

in Lockport, Illinois. In addition to the parties, the hearing was attended and testimony given by members of the public.

Based on the record before it, the Board finds that Metro 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 conditions consistent with this Opinion.

REGULATORY FRAMEWORK

In recognition of a variety of possible effects occasioned by elevated levels of iron in drinking water, the Board has promulgated regulations which, among other matters, restrict the concentration of total iron in finished drinking water supplies to 1.0 mg/l. This standard is codified at 35 Ill. Adm. Code 604.202.

The action Metro requests here is not variance from this maximum allowable iron concentration. Regardless of the action taken by the Board in the instant matter, the iron standard will remain applicable to Metro. Rather, the action Metro 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 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 $\frac{1}{2}$, 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. This provision is a feature of Illinois regulations not found in federal law. It is this prohibition which Metro requests be

lifted. Moreover, as Metro properly notes (Pet. at par. 46), grant of the requested variance would not absolve Metro from compliance with the iron standard, nor insulate Metro from possible enforcement action² brought for violation of this standard.

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. 1987, ch. 111 $\frac{1}{2}$, par. 1035(a)). Furthermore, the burden is upon the petitioner to show that its claimed hardship outweighs the public interest in attaining compliance with regulations designed to protect the public (Willowbrook Motel v. Pollution Control Board (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 which the task of eventual compliance presents an individual polluter (Id.). Accordingly, a variance petitioner is required, as a condition to grant of variance, to commit to a plan which is reasonably calculated to achieved compliance within the term of the variance.

BACKGROUND

Metro is a public utility which provides sewer and water utility service to approximately 4,000 customers in northeast Illinois. Metro has 19 employees and operates from offices located at 143 South Lincolnway, North Aurora, Illinois. Metro Utility Co. was formed in 1983 as the result of the consolidation of seven smaller utility companies, the largest of these being Chickasaw Hills Utility Company. The vestiges of the seven constituent utilites now remain as separate service territories or operating divisions of Metro. It is the Chickasaw Hills division of Metro Utility Co. which has been placed on restricted status and which is the subject of the instant matter.

² The Board notes that the Agency in its recommendation and at hearing alludes to a pending enforcement action related to the elevated iron concentrations in Metro Utility's water (Rec. at par. 10; R. at 9-10, 100). That pending action is not before the Board in the instant matter, and today's action in no way reflects on or is intended to reflect on the merits of the pending action.

The original Chickasaw Hills Utility Company was incorporated in 1965 to provide sewer and water utility service to the Chickasaw Hills Subdivision, which is located midway between Lockport and Orland Park in Homer Township, Will County, Illinois. Since that time the service area of the Chickasaw Hills division has expanded to include other areas with a potential of 3,568 customers (Pet. at par. 9). At this time, approximately 2,430 customers are being served, 2,368 of which are single-family residential customers and 62 of which are small commercial units (Id.).

The water utility system in question includes four shallow wells, pumps, an elevated tower, and distribution lines. The system is divided to a "North" and a "South" area (Pet. Attachment 1), which are connected by a 12" water main which allows exchange between the areas. Three of the wells (Wells No. 1, 2, and 4) are located in the North area; one well (Well No. 3) is located in the South area (Pet. at par. 11). Metro contends that the raw water produced from the four wells differs in its background concentration, with water from Well No. 1 being below the 1.0 mg/l standard, water from Well No. 2 being at or slightly above the standard, and water from Wells No. 3 and 4 averaging approximately 0.5 mg/l above the standard (Pet. at pars. 12 and 17).

Metro provides various analyses of iron at points within the distribution system (See Pet. at par. 22 and 24). Typical of distribution system iron analyses, the reported concentrations vary widely: the 32 reported analyses range from .12 mg/l to 50.60 mg/l, with a median of 0.8 mg/l. As the Agency properly points out, distribution system iron analyses are likely to show a great deal of variability due to the chemical properties of iron (Rec. at par. 11). In particular, iron tends to precipitate within the pipes of the distribution system as iron oxide or hydroxide, and may thereafter be flushed through a water tap to produce an occasional very high analysis at the tap. In fact, it is standard practice in systems where raw water is high in iron to periodically flush accumulated iron out of the water mains, and thus to reduce the possibility of large "slugs" of iron being delivered at a customer's tap.

Metro contends that prior to 1988 it had been able to chemically sequester the iron in its water supply, and that it thereby had been operating in compliance with the iron standard (Pet. at par. 16). Metro contends further, however, that due to growth in the number of customers served and higher individual water demands, its former sequestering program is no longer adequate (Pet. at par. 18).

Nevertheless, Metro contends that it was not aware of the failure of its sequestering program, and its resultant failure to be in compliance with the iron standard, until notified to this

effect in a letter from the Agency dated August 24, 1989 (Pet. at par. 26). In the same letter (Pet. Attachment 8), the Agency first notified Metro of placement on restricted status.

COMPLIANCE PROGRAM

Metro has taken various steps to date to reduce the occurrences of elevated iron concentrations in its distribution system. These include acceleration of its program to flush water mains (Pet. at par. 19). Additionally, Metro has installed an integrated well control system so that daily average consumption is being supplied by Wells No. 1 and 2 (Id.), the two wells with the lowest background iron concentrations. Metro points to reduced consumer complaints as one measure of efficacy of these measures (Id.).

Metro now proposes three additional actions. These are (Pet. at par. 27; R. at 28-35):

- 1) Drilling of a second well adjacent to Well No. 1 to increase the production of water with an iron concentration of less than 1.0 mg/l. Metro estimates that the new well will be operational during the summer of 1990 at a cost of approximately \$116,000 (R. at 33-4). A construction permit for this activity was issued by the Agency on September 21, 1989 (See Pet. Attachment 11).
- 2) Construction of treatment facilities in order to provide iron treatment to all water supplied by Well No. 3. The facilities are intended to include a fine filter unit, pressure tank, housing, and controls. Metro estimates that the facilities will be operational around June 1, 1990 (R. at 33) and cost \$194,000. A construction permit for this activity was issued by the Agency on September 1, 1989 (See Pet. Attachment 12).
- 3) Construction of treatment facilities at Well No. 4, similar to that of Well No. 3, above. Metro estimates an implementation time of 36 months and a cost of \$237,600.

The Agency believes that this compliance program, as well the compliance schedule, is acceptable (Rec. at par. 16). The Agency further believes that the compliance program, if implemented properly, can achieve compliance with the Board's iron standard (Id.; R. at 102). The Board concurs with the Agency's analysis.

HARDSHIP

Metro notes that it intends to come into compliance with the iron standard as soon as is practicable, and is currently engaged in implementing a compliance program (see following). However, Metro believes that remaining on restricted status during the interval during which compliance steps are being undertaken would constitute an arbitrary or unreasonable hardship. Metro and the Agency both note that because of Metro's inability to receive permits for water main extensions, any economic growth dependent on those water main extensions is not allowed. Metro adds that a principal hardship would fall upon others (Pet. at par. 41):

Failure to obtain a variance means that all construction within Petitioner's service area requiring extension of the water system could not resume. This hurts prospective home purchasers as well as business developers ... Moreover, Petitioner had, previous to its being placed on the Restricted Status List, entered into numerous contracts with developers of property for the extension of its sewer and water mains. Most, if not all, of these developers have expended substantial sums of money on planning, approvals, construction, and marketing of their developments under the assumption that Petitioner would provide central sewer and water service. If a variance is not granted, these developers stand to suffer serious economic losses in terms of both time and money, as a result of Petitioner's inability to serve.

Letters filed with the Board by persons who have economic interest in land and home developments in the Metro service area support the contention that hardship would fall on persons in addition to Metro³. Developments for which water main extension is foreseen include (Pet. at par. 14):

- 1) Saddle Brooke Subdivision located immediately west of the existing Pebble Creek Subdivision in Homer Township, Will County, Illinois, consisting of 83 single family residences with an expected population of 330 persons. Each house would have a separate hookup to the proposed water main.

³ Letters are from: John C. LaFlamboy of Caldwood Development Corporation, filed February 28, 1990; John Ryan of Ryan & Smith Incorporated, filed March 2, 1990; Jeanette M. Funchion of F.I.D.C., Inc., filed March 5, 1990; Michael J. Cap of Joseph A. Schudt & Associates, filed March 7, 1990; and Ronald J. Patterson of PatConServ, Inc., filed March 26, 1990.

- 2) County Woods Subdivision located immediately north of the existing Twin Lakes Subdivision in Homer Township, Will County, Illinois, consisting of 84 single family residences with an expected population of 330 persons. Each house would have a separate hookup to the proposed water main.
- 3) Hillside Meadow Subdivision located immediately west of the existing Meadowview Subdivision in Homer Township, Will County, Illinois, consisting of 19 single family residences with an expected population of 70 persons. Each house would have a separate hookup to the proposed water main.
- 4) Hillside Court Subdivision located immediately west of the existing Meadowview Subdivision in Homer Township, Will County, Illinois, consisting of 28 single family residences with an expected population of 110 persons. Each house would have a separate hookup to the proposed water main.
- 5) Cedar Road Grade School, Homer School District 33C, on Cedar Road, south of 159th Street, in Homer Township, Will County, Illinois, housing approximately 660 students and staff.

Metro notes that each of the four subdivisions above mentioned has been approved pending the issuance of permits by the Agency, and that substantial initial development and marketing have taken place (Pet. at pars. 14, 42). Metro further notes that the permit for extension to the Saddle Brooke Subdivision has been denied by the Agency by letter of October 16, 1989 (Pet. Attachment 9), based on Metro's restricted status.

Metro next notes that it must come into compliance with the iron standard irrespective of the Board's action in the instant matter. Metro also adds that if it is denied variance, and hence cannot add additional customers during the time period required to come into compliance, the burden of paying for the required additional treatment facilities will fall upon fewer customers resulting in higher individual rates than would otherwise be necessary if the variance were granted (Pet. at par. 39).

Lastly, Metro contends that the hardship resulting from denial of the requested variance would outweigh the injury of the public (see below), particularly given the limited time period of the requested variance and the intermediate compliance steps which are to be undertaken (Pet. at par. 38-43). Metro thus believes that the hardship rises to the level of arbitrary or unreasonable hardship (*Id.* at par. 43). The Agency agrees that denial of variance would constitute an arbitrary or unreasonable hardship (Rec. at par. 18 and 19).

PUBLIC INJURY

Although Metro has not undertaken a formal assessment of the environmental effect of its requested variance, it contends that extension of its watermains will not cause any significant harm to the environment or to the people served by the potential watermain extensions for the limited time period of the requested variance (Pet. at par. 33). As regards the elevated iron concentrations, Mr. Harold A. Ritke, witness for Metro contends:

It is not a health hazard. But, it does mess up the laundry and it isn't pleasant to draw it into the bath tub. Most importantly, it turns the water black. (R. at 35).

Mr. Martin Ince, appearing on behalf of the Will County Land Use Department, which otherwise opposes grant of variance, also concedes "that high iron concentrations in the water do not pose a health hazard" (R. at 47). However, Mr. Ince notes that "there are a number of other undesirable effects, discoloration, taste and odor" (Id.).

The Agency also contends that iron in the concentrations typical of that found in Metro's system does not constitute a significant health risk (Rec. at par. 15). The Agency additionally notes that the principal concerns are related to problems of color and taste (Rec. at par. 14).

In conclusion, 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 the iron standard, 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. at par. 23 and 24).

CONSISTENCY WITH FEDERAL LAW

The Agency believes that Metro may be granted variance consistent with the requirements of the Safe Drinking Water Act (42 U.S.C. §300(f)) and corresponding regulations because the requested relief is not variance from a national primary drinking water regulation (Rec. at par. 21).

CONCLUSIONS

The Board concludes that, in light of all the facts and circumstances of this case, denial of variance would impose an arbitrary or unreasonable hardship upon Petitioner. 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, given the reasonable assurance that compliance is forthcoming via Metro's compliance program.

The Board notes that significant attention has focused on the 50.60 mg/l iron concentration determined on a sample collected on July 6, 1989 from 13041 W. Woodlawn. The Board itself had, by Order of January 11, 1990, requested that the Agency address the nature of this result. The 50.60 mg/l is not only more than 50-times the standard, but it is also almost 17-times larger than any of the other 31 sampling results in the record before the Board. Whereas Metro seemingly questions the validity of the result, to the extent that it points out that both its own lab and an outside lab have not found similar results (Pet. at par. 24), the Agency defends the result as real and as consistent with the chemical properties of iron (Rec. at par. 11). The Agency notes, however, that given the inherent variability of iron concentrations, one would not expect a similar result if the test were taken at another time, even at the same location (Id.). Moreover, the Agency notes that it "would not expect any health implications from the 50.60 mg/l iron content due simply to the fact that once the water has been run for a while, this level would not be likely to be present", and that samples taken at other times and locations "demonstrate that the 50.60 mg/l level is not regularly present in Metro's finished water" (Id.).

The Board generally concurs with the Agency's perspective on the health aspects of the 50.60 mg/l result. Aside from the absence of known health effects from occasional consumption of

such water, the Board notes that water containing iron at this concentration is highly colored, and therefore is unlikely to be routinely consumed. However, such water can cause substantial discoloration of fixtures and clothing. In the latter case, it is not reasonable to expect a person to monitor the color of water entering appliances, such as washing machines, as a defense against discoloration and ruin of clothing. Thus, concentrations of this sort, even if only very occasionally encountered, are not to be tolerated.

Lastly, the Board notes that the instant matter is unusual among variance actions before the Board in that it has elicited a far larger public participation than is normal. In part, this public participation reflects concern about the economic consequences of denial of variance. In part, it also reflects a significant public displeasure with Metro's general service. Public displeasure with Metro's general service is borne out in various consumer complaints filed with Metro, the Agency, and/or various units of local and state government (e.g., R. at 8-9, 26, 42-43, 50, 57, 66, 68-71, 118, 134, 137-149, 154; Rec. at par. 10), as well as the objections to variance filed with the Board. The Agency has also conducted a survey of Metro customers (R. at 73-4; Pub. Exh. 2); the survey produced 538 responses, 408 of which indicated that Metro's water was "unacceptable" (Rec. at par. 10). The level of public displeasure is further evidenced by the level of public participation at hearing and comments elicited there.

The Board initially notes that it is difficult to separate out those portions of the expressed public concern which are germane to the instant matter from those which are not germane. Most of the complaints, in fact, appear to be related to matters such as insufficient water pressure and discoloration. These matters are not germane to today's action, in that Metro does not request relief, nor does the Board grant relief, from any standards related to water pressure or chemical or physical parameters. Moreover, Metro has been made clearly aware by the actions of the Agency that the problems of pressure and chemical and physical parameters must be corrected. The Board accepts Metro's compliance program as an acceptable method of correction, and intends to bind Metro to the compliance program as a condition for grant of the instant variance.

Among other matters which are not germane to today's action are alleged right-of-way disputes between Metro and the Homer Township highway commission (R. at 80-83) and Metro's alleged implacement of "substandard" fire hydrants (R. at 86-91, 125-128; Pub. Exh. 5). These matters are not only not germane, they are not within the Board's jurisdiction.

Few of the expressed public concerns appear to be directly related to the only issue at hand, which is whether Metro should

now be allowed to extend its water service to additional customers. Among comments which urge grant of variance are those which are based on financial loss if water service cannot be supplied; the Board believes that these comments are important, and gives them corresponding weight. Among comments which urge denial, the Board perceives that there are some which would deny the instant variance as penalty for implied past failures on Metro's part. The Board is not persuaded that denial of variance could be based on Metro's history. The record does not support that Metro's hardship, yet alone the hardship of Metro's intended new customers, is self-imposed. Moreover, Metro has, since notification of its restricted status, aggressively sought compliance. The Environmental Protection Act rather narrowly prescribes the standards under which this Board must either grant or deny any requested variance. These are the standards of hardship and commitment to compliance noted earlier in this Opinion. Based on the record developed in this matter, the Board is constrained to find that Metro has met all of the standards for grant of variance. Variance must therefore be granted with conditions consistent with this Opinion.

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

ORDER

Petitioner, Metro Utility Co. (Chickasaw Hills division) 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 iron standard of 35 Ill. Adm. Code 604.302, subject to the following conditions:

- (A) Compliance shall be achieved with the iron standard of 35 Ill. Adm. Code 604.202 no later than three years from grant of this variance.
- (B) In consultation with the Illinois Environmental Protection Agency ("Agency"), Petitioner shall continue its sampling program to determine as accurately as possible the level of iron in its wells and finished water. Until this variance terminates, Petitioner shall collect quarterly samples of its water from its distribution system and shall have them analyzed annually by a laboratory certified by the State of Illinois for iron analysis so as to determine the concentration of iron. The results of the analyses shall be reported to:

Illinois Environmental Protection Agency
Compliance Assurance Section
Division of Public Water Supplies
P.O. Box 19276
2200 Churchill Road
Springfield, Illinois 62794-9276

- (C) 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, 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 it relates to the iron concentration standard.
- (D) 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, Petitioner shall send to each user of its public water supply a written notice to the effect that Petitioner is not in compliance with the iron concentration standard. The notice shall state the concentration of iron in samples taken since the last notice period during which samples were taken.
- (E) Petitioner shall take all reasonable measures with its existing equipment to minimize the level of iron in its finished drinking water during the period of this variance. These measures shall include a regular flushing program approved by the Agency.
- (F) No later than 12 months from this grant of variance, Petitioner shall complete construction of a second well adjacent to Well No. 1 to increase the production of water with an iron concentration of less than 1.0 mg/l
- (G) No later than sixteen months from this grant of variance, Petitioner shall complete construction of facilities to treat for iron all water supplied by Well No. 3.
- (H) Petitioner shall apply for permits for construction of iron removal equipment at Well No. 4 by August 1, 1991, and shall begin construction of said iron removal equipment by April 1, 1992. Petitioner shall complete construction of treatment facilities to treat all water supplied by Well No. 4 by a date three years from this grant of variance.

- (I) Petitioner shall provide written progress reports to the Agency at the address below every six months concerning steps taken to comply with this Order. Progress reports shall quote each of the 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 Supplies
 Field Operations Section
 2200 Churchill Road
 Springfield, Illinois 62708

Within 45 days of the date of this Order, Petitioner shall execute and forward to Bobella Glatz, Enforcement Programs, 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 89-210, April 26, 1990.

 Petitioner

 Authorized Agent

 Title

 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 Members Jacob D. Dumelle, Bill Forcade, and Michael Nardulli dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 26th day of April, 1990, by a vote of 4-3.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board