

ILLINOIS POLLUTION CONTROL BOARD
August 11, 1994

VILLAGE OF DIAMOND,)
)
Petitioner,)
)
v.) PCB 94-132
) (Variance)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

OPINION AND ORDER OF THE BOARD (by M. McFawn):

This matter is before the Board on the April 21, 1994 filing by Petitioner, the Village of Diamond (Village), of a petition for variance. The Village seeks relief from 35 Ill. Adm. Code 602.105(a) "Standards for Issuance", and 602.106(a), "Restricted Status", but only as these rules relate to the radium-226 and radium-228 standard of 35 Ill. Adm. Code 611.330(a) and the gross alpha standard of 35 Ill. Adm. Code 611.330(b). The Village requests a variance for up to and including December 31, 2000 or five years from the grant of the variance or when analysis pursuant to 35 Ill. Adm. Code 605.104(a) shows compliance with the standard regulating radium-226, radium-228 and gross alpha particle activity, whichever occurs first.

On May 19, 1994, the Illinois Environmental Protection Agency (Agency) filed its variance recommendation.¹ The Agency recommends that the variance be granted for eighteen months subject to certain conditions. The Village waived hearing, and none has been held.

For the following reasons, the Board finds that the Village has presented adequate proof that immediate compliance with the Board's regulations for "Standards for Issuance" and "Restricted Status" would result in the imposition of an arbitrary or unreasonable hardship. Variance is be granted for five years, the maximum time allowed by law (415 ILCS 36(b)), subject to conditions set forth in the attached order.

BACKGROUND

The Village, located in Grundy County, is an Illinois

¹ The petition will be cited as (Pet. at .) and the Agency's recommendation will be cited as (Rec. at .).

municipality which provides public services including a potable water supply and distribution system. These services are provided to a population of approximately 470 residential and 19 business customers, representing approximately 1200 residents as of the year of 1993. (Pet. at 4.) The Village is not part of a regional public water supply.

The Village owns, operates and maintains the deep well water supply system in question. The distribution system includes two deep wells, pumps and distribution facilities. (Pet. at 5.) The water is provided to all residential and business users as needed and charged according to the established ordinances.

The Village has the following number of wells: (Pet. at 5.)

<u>Well #</u>	<u>Depths</u>	<u>Placed in Operation</u>	<u>Gallons Per Minute</u>	<u>Location</u>
1	470 feet	1955	170	1750 E. Division
2	772 feet	1964	300	260 N. Tinman

(Well #2 is for emergency use only due to its radium content)

The Village requests the variance to extend its water mains to serve a new sewage treatment plant and new users in two proposed subdivisions. (Pet. at 5.) One subdivision to be located at Stellon and School Streets, the other is at McGinty and Patmore Streets, both in Diamond, Illinois. Each subdivision will consist of approximately 35-40 single family residences with an expected population of 120 persons. (Pet. at 5.) Petitioner is currently planning to provide a separate hookup to the proposed water main for each house. Additionally, the Village is in the final stages of construction of its new sewage treatment plant and extending the water main is necessary to support this operation.

This is petitioner's first request for a variance² involving the combined radium and gross alpha particle activity limitations in 35 Ill. Adm. Code 611.330(a) and (b). (Rec. at 3.) According to the Village, blending of the waters from the wells was not a consideration because the concentration of the contaminants was approximately the same in both wells. (Pet. at 6.) The maximum contaminant levels (MCLs) for combined radium-226 and radium-228, and gross alpha particle activity are respectively 5 pCi/L and 15

² In its recommendation, the Agency mistakingly states several times that the petitioner is requesting an extension to a variance (Rec. at 5.), while earlier stating that the petitioner had not sought a variance from these regulations prior to this application. (Rec. at 4, at Paragraph 9.)

pCi/L. According to the Village, it first learned of excessive levels of these contaminants in the groundwater from the Agency by letter dated November, 1985, and was first advised that the MCLs were exceeded by letter dated November, 1986. (Pet. at 6.) According to the Agency, it advised the Village that its water supply exceeded the maximum allowable concentration for combined radium in a letter dated September 14, 1984, and that the MCL for gross alpha particle activity was exceeded in a letter from the Agency dated October 17, 1980. (Rec. at 4.) According to the petitioner, the Agency's report was based upon the analysis done by the Illinois Department of Nuclear Safety for gross alpha particle activity on an annual composite of four consecutive quarterly samples. (Pet. at 6.) Currently, the petitioner is not in violation of the gross alpha particle activity standard. (Rec. at 4.)

According to the petitioner, the radium analyses are also conducted by the Illinois Department of Nuclear Safety. (Pet. at 6.) The most recent results obtained from composite analyses of the radium content in petitioner's water distribution system exceed the sum of the two isotopes of radium, radium-226 and radium-228 ("combined radium") 5 pCi/L standard and are as follows (Pet. at 4, 5.):

August 1992 through May 1993 testing:

Radium-226	8.1 pCi/L
Radium-228	4.1 pCi/L

The last two analyses of gross alpha particle activity in petitioner's water distribution system produced the following results:

Last Sampling Period using four consecutive quarterly samples:

Gross Alpha	12.3 pCi/L
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First two quarters of the current sampling period:

Gross Alpha	14.30 pCi/L
Gross Alpha	35.50 pCi/L

While no violation is evident based on recent past analysis of gross alpha particle activity, the analysis for the first two quarters of the current sampling period indicates that the average for the upcoming sample period will exceed the MCL of 15.0 pCi/L standards. (Rec. at 4,5.)

The Village has controls for these contaminants, as well as others, which were put into operation in February 1992. (Pet. at

6.) These controls consist of two reverse osmosis filtering units which are leased from Culligan International. The controls were installed with the approval of the Agency by Culligan for the purpose of removing all contaminants. (Pet. at 7.) These units filter the well water to virtually zero contaminants. The pure water is then blended with well water for economic and chemistry-based reasons. The blending process is controlled based on the results of Agency analyses and analyses done by the Village through an approved independent laboratory. (Pet. at 7.) In either case, these analyses are very expensive and take from four to eight weeks or longer to perform. (Rec. at 5.) The Agency acknowledges that more frequent sampling would be cost prohibitive at this time. (Rec. at 5.)

Pursuant to 35 Ill. Adm. Code 104.180(a), the Agency has investigated the facts alleged by the petitioner. (Rec. at 6.) In accordance with 35 Ill. Adm. Code 104.140(b), the Agency attempted to ascertain the views of persons who might be affected by the grant of the variance by publishing in a newspaper of general circulation in petitioner's county a solicitation of views of such persons and by sending notices of the petition for the variance to the appropriate State legislators and county officials. According to the Agency there has been no response to this newspaper solicitation and notices as of May 19, 1994.

REGULATORY FRAMEWORK

The instant variance request concerns two features of the Board's public water supply regulations: "Standards for Issuance" and "Restricted Status", which are found at 35 Ill. Adm. Code 602.105 and 602.106. In pertinent part they 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 1/2, pars. 1001 et seq.) (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.

The cumulative effect of these regulations is to prohibit community water supply systems from extending water service, by virtue of not being able to obtain the requisite permits, unless and until their water meets all of the standards for finished water supplies. The Village requests that it be allowed to extend its water service while it continues to pursue compliance with the combined radium and gross alpha standards, as opposed to extending service only after attaining compliance.

In determining whether any variance is to be granted, the Act requires the Board to determine whether a petitioner has presented adequate proof that immediate compliance with the Board regulations at issue would impose an arbitrary or unreasonable hardship. (415 ILCS 5/35(a)(1992)) 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 (1985), 135 Ill. App.3d 343, 481 N.E.2d 1032.) Only with such a showing can the claimed hardship rise to the level of arbitrary unreasonable hardship.

A further feature of a variance is that it is, by its nature, 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 (1977), 67 Ill.2d 276, 367 N.E.2d 684.) 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.

It is important to recognize that grant of variance from "Standards for Issuance" and "Restricted Status" neither absolves a petitioner from compliance with the drinking water standards at issue, nor insulates a petitioner from possible enforcement action brought for violation of those standards. The underlying standards remain applicable to the petitioner regardless of whether variance is granted or denied.

Standards for radium in drinking water were first adopted as National Interim Primary Drinking Water Regulations by the USEPA in 1976. The standards adopted were 5 pCi/L for the sum of the two isotopes of radium, radium-226 and radium-228. Shortly thereafter, Illinois adopted the same limits. Although characterized as "interim" limits, the standards nevertheless are the maximum allowable concentrations under both federal and Illinois law, and will remain so unless modified by the USEPA.³

³ In anticipation of USEPA revision of the radium standard, the legislature amended the Illinois Environmental Protection Act

Since their original promulgation, the current radium and gross alpha particle activity standards have been under review at the federal level. The USEPA first proposed revision of the standards in October 1983 in an Advance Notice of Proposed Rulemaking (48 Fed. Reg. 45502). It later republished this advance notice in September 1986 (51 Fed. Reg. 34836). On June 19, 1991, USEPA announced a proposal to modify both radium standards (56 Fed. Reg. 33050, July 18, 1991). USEPA proposed to replace the 5 pCi/L combined radium standard by separate standards of 20 pCi/L each for radium-226 and radium-228. The gross alpha particle activity standard was proposed to be replaced by an adjusted gross alpha particle activity standard; the latter would still have a 15 pCi/L value, but would no longer include alpha particle activity associated with radium or uranium decay. Under the USEPA's calendar, these standards were scheduled to be published by April 30, 1995. However, the U.S. Congress passed and President Clinton signed Public Law 103-124 (October 28, 1993) which included a prohibition for use of any funds by USEPA in promulgating a new standard for radon in drinking water. (Rec. at 8.) Prior to the enactment of this legislation, the Agency had anticipated that the new standard for radon and the amended standards for the radium isotopes would be adopted in the winter of 1993-1994. This congressional action has suspended any USEPA regulatory activity for radionuclides until 1995. (Rec. at 8.)

COMPLIANCE PLAN

According to the Agency, the Village is committed to achieve compliance with these contaminants once the USEPA establishes its amended standards for radium-226 and radium-228. No mention is made by the Agency concerning the Village's commitment concerning the standard for gross alpha particle activity (if it is still applicable after the long-anticipated federal rule change). The Agency states its belief that the Village must operate the reverse osmosis units to remove the radium isotopes to the extent necessary to reliably and consistently comply with the existing radium and gross alpha particle activity standards. The Agency further states that it cannot support a variance that would permit "engineered noncompliance" for the period of the variance. (Rec. at 6.) The Board does not understand this term. Yet it is for that reason apparently, that the Agency limits its support for the requested variance to a period of 18 months or less. The

at Section 17.6 in 1988 to provide that any new federal radium standard immediately supersedes the current Illinois standard. (See P.A. 87-650, which amends Section 17.6 of the Act to specifically require Board adoption of federal combined radium-226 and radium-228 and gross alpha particle activity standards by peremptory rulemaking.)

Agency states that any longer time period would permit the Village to "under-utilize" its existing reverse osmosis units. (Id.)

The Village does not specifically address the issue of a compliance plan in its petition. However, the Village does represent that it has retained an "outside consultant" to assist it in evaluating "this situation" and to prepare recommendations for resolving the problem. The only recommendations of that consultant were the "IEPA recommended methods for removal": ion exchange and lime softening. According to the Village, both systems cost over \$1 million and would be impossible to operate since the Village does not have a waste treatment system (sic) at this time. (Pet. at 7 & 8.)

However, we know, based on the information provided in its petition and in the Agency's recommendation, that the Village currently operates its reverse osmosis units and then conducts blending operations. However, the Village states that blending to guarantee compliance is "very cost prohibitive" and would result in very corrosive water due to very low concentration of dissolved solids. Therefore, the Village blends to achieve levels just below the MCL for the contaminants. (Pet. at 7.) The Agency recommends as a condition to the variance, if granted, a requirement that the Village operate this equipment to minimize or eliminate the level of contaminants in its finished drinking water. However, the Agency does not recommend any changes to the reverse osmosis and blending operations, or any additional treatment equipment. Furthermore, the Agency does not recommend any change in the current sampling protocol.

ENVIRONMENTAL IMPACT

The Village has made no formal assessment of the effect of the variance on the environment. Instead, the Village, refers to the testimony and exhibits presented by Dr. Richard E. Toohey, Ph.D., and Dr. James Stebbings, Ph.D, on July 30 and August 2, 1985, in R85-14, Proposed Amendments to Public Water Supply Regulations 35 Ill. Adm. Code 602.105 and 602.106, in support of the assertion that the variance will not result in any adverse environmental impact. (Pet. at 8.) The Agency simply states its belief that radiation at any level creates some risk, but that the risk associated with this level is very low. (Rec. at 7.)

HARDSHIP

The Village correctly points out that a grant of the requested variance only prohibits the Agency from legally denying construction or operating permits based on the Village's

violation of the standards, and does not make less strict the standards that petitioner must meet. (Pet. at 10.) The Village asserts that a substantial expenditure of public funds for treatment facilities, which may become obsolete in the near future as a result of the USEPA proposed relaxation of the current standards, is not in the public interest and does not grant a corresponding benefit to the public. (Pet. at 11.) The Village also asserts that a failure to obtain a variance will negatively impact prospective home purchasers as well as business developers and the Village tax base, because all construction within the Village's service area requiring the extension of the water supply system would be prohibited. Finally, the Village argues that the time involved for planning, financing, engineering, and construction of water treatment facilities prevents immediate compliance with the standards, and that, in the interim period, there is a great need for the expansion of the water distribution system in order to serve the domestic and fire protection requirements of the local population. (Pet. at 12.)

The Agency believes that a denial of the variance would be an arbitrary and unreasonable hardship to the petitioner. (Rec. at 9.) Denial of a variance from the two rules imposing restricted status on the Village would result in an arbitrary or unreasonable hardship because denial would require that the Agency: (1) publish the Village on the Restricted Status List, and (2) deny construction and operating permits until compliance is achieved. The second action would prevent further development from taking place in the Village of Diamond, while the first might mislead developers and other persons who check this list and their contemplated economic activity might be delayed or discontinued. (Rec. at 9.)

The Agency believes that the hardship resulting from denial of the variance, which would have the effect of putting petitioner on restricted status, would outweigh the injury to the public from grant of the extension. The Agency observes that this grant of the variance from restricted status should affect only those users who consume water drawn from any newly extended water lines and states that an increase in the allowable concentration for these contaminants should cause no significant health risk for this limited population. (Rec. at 8.) 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. (Rec. at 11.) The Board notes that the granting of this variance should not cause any "increase in the allowable concentration of these contaminants," but agrees with the Agency's latter statement that compliance may be hastened.

CONSISTENCY WITH FEDERAL LAW

The Agency states that the requested variance may be granted consistent with the Safe Drinking Water Act, PL 93-523, as amended by PL 96-502, 42 U.S.C. §300(f)(1992), and the USEPA Drinking Water Regulations (40 CFR Part 141 (1991)), because the variance does not grant relief from compliance with the National Primary Drinking Water Regulations. (Rec. at 10.)

Granting a variance from the effects of restricted status affects State and not federal law and regulations. (Rec. at 10.) Therefore, a variance under the Act and Board regulations is not a variance from USEPA's National Primary Drinking Water Regulations. The Agency believes there should be no resulting risk to the State of Illinois of loss of its primary enforcement responsibility ("primacy") under the Safe Drinking Water Act. (Rec. at 10.)

CONCLUSION

Based on the record, the Board finds that the Village has presented adequate proof that immediate compliance with the "Standards for Issuance" and "Restricted Status" regulations would impose an unreasonable hardship on the Village pursuant to Section 35(a) of the Act. The Board will grant this variance for a period of five years subject to conditions similar to those recommended by the Agency. If, during the course of the following five years, the standards for combined radium and gross alpha particle activity as set forth in 35 Ill. Adm. Code 611.330(a) and (b), are changed due to the long awaited and now uncertain action by the USEPA, this variance may no longer be applicable.

The Agency recommends that the term of the variance be limited to 18 months or less for the reasons recounted above. The Board does not understand how granting the requested variance for a period of time longer than 18 months would "permit the Petitioner to under-utilize the existing reverse osmosis units." (Rec. at 6.) Pursuant to the conditions recommended by the Agency and adopted by the Board hereunder, the Village will be required to "take all reasonable steps with the existing equipment to minimize or eliminate the level of contaminants in its finished drinking water." (Rec. at 13; Order at Paragraph 5.) The Board notes that little information has been provided by the Agency or the Village, which agreed to comply with this type of condition at page 9 of its Petition, about what constitutes "reasonable steps." Based on the description by the Village and the Agency about the current operations and that non-compliance appears in large part to be due to delays inherent in the sampling protocol, the Board believes that the current operations constitute reasonable compliance measures.

As acknowledged by the parties, today's action is solely a grant of variance from "Standards of Issuance" and "Restricted Status". The Village is not granted variance from compliance with the combined radium standard, or the gross alpha particle standard, and today's action does not insulate the Village in any manner against enforcement for violation of these standards.

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

ORDER

The Village of Diamond is hereby granted a five-year variance from 35 Ill. Adm. Code 602.105(a), "Standards for Issuance", and 602.106(a), "Restricted Status", as they relate to the standard for combined radium and gross alpha particle activity as set forth in 35 Ill. Adm. Code 611.330(a) and 611.330(b), respectively, subject to the following conditions:

- (1) The variance shall terminate on the earliest of the following dates:
 - a) Two years following the date of USEPA action; or
 - b) August 11, 1999; or
 - c) When analysis pursuant to 35 Ill. Adm. Code 611.720(d), or any compliance demonstration method then in effect, shows compliance with any standards for radium in drinking water.
- (2) For purposes of this order, the date of 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 for combined radium, either of the isotopes of radium, or the method by which compliance with a radium maximum contaminant level 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.
- (3) In consultation with the Agency, the Village shall continue its sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water. Until this variance

expires, the Village shall collect quarterly samples of its water from its distribution system at locations approved by the Agency. The Village 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. The results of the analyses shall be reported to the Compliance Assurance Section, Division of Public Water Supplies, 2200 Churchill Road, IEPA, Springfield, IL 62794-9276, within 30 days of receipt of each analysis. At the option of the Village, 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) 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, the Village will send to each user of its public water supply a written notice to the effect that the Village is not in compliance with the combined radium and gross alpha particle activity level standards. The notice shall state the average content of the combined radium and gross alpha particle activity in question in samples taken since the last notice period during which samples were taken.
- (5) 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 variance order, whichever occurs first, and every three months thereafter, the Village will send to each user of its public water supply a written notice to the effect that the Village 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(a), "Restricted Status", as it relates to the MCL standards for combined radium-226 and radium-228 of 5 pCi/L, and for gross alpha particle activity of 15 pCi/L.
- (6) Until full compliance is reached, the Village shall take all reasonable measures to operate its existing equipment as necessary to minimize the level of radium-226 and radium-228, and gross alpha particle activity in its finished drinking water.
- (7) The Village shall provide written progress reports to Agency's Division of Public Water Supplies, Field Operations Service every six months concerning steps

taken to comply with paragraphs 4, 5 and 6. 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 the Village chooses to accept this variance subject to the above order, within forty-five days of the grant of the variance, the Village must execute and forward the attached certificate of acceptance and agreement to:

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

Once executed and received, that certificate of acceptance and agreement shall bind the Village to all terms and conditions of the granted variance. The 45-day period shall be held in abeyance during any period that this matter is appealed. Failure to execute and forward the certificate within 45-days renders this variance void.

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 94-132, August 11, 1994.

Petitioner

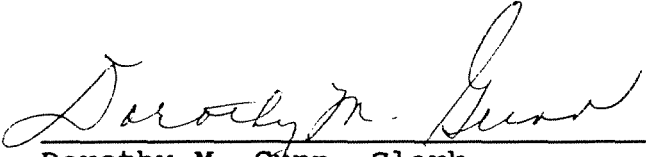
Authorized Agent

Title

Date

Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1989, 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.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 11th day of August, 1994, by a vote of 6-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board