

ILLINOIS POLLUTION CONTROL BOARD  
May 2, 1996

VILLAGE OF OSWEGO,	)	
	)	
Petitioner,	)	
	)	
v.	)	PCB 96-154
	)	(Variance - Public Water Supply)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

DALLAS C. INGEMUNSON, LAW OFFICES OF DALLAS C. INGEMUNSON,  
APPEARED ON BEHALF OF PETITIONER;

STEPHEN C. EWART AND SUSAN E. KONZELMANN APPEARED ON BEHALF OF  
RESPONDENT.

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

This matter is before the Board on a January 8, 1996 petition for variance filed by the Village of Oswego (Oswego). Oswego seeks a variance from the requirements of 35 Ill. Adm. Code 602.105 (a), "Standards for Issuance", and 602.106 (b), "Restricted Status", but only to the extent those rules involve 35 Ill. Adm. Code 611.330 (a), which establishes the maximum contaminant level (MCL) for combined radium-226 and radium-228 of 5 picocuries per liter (pCi/L).

The Board's responsibility in this matter arises from the Environmental Protection Act (Act). (415 ILCS 5/1 *et seq.* (1994).) The Board is charged therein 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 in hearings on variance petitions. (415 ILCS 5/4 (f).) The Agency is also charged, among other matters, 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).)

On February 9, 1996, The Illinois Environmental Protection Agency (Agency) filed its variance recommendation (Rec.). The Agency recommended that the variance be granted, subject to certain conditions. Although Oswego waived hearing in this matter, the Board received several letters objecting to the grant of the variance, one of which included a timely-filed request for hearing. The following persons filed letters of objection: Mark and Susan Hauser, Elizabeth Summers, and Lawrence F. Rybicki filed objections on January 29, 1996; Bonnie A. Pinnow, and David G. and Donna Scheele filed objections on February 2, 1996.

The Board accepted this matter for hearing pursuant to 35 Ill. Adm. Code 104.141 (a). On March 25, 1996 a hearing was held in Oswego, Illinois before hearing officer Deb Frank. At hearing, Dan Albert and Craig Anderson testified on behalf of Oswego, and Tracey Virgin testified on behalf of the Agency. Additionally, the following members of the public made statements on the record: Bryce Pinnow, Lisa Rybicki, Bill Truxes, Wes Gross, Ron Thomas, Susan Hauser, Robert Corl, Louis Ott, and Donna Scheele. The following persons submitted post-hearing comments objecting to grant of the variance: Mr. and Mrs. William Cole, and John and Kalynn Carlson filed objections on April 1, 1996; and Jeff Bzdawka, on behalf of the Lakeview Estates Homeowners' Oswego, filed an objection on April 8, 1996. On April 1, 1996, Dallas C. Ingemunson, on behalf of the Village of Oswego, submitted a letter concurring with the Agency recommendation for variance.

On April 11, 1996, the Agency filed a "Motion to File Record Instantly," with an affidavit from Agency toxicologist Tracey Virgin. The "record" which the Agency seeks to file consists of a memorandum from Tracey Virgin to Agency attorney Steve Ewart, and a Public Health Statement from the Agency for Toxic Substances and Disease Registry on the human health effects of radium. Oswego has not filed a response to the motion. We hereby grant the Agency's motion to file instantly, and accept the proffered documents as post-hearing comments.

For the reasons set forth below, the Board finds that Oswego 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 variance is granted for a period of five years beginning on the date of this opinion, subject to conditions set forth in the attached order.

### BACKGROUND

The Village of Oswego is a municipality located in Kendall County, Illinois. Oswego provides potable water to 2,956 customers, 2,765 of which are residential and 191 of which are commercial. The total population served is approximately 7,300 people. (Pet. at 4.)

Oswego maintains the public water distribution system, which includes three deep wells, one shallow well, three elevated storage tanks (a 250,000-gallon, a 200,000-gallon, and a 300,000-gallon), pumps, and distribution facilities. Water is provided to all residential, commercial, and industrial users as needed, and charges, as established by ordinance, are made to all users. Oswego is not part of a regional public water supply. (Pet. at 4.)

Oswego originally applied for and was granted a variance from 35 Ill. Adm. Code 602.105(a), "Standards for Issuance," and 602.106(b) "Restricted Status," in PCB 85-106. This variance expired on January 1, 1990. On October 10, 1991, the Board granted Oswego an extension of this variance until October 10, 1995 in docket PCB 91-111. Oswego now seeks a third variance from these requirements, extending until January 1, 2001. (Rec. at 4.)

The most recent analyses of the petitioner's water supply were completed at Tap 1 on January 25, 1994 when petitioner's water supply showed a combined radium content of 7.0 pCi/L. Tap 2 analyses were completed on February 16, 1994 and showed a combined radium content of 7.9 pCi/L. Tap 3 analyses performed on May 9, 1994 showed a combined radium content of 8.9 pCi/L. The results were obtained from analyses of composite samples compiled from four consecutive quarterly samples. These levels exceed the 5 pCi/L combined standard for radium-226 and radium-228. (Rec. at 5.)

### REGULATORY FRAMEWORK

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) (1994).) 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, (1st Dist. 1977), 135 Ill. App. 3d 343, 481 N.E. 2d 1032.) Only with such showing can the claimed hardship rise to the level of arbitrary or unreasonable hardship.

Further, a variance 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 eventual compliance presents an individual polluter. (Monsanto Co. v. Pollution Control Board, (1977) 67 Ill.2d 276, 287, 367 N.E.2d 684, 688.) Accordingly, 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, unless certain special circumstances exist.

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, which in pertinent part 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 (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

causing a facility may no longer be issued a construction permit without 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 of 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 violation of 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 (NIPDWRs) by the United States Environmental Protection Agency (USEPA) in 1976. The standard adopted was 5 pCi/L for the sum of the 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 nevertheless are the maximum contaminant levels under both federal and Illinois law, and will remain so unless modified by the USEPA. In anticipation of USEPA's revision of the radium standard, the legislature amended the Act at Section 17.6 in 1988 to provide that any new federal radium standard immediately supersedes 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 first proposed a 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, the USEPA announced a proposal to modify both standards. USEPA proposes to replace the 5 pCi/L combined radium standard by separate standards of 20 pCi/L each for radium-226 and radium-228.

This change was to be promulgated by April, 1995, but this deadline was later extended to September, 1995. However, Congress prohibited funds for the promulgation of final radionuclide standards for fiscal years 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. Most recently the Federal Register has indicated that radionuclide standards are no longer scheduled for a specific final regulatory action date. (60 Fed. Reg. 60656, November 28, 1995.)

### COMPLIANCE PLAN

On October 12, 1995, petitioner was notified that the water supply system had been placed on the Restricted Status List for exceeding the MCL for radium-226 and radium-228. Since notification of the MCL violation, petitioner has been investigating options for reducing the amount of radium in its water supply.

Oswego states that during the original variance period and the extension period, measures have been taken to reduce the amount of radium in its water supply. Under the terms of the prior variance, Oswego was required to install two new wells, including a shallow well, as part of its plan to achieve compliance. While Oswego has constructed both wells and has complied with all other requirements of the variance, the radium content of its water supply has not yet been reduced to the current permissible level. (Pet. at 5.) Oswego currently envisions two alternatives for resolving this problem:

- (a) Using shallow wells for blending and dilution purposes. Petitioner anticipates that two such wells will be necessary to reduce the levels of radium in its water supply. The estimated time for implementation of each shallow well is 12 months.
- (b) Constructing treatment facilities in order to treat all water supplied by the petitioner. The estimated time for implementation of this alternative is 30 months.

(Pet. at 5-6.)

At this time, petitioner anticipates implementing alternative (a).

During the term of the variance, Oswego proposes to take the following steps toward achieving compliance. First, in consultation with the Agency, Oswego will continue its sampling program to determine as accurately as possible the radium levels in its wells and finished drinking water. Second, within four months after grant of the variance, Oswego will secure professional assistance, either from its present staff or from an outside consultant, in investigating compliance options, including the blending of water from shallow wells with that from its deep wells. Oswego proposes to submit to the Agency documentation that such assistance has been secured within five months of grant of the variance. Third, as expeditiously as practicable after identifying a feasible compliance option, but no later than three years after grant of the variance, Oswego will submit a program, with increments of progress, for bringing its water supply into compliance with the radium standards. Fourth, every three months Oswego will send notifications to its water supply customers that it is not in compliance with the combined radium standard, and that it has received a variance from the

requirements of 35 Ill. Adm. Code 602.105(a) "Standards for Issuance" and 602.106(b) "Restricted Status."

Petitioner further states that it will continue to pursue compliance and take all reasonable measures to minimize the radium levels in its finished water.

#### ARBITRARY OR UNREASONABLE HARDSHIP

Oswego asserts that compliance with the standard does not significantly benefit the public or environment and any expenditure of money to comply is an arbitrary or unreasonable hardship. Oswego points out that USEPA has published notice of its intention to propose revised National Primary Drinking Water Regulations (NPDWRs) for contaminants in drinking water, including radionuclide contaminants. (Pet. at 9-10; see 48 Federal Register 45502, October 5, 1983.) Additionally, on July 18, 1991, USEPA proposed revisions of the MCL for all radium isotopes. Oswego asserts that requiring it to expend substantial public funds for treatment facilities which may become obsolete in the near future is not in the public interest. (Pet. at 10.)

In its recommendation, the Agency states that while radiation at any level creates some risk, the risk associated with the level found in Oswego's drinking water is very low. (Rec. at 8.) The Agency states that the proposed variance should cause no significant health risk for the population served by the new water main extension. (Rec. at 10.) The Agency agrees with Oswego that grant of the requested variance would result in no significant injury to the public or to the environment for the limited time period requested, and that denial would be an arbitrary and unreasonable hardship to the Oswego. (Rec. at 11.) Denial of the requested extension of variance would require the Agency to deny Oswego construction and operating permits until compliance is achieved. Pursuant to Board rule, placing Oswego on restricted status would mean no new water main extensions permits could be issued and further development would be prevented. (Id.)

#### CONSISTENCY WITH FEDERAL LAW

Oswego asserts that the requested variance can be granted consistent with federal law. Petitioner emphasizes that it is not seeking a variance from any federal regulation, but is only seeking a variance from the State's regulations concerning restricted status, and that granting the requested variance will not insulate Oswego from possible enforcement actions for violations of the radium standards. (Pet. at 11.)

In its recommendation, the Agency states that the requested variance relief from 35 Ill. Adm. Code 602.105(a) and 602.106(b) may be granted consistent with the Safe Drinking Water Act (SDWA), PL 93-523, as amended by PL 96-502, 42 U.S.C. 300(f) and corresponding regulations (40 CFR Part 141) because the variance does *not* grant relief from compliance with the national primary drinking regulations. (Rec. at 10.) The Agency agrees with petitioner that granting a variance from the effects of restricted status affects State and not federal law and regulations, and that a variance from the effect of restricted status would allow water main extensions, under the Act and Board regulations. (Rec. at 10.)

The Agency further emphasizes that the recommended variance is not a variance from USEPA's national primary drinking water regulations, and does not suspend the effect of the SDWA. (Id.) The Agency states that since a federal variance is not at issue there should be no risk to the State of Illinois of loss of primacy for the drinking water program. (Id.) The Agency agrees that Oswego will remain subject to the possibility of enforcement for violations of the MCL for the contaminants in question under State and federal law. (Id.) Finally, the Agency concludes that because continuing progress is being made towards compliance while awaiting final promulgation of a possibly revised standard, USEPA is not likely to object to the issuance of the recommended variance. (Id.)

#### OBJECTIONS TO GRANT OF THE VARIANCE

Several parties have filed written objections to grant of the requested variance. Additionally, several parties made objections on the record at the hearing that was held in this matter on March 25, 1996. The majority of those opposed to the grant of the variance expressed concern that elevated radium levels increase the risk of cancer for those using the water supply. Additional comments were made about the possibility of using alternative water supplies and various methods of treatment, the impact on real estate values, and the impact on surrounding communities.

In its recommendation and at hearing, the Agency responded to concerns about the cancer risk posed by the radium levels in Oswego's drinking water. In its recommendation, the Agency included as an attachment the revised testimony of Dr. Richard E. Toohey, Ph.D, from a rulemaking before the Board, R85-14, Proposed Amendments to Public Water Supply Regulations, 35 Ill. Adm. Code 602.105 and 602. In this testimony, Dr. Toohey stated:

At high doses (above 9 microCurie intake to blood), radium causes two types of cancer: bone and head carcinomas. In order to have an intake of 9 microCurie, one would have to drink two liters of water containing 5 pCi/L of radium, everyday, for over 12,000 years.

(Rec., Attached Report at 2-3.)

At hearing, Agency environmental toxicologist Tracey Virgin testified that the calculations made by Dr. Toohey would be accurate under the currently available information. (Tr. at 22.) Ms. Virgin also testified that the USEPA has re-analyzed the available data on radium in drinking water, and has performed additional studies. (Tr. at 20.) Additionally, USEPA has corrected the mathematical model used for assessing risks, using data obtained from human epidemiological studies. (Tr. at 20-21.) Based upon this information, the USEPA has derived new proposed MCLs of 20 picocuries per liter each for radium-228 and radium-226. (Tr. at 21.)

In its post-hearing comments, the Agency provided further information on the health effects of the radium levels found in Oswego's drinking water. In these comments, Agency

toxicologist Tracey Virgin compared the radium levels found in Oswego's drinking water to radium levels associated with cancer. Ms. Virgin concluded that the level found in Oswego's drinking water was 150 times lower than the lowest intake of radium associated with cancer. (Agency Post-Hearing Comments, April 5, 1996 Memorandum from Tracey Virgin to Steve Ewart.)

### CONCLUSION

Based upon the record, the Board finds that immediate compliance with the "Standards for Issuance" and "Restricted Status" regulations would impose an arbitrary or unreasonable hardship on Oswego. The Board also agrees with the parties that granting this variance does not pose a significant health risk to those persons served who are affected by the variance.

Timely compliance by Oswego may be affected by pending USEPA action to promulgate new standards for radionuclides in drinking water. USEPA's proposal of separate 20 pCi/l standards for both radium-226 and radium-228 (56 Fed. Reg. 33082, 33126 (1991)), if adopted, could significantly alter Oswego's need for a variance from the Board's rules concerning restricted status, or alternatives for achieving compliance with the underlying radium limitations.

Accordingly, the Board hereby grants Oswego a variance subject to the conditions stated below. Today's action is solely a grant of variance from standards of issuance and restricted status. Oswego is not granted variance from compliance with the combined radium standard, nor does today's action insulate Oswego 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 Oswego (Oswego) is hereby granted a variance from 35 Ill. Adm. Code 602.105(a), "Standards for 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 USEPA of any regulation which amends the maximum contaminant level (MCL) for combined radium, of the isotopes of radium, or the method by which compliance radium MCL is demonstrated; or
- either  
with a



- (2) Date of publication of notice by 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.

(B) The variance shall terminate on the earliest of the following dates:

- (1) Five years from the date of this order;
- (2) Two years following the date of USEPA action.

(C) In consultation with the Illinois Environmental Protection Agency (Agency), Oswego shall continue its sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water. Until this variance terminates, Oswego shall collect quarterly samples of water from its distribution system at locations approved by the Agency. Oswego 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 the option of Oswego, the quarterly samples may be analyzed when collected. The results of the analyses shall be sent to:

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

(D) Within 30 days of receiving the most recent quarterly sample, Oswego shall also send to the address in paragraph (C) above the running average of the most recent four quarterly samples results.

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

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

- (F) Within three months of the issuance of each construction permit issued by the Agency, Oswego shall advertise for bids, to be submitted within 60 days, from contractors to do the necessary work described in the construction permit. Oswego shall accept appropriate bids within a reasonable time.
- (G) Oswego shall notify the Agency, Division of Public Water Supplies, within 30 days, of each of the following actions:
- (1) advertisements for bids;
  - (2) names of the successful bidders; and
  - (3) whether Oswego accepted the bids.
- (H) 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 USEPA action. One year after completion of construction will be necessary to prove compliance.
- (I) Pursuant to 35 Ill. Adm. Code 611.851(b), in the first set of water bills or within three months after the date of this order, whichever occurs first, and every three months thereafter, Oswego will send to each user of its public water supply a written notice to the effect that Oswego 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.
- (J) 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, Oswego will send to each user of its public water supply a written notice to the effect that Oswego has been granted a variance by the Illinois Pollution Control Board from 35 Ill. Adm. Code 602.105(a), Standards of Issuance, and 35 Ill. Adm., Code 602.106(b), Restricted Status, as each relates to the MCL standard in question.
- (K) Until full compliance is achieved, Oswego shall take all reasonable measures with existing equipment to minimize the level of combined radium-226 and radium-228, in its finished drinking water.
- (L) Oswego 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, I, and J of this order. Progress reports shall quote each of said 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 Supply  
Field Operations Section  
2200 Churchill road  
Springfield, Illinois 62794-9276

IT IS SO ORDERED.

If Oswego chooses to accept this variance subject to the above order, within forty-five days of the grant of the variance, Oswego 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 Oswego 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 terms and conditions of the Order of the Pollution Control Board in PCB 96-154, May 2, 1996.

\_\_\_\_\_  
Petitioner

\_\_\_\_\_  
Authorized Agent

\_\_\_\_\_  
Title

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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 \_\_\_\_\_.

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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board

