agency continue its sampling program to determine as accurately as possible the level of barium in its wells and finished water. Testing for barium shall be continued.
- b. Within three months after the grant of the variance, initiate a program of groundwater resources investigation, including both shallow and deep groundwater resources, to identify additional sources of groundwater having an acceptable level of barium.
- c. Within three months of the completion of the groundwater resources investigation and within twelve months of the grant of the variance, complete investigating compliance methods, and prepare a detailed Compliance Report showing how compliance shall be achieved within the shortest practicable time, but no later than five years from the date of the variance.
- d. Within twelve months of the grant of the variance, submit the Compliance Report to the Agency, Division of Public Water Supply ("DPWS"), for its approval.
- e. If the compliance Report is not disapproved by the Agency within three months of its submission, or within any written extension of approval time made by the agency, then within six months after said approval time, apply to the Agency, DPWS, Permit Section for all permits necessary for construction of installations, changes, or additions to the public water supply needed for achieving compliance with the maximum allowable concentration for barium.
- f. Within three months after each construction permit is issued by the Agency, DPWS, advertise for bids from contractors to do the necessary work described in the construction permit and shall accept appropriate bids within a reasonable time.
- g. Construction allowed on said construction permits shall begin within a reasonable time of bids being accepted, but in any case, construction of all installation, changes, or additions necessary to achieve compliance with the maximum allowable concentration for barium shall begin no later than two and one half years from the grant of the variance and shall be completed no later than three years from the grant of the variance.

- h. Compliance shall be achieved with the maximum allowable concentration for barium no later than three years from grant of the variance.
- i. Pursuant to 35 Ill. Adm. Code 606.302, in its first set of water bills or within three months after the date of the variance, whichever occurs first, and every three months thereafter, send to each user of its public water supply a written notice to the effect that it has been granted by the Board a variance from 35 Ill. Adm. Code 602.105(a), Standards for Issuance, and 35 Ill. Adm. Code 602.106(b), Restricted Status, as it relates to the barium standard.
- j. Pursuant to 35 Ill. Adm. Code 602.201, 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, send to each user of its public water supply a written notice to the effect that it is not in compliance with the barium standard of 35 Ill. Adm. Code. 604.301(a). The notice shall state the average content of barium in samples taken since the last notice period during which samples were taken.
- k. Take all reasonable measures with its existing equipment to minimize the level of barium in its finished water.

(Pet., par. 30)

#### HARDSHIP

Maple Park cites several reasons why it, taxpayers, prospective developers, and persons and industries serves by those developers would experience an arbitrary and unreasonable hardship if the Board denied its variance request. First, Maple Park states that an expenditure of significant sums of money to come into compliance would be arbitrary or unreasonable when delayed compliance with the barium standard does not significantly benefit the public or the environment. (Pet., par. 31). Second, Maple Park points out that extension of its water mains will not cause any significant risk or harm to the environment or to the people served by any extensions for the limited time of the variance because grant of the variance would not relax the barium standard but would only mean that the Agency could not legally deny construction or operating permits based on Maple Park's violation of the barium standard (Pet., pars. 26, 32, 41). Third, Maple Park contends that, given the anticipated change in the barium standard (see following), and the fact that it may be able to comply with such standard, a substantial expenditure of public monies for blending or treatment facilities that may later become obsolete in the near future is not in the public interest and would not benefit the public. (Pet., par. 38). Fourth, Maple Park asserts that its tax base, home purchasers, and business developers will be hurt because

construction within the service area requiring water supply extensions cannot resume. (Pet., par. 39). Fifth, Maple Park asserts that there is a need for the expansion of its water distribution system to serve the domestic and fire protection requirements of the local population during the time involved for the planning, financing, engineering, and construction of water supply, blending, or treatment facilities. (Pet., par. 40).

The Agency supports Maple Park's variance request and agrees that denial of the variance would result in an arbitrary and unreasonably hardship. The Agency specifically points to the fact that it would be required to deny construction and operating permits for the new water main extensions until compliance is achieved (unless a variance from 35 Ill. Adm. Code 604.301 is granted) and that, as a result, any economic growth resulting from those water main extensions would be stifled. (Rec., par. 19).

#### ENVIRONMENTAL IMPACT

Although Maple Park states that it has made no formal assessment of the environmental effect of the requested variance, it contends that extension of its water mains will not cause any significant harm to the environment or to any potential customers served by any extension for the limited time period of the requested variance. (Pet., par. 26).

The Agency agrees with Maple Park's assertion and has no objection to the use of alternative a) or b) (see above) provided that either method can be timely implemented and will meet the requirements of the Act, the Board's rules, and the Agency's Technical Policy Statements. (Rec., par. 16).

#### CONSISTENCY WITH FEDERAL LAW

Both Maple Park and the Agency state that Maple Park 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. Law 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., pars. 42, 43; Rec., pars. 21, 23). Specifically, granting a variance from the effects of restricted status means that only the State's criteria for variances are relevant. (Pet., par. 44; Rec., par. 22).

Maple Park and the Agency state that grant of variance leaves Maple Park subject to the possibility of federal enforcement for violations of the barium standard. (Pet., par. 45; Rec., par. 24). The Agency notes, however, that if the state variance requires compliance by the end of the Agency's

recommended variance period, USEPA would probably consider the variance order to be a "Compliance Order" and defer federal enforcement. (Rec., par. 24).

#### ANTICIPATED FEDERAL STANDARD REVISION

In the October 5, 1983 Federal Register (48 Fed. Reg. 45502), USEPA published advance notice of its intention to propose National Revised Primary Drinking Water Regulations for organic, inorganic, microbial and radionuclide contaminants in drinking water. (Pet., par. 33). In the May 22, 1989 Federal Register (54 Fed. Reg. 22111), USEPA published proposed regulations for barium in drinking water that increase the maximum contaminant level ("MCL") from 1.0 mg/l to 5.0 mg/l. (Pet., par. 35). In a letter dated March 10, 1989, USEPA indicated to Maple Park that it will revise the federal barium standard according to the following schedule:

May, 1989 - date of filing of proposed MCL at 5.0 mg/l  
Jan., 1991 - expected promulgation date of final MCL  
Jul., 1992 - expected effective date of revised standard

(Pet., pars. 34, 36, Attachment 3)

Maple Park states that it will be in compliance with the barium standard, if the federal and state standards for barium are increased to 5.0 mg.l. (Pet., par. 37).

#### TERMS OF VARIANCE

Maple Park requests that the term of variance be three years from the date variance is granted. The Agency, however, recommends that variance end after three years, or when analysis shows compliance, whichever occurs first. (Rec., par. 27(b)).

#### CONCLUSION

The Board finds that, in light of all the facts and circumstances of this case, Maple Park has presented adequate proof that immediate compliance with 35 Ill. Adm. Code 602.105(a) and 602.106(b) would impose an arbitrary or unreasonable hardship upon Maple Park. We particularly note that Maple Park's commitment, both financially and otherwise, towards coming into compliance is firm and well on its way to fruition. The Board, however, agrees with the Agency's reasoning regarding the termination date of the variance. The Board will therefore allow Maple Park until May 1, 1995, to achieve compliance.

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 will accordingly grant variance consistent with this Opinion.



As a final note, the Board believes that the conditions as recommended by the Agency are generally appropriate. The Board, however, makes one substantive insertion; the placement appropriate positions of the phrase, "or with any standard for barium in drinking water then in effect", or like phrases, at appropriate places in the Order. The purpose is to assure that if the barium standard is altered during the term of variance by USEPA action and corresponding operation of Section 17.6 of the Act, the compliance target for Maple Park then becomes the revised barium standard rather than the presently applicable standard of 1.0 mg/l.

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

ORDER

Petitioner, the Village of Maple Park, is hereby granted variance from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(b), Restricted Status, but only as they relate to the 1.0 mg/l barium standard of 35 Ill. Adm. Code 604.202, subject to the following conditions:

- (1) This variance shall terminate on the earliest of the following dates:
  - (a) August, 1993; or
  - (b) When analyses pursuant to 35 Ill. Adm. Code 605.103, or any compliance demonstration then in effect, show compliance with the barium standard or any standard for barium in drinking water then in effect.
- (2) Compliance shall be achieved with the maximum allowable concentration of barium, or with any revised standard for barium in drinking water then in effect, no later than August, 1993.
- (3) In consultation with the Agency, Maple Park shall continue its sampling program to determine as accurately as possible the level of barium in its wells and finished water. Until this variance terminates, Maple Park shall collect semi-annual samples of its water from its distribution system at locations approved by the Agency, and shall collect semi-annual samples of its raw water from its wells. Maple Park shall analyze the samples at six-month intervals, using a laboratory certified by the State of Illinois for barium analysis. The results of the analyses shall be reported within 30 days of receipt of each analysis to:

Illinois Environmental Protection Agency  
Division of Public Water Supply

Compliance Assurance Section  
2200 Churchill Road  
Springfield, Illinois 62794-9276

- (4) Within twelve months after the grant of variance, Maple Park shall submit a detailed compliance report showing how compliance shall be achieved within the shortest practicable time, but no later than August 1993. The Compliance Report shall be submitted to:

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

- (5) Within six months of the Agency's receipt of the Compliance Report, Maple Park shall apply for all permits necessary for construction of installations, changes or additions to Maple Park's public water supply needed for achieving compliance with the maximum allowable concentration for barium or with any standard for barium in drinking water then in effect. Such applications shall be made to:

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

- (6) Within three months after each construction permit is issued by the Agency, Maple Park shall advertise for bids, to be submitted within 45 days, from contractors to do the necessary work described in the construction permit. Maple Park shall accept appropriate bids within a reasonable time. Petitioner shall notify the Agency at the address in condition of (5) of each of the following actions: 1) advertisement for bids, (2) names of successful bidders, and 3) whether Maple Park accepted the bids.
- (7) 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 barium, or with any standard for barium in drinking water then in effect, shall begin no later than two and one-half years from the grant of this variance, and shall be completed no later than three years from the grant of this variance.
- (8) Pursuant to 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, Maple Park shall send to each user of its public water supply a written notice to the effect that Maple Park 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 barium standard.

- (9) Pursuant to 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, Maple Park shall send to each user of its public water supply a written notice to the effect that Maple Park is not in compliance with the barium standard. The notice shall state the average content of the contaminant in question in samples taken since the last notice period during which samples were taken.
- (10) Until full compliance is achieved, Maple Park shall take all reasonable measures with its existing equipment to minimize the level of barium in its finished drinking water. In particular, Maple Park shall continue to maintain, to the degree reasonably practicable, the increased proportion of shallow well water in its distribution system in order to reduce the barium level.
- (11) Maple Park shall provide written progress reports to the Agency every six months concerning steps taken to comply with conditions 4 through 10 of this Order. Progress reports shall quote each of said conditions and immediately below each condition state what steps have been taken to comply with each condition. Such written progress reports shall be submitted to:

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

- (12) Because it is possible that the USEPA may promulgate a final maximum contaminant level for barium that will bring Maple Park into compliance without any changes or additions to its public water supply, Maple Park may make a petition for modification subsequent to completion of the requirements of conditions (1) - (5) if there is good reason to believe changes in the standard are imminent. Compliance with a finally promulgated USEPA maximum contaminant level for barium will automatically terminate this variance on the date of compliance in accordance with condition 1(b) above.

Within 45 days of the date of this Order, Petitioner shall execute and forward to Bobella Glatz, 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 the bound by all terms and conditions of the Order of the Illinois Pollution Control Board, in PCB 90-134, October 11, 1990.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
By: Authorized Agent

\_\_\_\_\_  
Title

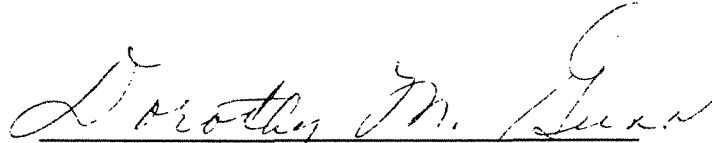
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Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1987, ch. 111 1/2 par. 1041, provides for appeal of Final Orders of the Board within 35 days. The Rules of the Supreme Court of Illinois establish filing requirements.

IT IS SO ORDERED.

Board Member B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 17<sup>th</sup> day of October, 1990, by a vote of 5-1.

  
Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board