

ILLINOIS POLLUTION CONTROL BOARD
November 21, 1996

CITY OF WEST CHICAGO,)	
)	
Petitioner,)	
)	PCB 97-51
v.)	(Variance - Public Water Supply)
)	
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

OPINION AND ORDER OF THE BOARD (by R.C. Flemal):

This matter is before the Board on the City of West Chicago's petition for variance filed on September 9, 1996. The City of West Chicago (West Chicago) is seeking a variance from the requirements of 35 Ill. Adm. Code 602.105(a), "Standards for Issuance" and 35 Ill. Adm. Code 602.106(b) "Restricted Status", to the extent these requirements involve 35 Ill. Adm. Code 611.330(a) which establishes the maximum contaminant level (MCL) for combined radium-226 and radium-228 of 5.0 picocuries per liter (pCi/L), and 35 Ill. Adm. Code 611.330(b) which establishes the gross alpha particle activity level of 15.0 pCi/L. West Chicago requests a five-year variance.

The Board previously granted West Chicago a variance from the same requirements in PCB 91-41 (June 20, 1991). The variance granted in PCB 91-41 expired on June 20, 1996.

On October 9, 1996 the Illinois Environmental Protection Agency (Agency) filed its variance recommendation. The Agency recommends that a five-year variance be granted subject to certain conditions. West Chicago waived hearing (Pet. at 15)¹ and no hearing was held. The Board's responsibility in this matter arises from the Illinois Environmental Protection Act (Act). (415 ILCS 5/1 *et seq.* (1994).) The Board is charged with the responsibility of granting variance from Board regulations whenever it is found that immediate compliance with the regulations would impose an arbitrary or unreasonable hardship upon the petitioner. (415 ILCS 5/35(a).) The Agency is required to appear at hearings on variance petitions (415 ILCS 5/4(f)), and is charged, among other things, with the responsibility of investigating each variance petition and making a recommendation to the Board as to the disposition of the petition. (415 ILCS 5/37(a).)

¹ West Chicago's Petition for Variance will be cited as (Pet. at __); the Agency's Recommendation will be cited as (Rec. at __).

For the following reasons, the Board finds that West Chicago has presented adequate proof that immediate compliance with the Board's regulations for "Standards for Issuance" and "Restricted Status" would impose an arbitrary or unreasonable hardship. Accordingly, the request for a variance from the Board's "Standards of Issuance" and "Restricted Status" is granted for five years, beginning on the date of this opinion, and subject to the conditions set forth in the attached order.

BACKGROUND

West Chicago is a municipality located in DuPage County, Illinois. (Rec. at 3.) West Chicago provides a potable water supply and distribution system to a population of approximately 3,816 residential and 662 industrial and commercial utility customers, representing approximately 16,350 people and 800 industries and businesses employing approximately 12,000 people. (Rec. at 3.) West Chicago's water supply and distribution system consists of four deep wells, three shallow wells, pumps and distribution facilities. It is not part of a regional public water supply.

West Chicago currently anticipates that the variance will allow it to extend its water mains to serve the following new users: the Oliver-Hoffman development, 900 new units; the Hickory Lane, 20 new homes; Woodland Ridge, 7 lots; and Kresswood Trails, 14 lots. (Pet. at 4.) West Chicago's current well water system is made up of the following wells:

<u>Well No.</u>	<u>Depths</u>	<u>Placed in Operation</u>	<u>Gallons per minute</u>	<u>Location</u>
3	1378 ft.	1950	625	Fremont Street, 250' North of York Street
4	1465 ft.	1967	950	Forest & Bishop
5	1376 ft.	1960	850	Industrial Dr. 500' North of Western Dr.
6	325 ft.	1980	700	500' North of Well #5
7	350 ft.	1980	590	Hawthorne Lane 300' East of Atlantic Dr.
8	350 ft.	1988	625	1255 Helena Drive
9	1430 ft.	1993	1200	1255 Helena Drive

(Pet. at 4-5.)

West Chicago is requesting a variance to allow it to continue operating the water supply and distribution system, to expand or extend the distribution system as necessary and remove this facility from the Agency's Restricted Status List for Public Water Supplies relevant to violations of 35 Ill. Adm. Code 611.330(a). (Pet. at 1, Rec. at 4.)

The Agency first advised West Chicago that its water supply system exceeded the MCL for radium-226 and radium-228 on January 18, 1991. The Agency reported a concentration of 7.1 pCi/L² from Tap 02 Well 5. (Pet. at 5.) The Agency notified West Chicago on January 31, 1991 that it would be placed on Restricted Status. West Chicago filed a petition for variance with the Board, and on June 20, 1991 in PCB 91-41, the Board granted the variance subject to West Chicago performing certain activities. The variance granted in PCB 91-41 required compliance with the Board regulations to be achieved by June 20, 1996. West Chicago did not achieve compliance and the variance expired on June 20, 1996. On June 24, 1996 the Agency sent West Chicago a letter indicating that it was still out of compliance and the Agency would be placing the City of West Chicago's public water supply on Restricted Status. West Chicago is not currently on the restricted status for exceeding any other contaminants. (Rec. at 5.)

According to the Agency's January 3, 1996 analysis, West Chicago's water supply showed a combined radium content of 11.5 pCi/L at Tap 02 Well 3; 10.7 pCi/L at Tap 03 Well 4; 15.5 pCi/L at Tap 07 Well 8; and 13.0 pCi/L at Tap 08 Well 9.

REGULATORY FRAMEWORK

In determining whether any variance is to be granted, the Act requires the Board to ascertain 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).) Furthermore, the burden is upon 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*, 135 Ill.App.3d 343, 481 N.E.2d 1032 (1st Dist. 1977).) The petitioner must establish this burden in order for the claimed hardship rise to the level of arbitrary or unreasonable hardship.

West Chicago does not seek a variance from the MCL of 5.0 pCi/L for combined radium. (Pet. at 13.) The radium standard will remain applicable to West Chicago's water supply irrespective of the action taken by the Board. Rather, the instant variance request concerns two features of the Board's public water supply regulations: Standards for Issuance and Restricted Status. These features are found at 35 Ill. Adm. Code 602.105 and 602.106, respectively, and in pertinent part read:

² The Board notes that West Chicago states that the concentration was 7.3 pCi/L. (Pet. at 5.)

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...or of this chapter.

35 Ill. Adm. Code 602.105.

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.
- 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.

35 Ill. Adm. Code 602.106.

The principal effect of these regulations is that public water suppliers are prohibited from extending water service due to their inability to obtain the requisite permits, unless and until their water meets all the standards for finished water supplies. A 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 actions for violating those standards. The underlying standards remain applicable to the petitioner regardless of whether the variance is granted or denied.

Standards for combined radium in drinking water were first adopted as National Interim Primary Drinking Water Regulations by the United States Environmental Protection Agency (USEPA) in 1976. The standard adopted was 5.0 pCi/L for the sum of two isotopes of radium: radium-226 and radium-228 ("combined radium"). Shortly thereafter Illinois adopted the same limits. Although characterized as "interim" limits, these standards are the MCLs under both federal and Illinois law, and will remain so unless modified by the USEPA. In anticipation of the USEPA's revision of the radium standard, the Illinois legislature amended the Act at Section 17.6 in 1988 to provide that any new federal radium standard will immediately supersede the current Illinois standard. The state standard is, therefore, inexorably tied to the federal standard, and cannot be greater than or less than the federal limit.

Since their original promulgation, the current radium standards have been under review at the federal level. The USEPA has been evaluating the interim radium standards pursuant to Sections 1412(b)(1)(B) and 1412(b)(2) of the Safe Drinking Water Act that require the USEPA to propose and promulgate the National Revised Primary Drinking Water Regulations. On October 5, 1983 the USEPA announced its intention of revising the interim radionuclides standards in an Advanced Notice of Proposed Rulemaking (ANPR). (48 Fed.Reg. 45502). In that notice, the USEPA stated that it would perform a comprehensive reassessment of the interim standards in order to optimize public health protection without unnecessary economic burdens on states and communities. It later republished this ANPR in September 1986, establishing MCL goals for radionuclides and providing information related to establishing MCLs for radionuclides. (51 Fed.Reg. 34836).

On July 18, 1991 the USEPA published a rulemaking proposal which included a revision of the interim standards for radium-226 and radium-228. (56 Fed.Reg. 33050). The USEPA proposes to replace the 5.0 pCi/L combined radium standard with separate MCLs of 20.0 pCi/L each for radium-226 and radium-228. In proposing the revised MCLs, the USEPA gave consideration to available technologies and associated costs, analytical capabilities and health risks associated with the contaminants. The USEPA determined that alternatives at the 10^{-4} lifetime risk level, approximately 20.0 pCi/L for both radium-226 and radium-228, are protective of human health. Hence, the USEPA concluded that it was not cost effective to set MCLs for radium at the technically feasible level of 5.0 pCi/L.

This change in the radium standard was to be promulgated by April 1995, but the deadline was later extended to September 1995. However, Congress prohibited funds for the promulgation of final radionuclide standards for fiscal year 1994 and 1995. Mr. Joseph Harrison, Chief of the Safe Drinking Water Division, USEPA Region V, announced that in light of the projected proposal for the relaxed standard, the USEPA would not force any municipality to spend funds to comply with the federal combined standard.

COMPLIANCE PLAN

West Chicago does not have any existing controls for reducing its combined radium levels except for blending with a higher percentage of water from the shallow wells. (Pet. at 6.) In that vein, West Chicago has installed a supervisory control and data acquisitions (SCADA), and corrected various problems identified in its first petition for variance with the Board. It will also achieve a higher ratio of shallow to deep well water by possibly installing an altitude valve at its elevated tank on Hawthorne Lane, and installing two new wells by 1997. (Pet. at 7.)

West Chicago proposes two options to meet the combined standard. Option one, it could use existing and new shallow wells for blending; implementation would be two years at a cost estimated at \$1,900,000. Option two, it could construct treatment facilities to treat all the water supplied by the wells; implementation would be five years at a cost estimated at \$6,000,000. (Pet. at 7.) The cost per capita to the resident population which West Chicago

serves would be a one time expense of \$370 for option #2. West Chicago has hired an outside consultant to review and evaluate the proposals and make recommendations for resolving the situation. It anticipates a strategy within three months. (Pet. at 8.)

West Chicago anticipates implementing option one above as the short term solution, using a higher ratio of shallow wells for blending. (Pet. at 8.) Using this method it believes the combined radium level will be below 5 pCi/L. (*Id.*) Although exact costs and time periods are not presently known, it believes it will take a total of 26 months to implement option one.

If blending is not sufficient to meet the combined radium standard, West Chicago would implement option two, treatment, which would take approximately three years to design and construct and sample. (*Id.*) There are two primary treatment methods, lime or lime-soda softening and ion exchange water softening. (Pet. at 8-9.) For various reasons West Chicago or the Agency do not recommend either of the treatment options.

ARBITRARY OR UNREASONABLE HARDSHIP

West Chicago argues that expenditure of such significant sums of money to comply is an arbitrary or unreasonable hardship. (Pet. at 13.) It states that compliance with the standard does not significantly benefit the public or the environment, and in fact may harm both. (*Id.*) West Chicago notes that grant of the requested variance will not make the standard it must meet less strict, and extension of the water mains will not cause any significant harm to the environment or to the people served by the potential water main extensions. (*Id.*)

West Chicago states that denial of its request for a variance would also pose an arbitrary or unreasonable hardship because all construction within its' service area requiring the extension of the water supply system could not resume. (Pet. at 14.) This would hurt prospective home purchasers, business developers, and the tax base. Additionally, the potential harm includes the expansion necessary to serve the fire protection requirements of the local population. (*Id.*) West Chicago states that denial of its requested variance would be an arbitrary or unreasonable hardship because it would require the Agency to keep West Chicago on its restricted status list.

The Agency also claims that denial of the requested variance would result in an arbitrary or unreasonable hardship. (Rec. at 10.)

ENVIRONMENTAL IMPACT

In its recommendation, the Agency stated its belief that granting the requested variance would impose no significant injury to the public or the environment. (Rec. at 7-10.) The Agency asserts that the proposed variance should cause no significant health risk for the population served by any new water main extensions for the time period of the recommended variance. (Rec. at 10.) The Agency relies on testimony presented by Richard E. Toohey, Ph.D., of Argonne National Laboratory, at hearings held 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. Additionally the Agency notes the updated information concerning the effects of combined radium levels provided in the written testimony of Dr. Toohey and the testimony of Dr. Robert Rowland, at a variance hearing on August 5, 1996 in PCB 96-246. (Rec. at 8.)

In fact, the Agency believes that the hardship resulting from the denial of the requested variance would outweigh the injury to the public from granting the variance. (Rec. at 12.)

West Chicago has not performed a formal assessment of the effect of the variance on the environment. (Pet. at 9.) However, petitioner believes it will not cause any significant harm to the environment or to the people served by potential water main extensions.

CONSISTENCY WITH FEDERAL LAW

The parties believe the Board can grant the requested variance consistent with the Safe Drinking Water Act, PL 93-523, as amended by PL 96-502, PL 99-339, and PL 104-18, 42 U.S.C. 300(f) et. seq. and the USEPA drinking water regulations (40 CFR 141 (1993)). (Pet. at 15, Rec. at 11-12.) The requested variance, which would allow construction of water main extensions under the Act and Board regulations, would not be a variance from the national primary drinking water regulations, but only a variance from the state's regulations regarding Restricted Status and Standards of Issuance. Since only state criteria are relevant in this request for variance, there is no conflict with federal law or regulations, and it will not suspend the effect of the Safe Drinking Water Act.

The parties point out that granting the variance will not insulate West Chicago from possible enforcement actions for violations of the radium standards. (Rec. at 12, Pet. at 15.) However, the Agency believes the USEPA will not object to the issuance of the variance. In fact the USEPA has indicated that it will not force municipalities to spend funds preparing a final design or constructing a treatment system to comply with the federal combined standard. (Rec. at 9.)

ANALYSIS

The issue before the Board is whether West Chicago would incur an arbitrary or unreasonable hardship which outweighs the environmental and health impact if its request for variance is denied. In determining what constitutes an arbitrary or unreasonable hardship, the Board notes that a speculative change in law is not grounds for establishing arbitrary or unreasonable hardship. However, in some circumstances a prospective change in law may be appropriately reflected in the conditions upon which a variance is granted. (City of Genoa v. IEPA (December 20, 1990) PCB 90-166, 117 PCB 135.)

In the case at bar, the Board finds it appropriate to condition the granting of a variance based on the USEPA's expected decision to revise the radium standards. By basing its decision on the expected USEPA revision, the Board is ensuring that West Chicago will

achieve compliance with the standard the USEPA will mandate. The Board's condition also ensures that West Chicago will not need to prematurely return to this Board to request another variance. The Illinois legislature linked state standard changes with federal standard changes. (415 ICLS 5/17.6) The Board believes it is consistent with legislative intent to allow delay in compliance until the regulatory scheme stabilizes at the federal level. As a result, the Board is disinclined to require a municipality to expend substantial funds in order to conform to a standard that is being federally reviewed and expected to be relaxed in the future.

West Chicago claims denial of the variance would hurt prospective home purchasers, business developers, and the tax base. Normally, consequences of variance denial such as the loss of job opportunities, city income and taxes, and the loss of sales and enhanced property taxes, are considered merely the expected consequences of restricted status, and do not, by themselves, constitute arbitrary or unreasonable hardship. (Willowbrook Motel v. Pollution Control Board (July 14, 1983) PCB 1-149, 53 PCB 007; *affirmed in Willowbrook Motel v. Pollution Control Board*, 135 Ill.App.3d 343, 481 N.E.2d 1032 (1st Dist. 1977) (emphasis added.)) However, if the claimed hardship outweighs a nominal injury to the public or the environment, the Board can find that an arbitrary or unreasonable hardship would result. (Marathon Oil Company v. IEPA and IPCB, 610 N.E.2d 789 (5th Dist. 1993).)

The Board finds that West Chicago's radium levels of 11.5 pCi/L at Tap 02, Well 3; 10.7 pCi/L at Tap 03, Well 4; 15.5 pCi/L at Tap 07, Well 8; and 13.0 pCi/L at Tap 08, Well 9, do not significantly diverge from the radium standard, and that the proposed variance would cause no significant health risk for the population served by water main extensions for the time period of the recommended variance. The Board agrees with the parties that granting the requested variance would not result in a significant injury to the public or to the environment for the limited time period requested.

The variance should only affect those users who consume water drawn from any newly extended water lines, and not affect the status of the remainder of the population who draw water from existing water lines. (Rec. at 12-13.)

Additionally, the Board notes that, during the term of the variance, West Chicago will be required to monitor its radium levels, and report its findings to the Agency.

CONCLUSION

Based on the above findings, the Board holds that West Chicago's alleged hardship, due to the ongoing scrutiny of the federal radium standard, and due to the loss of economic and fiscal income should a variance be denied, outweighs the nominal environmental impact of the requested variance. Therefore, the Board finds the hardship to be an arbitrary or unreasonable one. Accordingly, the Board grants West Chicago a variance subject to the conditions stated below.

Today's action is solely a grant of variance from standards of issuance and restricted status. The effect of this variance is to allow West Chicago to extend water service to new

customers. As West Chicago acknowledged in its petition, West Chicago is not granted variance from compliance with the combined radium standard, nor does today's action insulate West Chicago in any manner from enforcement for violation of that standard.

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

ORDER

The Village of West Chicago (West Chicago) is hereby granted a variance from 35 Ill. Adm. Code 602.105(a), "Standards of Issuance" and 602.106(b), "Restricted Status", only as they relate to the standards for combined radium-226 and radium-228 in drinking water as set forth in 35 Ill. Adm. Code 611.330(a), subject to the following conditions:

- (A) For purposes of this order, the date of United States Environmental Protection Agency (USEPA) action shall consist of the earlier date of the:
 - (1) Date of promulgation by the USEPA of the regulation 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
 - (2) Date of publication of notice by the USEPA that no amendments to the 5.0 pCi/L combined radium standard or the method for demonstrating compliance with the 5.0 pCi/L will be promulgated.
- (B) The variance shall terminate on the earliest of the following dates:
 - (1) Five years from the date of this order; or
 - (2) Two years following the date of the USEPA action; or
 - (3) When analysis pursuant to 35 Ill. Adm. Code 611.Subpart Q, or any compliance demonstration method then in effect, shows compliance with any standards for radium and gross alpha particle activity in drinking water then in effect.
- (C) In consultation with the Illinois Environmental Protection Agency (Agency), West Chicago shall continue a sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water. Until this variance terminates, West Chicago shall collect quarterly water samples from its distribution system at locations approved by the Agency. West Chicago shall composite quarterly

samples from each location separately and shall have them analyzed annually by a laboratory certified by the State of Illinois for radiological analysis so as to determine the concentration of radium-226 and radium-228. At its own option, West Chicago may have the quarterly samples analyzed when collected. The results of the analyses shall be sent to:

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

- (D) Within 30 days of receiving the most recent quarterly sample, West Chicago shall also send to the address in paragraph (C) the running average results of the most recent four quarterly samples.
- (E) Within three months of the USEPA action, West Chicago shall apply to the Agency at the address below for all permits necessary for construction, installation, changes, or additions to its 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

- (F) Within three months of the issuance of each construction permit by the Agency, petitioner shall advertise for bids, to be submitted within 60 days, from contractors to do the necessary work described in the construction permit. West Chicago shall accept appropriate bids within a reasonable time. West Chicago shall notify the Agency, Division of Public Water Supplies (DPWS), within 30 days, of each of the following actions: 1) advertisements for bids; 2) names of successful bidders; and 3) whether West Chicago accepted the bids.
- (G) 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 MCL in question, shall be completed no later than two years following the USEPA action. One year will be necessary to prove compliance.

- (H) 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, West Chicago will send to each user of its public water supply a written notice to the effect that West Chicago 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.
- (I) 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, West Chicago will send to each user of its public water supply a written notice to the effect that West Chicago has been granted by the Illinois Pollution Control Board a variance from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 602.106(b), Restricted Status, as it relates to the MCL standard in question.
- (J) Until full compliance is achieved, West Chicago shall take all reasonable measures with its existing equipment to minimize the level of contaminants in its finished drinking water.
- (K) West Chicago shall provide written progress reports to the Agency at the address below, every six months concerning steps taken to comply with paragraphs C, D, E, F, G, H, and, I. Progress reports shall quote each of said paragraphs and immediately below each paragraph state what steps have been taken to comply with each paragraph. Progress reports shall be sent to:

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

IT IS SO ORDERED.

If the City of West Chicago chooses to accept this variance subject to the above order, within 45 days of the grant of the variance, the City of West Chicago 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, Illinois 62794-9276

Once executed and received, that certificate of acceptance and agreement shall bind the City of West Chicago 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. The form of the certificate is as follows:

CERTIFICATION

I (We), _____, hereby accept and agree to be bound by all the terms of the Order of the Pollution Control Board in PCB 97-51, November 21, 1996.

Petitioner

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 Rules of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill. Adm. Code 101.246 "Motions for Reconsideration.")

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the ____ day of _____, 1996 by a vote of _____.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board