

ILLINOIS POLLUTION CONTROL BOARD  
February 4, 1988

VILLAGE OF WILLOWBROOK, )  
 )  
Petitioner, )  
 )  
v. ) PCB 87-114  
 )  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

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

This matter comes before the Board on an August 3, 1987 petition for the Village of Willowbrook (Willowbrook) for a four year extension of its prior variance from 35 Ill. Adm. Code 602.105(a) and 602.106(b) Standards for Issuance and Restricted Status respectively, but only as those rules involve 35 Ill. Adm. Code 604.301(a), combined Radium 226,228. Hearing was waived and none has been held.

On September 17, 1987, the Illinois Environmental Protection Agency (Agency) submitted a Recommendation that variance be denied, but if granted, that it be granted for only one year, with conditions. On October 16, 1987, Willowbrook filed a reply, which the Board on October 29, 1987 construed as an amended petition that restarted the 120 day time clock. On November 9, 1987, the Agency filed an amended Recommendation that variance be denied, but, if granted, that it be granted for 18 months, with conditions.

Willowbrook, which has a population of about 7,500, supplies water to about 1,050 single family residential, 194 multi-family residential and 141 industrial and commercial customers. Willowbrook is part of the regional DuPage Water Commission, which is scheduled to deliver Lake Michigan water to Willowbrook in 1992 as a full replacement for Willowbrook's present shallow and deep well water supply system.

This Opinion primarily will update Willowbrook's circumstances which are detailed in PCB 86-65, which Opinion and Order is incorporated herein by reference. In that Docket, the Board on July 31, 1986 granted a variance through July 31, 1987 from restricted status due to a concentration of combined radium that exceeds the standard. The Village had been first notified by the Agency on December 9, 1985 that an annual composite of four quarterly samples showed a radium-226 content of 4.4 pCi/l and a radium-228 content of 1.2 pCi/l, for a combined radium

reading of 5.6 pCi/l, in excess of the allowable standard of 5.0 pico Curies per liter.\* Willowbrook verified the exceedences through its own analyses, finding that the problem was caused by its one deep well in its four well system.

The Board imposed conditions in the PCB 86-65 variance that included, among other provisions, that compliance would be achieved by July 31, 1987 by blending water from the deep well with the three shallow wells; that Willowbrook would implement its program in consultation with the Agency; and, also in consultation with the Agency, that Willowbrook would have its distribution system sampled monthly for radium by a laboratory certified by the State.

In the instant petition, Willowbrook reported its ongoing radium results in radium-226 and radium-228 pCi/l as follows:

<u>Date</u>	<u>Results</u>	<u>Location</u>
March 1986	1.19 + 0.38	Well #1
March 1986	1.23 + 0.30	Well #2
March 1986	6.85 + 0.61	Well #3
March 1986	0.71 + 0.62	Well #4
March 1986	5.03 + 0.48	Distribution System
March 1986	5.68 + 0.72	Distribution System
September 1986	4.4 + 2.0	Distribution System
October 1986	2.4 + 1.7	Distribution System
November 1986	2.3 + 0.9	Distribution System
December 1986	2.1 + 0.9	Distribution System
January 1987	3.8 + 1.5	Distribution System
February 1987	0.2 + 0.1	Distribution System
March 1987	4.2 + 1.9	Distribution System
April 1987	4.2 + 2.0	Distribution System
May 1987	4.2 + 1.9	Distribution System

(Pet., August 3, 1987, p. 7,8)

The Agency also provided a July 16, 1987 Argonne analysis of the distribution system showing readings of  $3.4 \pm 0.2$  pCi/l for radium-226 and  $1.7 \pm 0.2$  for radium-228, totalling  $5.1 \pm 0.3$  pCi/l combined radium, (Agency Rec. Attach. 4).

Willowbrook acknowledged that it did not achieve compliance by the date required in PCB 86-65, explaining as follows:

Petitioner was unable to obtain an adequate mixing ratio in order to comply with the stated standard due to design constraints of

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\* The Agency in its recommendation inaccurately stated a combined total of 6.6 pCi/l (Agency Rec. p. 5, Pet. Ex. A)

the existing distribution system, for the reason that there is no central mixing facility. During mixing, an additional adverse side affect in water quality was produced. The iron content and hardness of the water was increased with a decrease in fluoride content and these quality issues may require the petitioner to provide additional treatment of the water. (August 3, 1987, Pet. p. 8)

Willowbrook has been attempting to acquire Lake Michigan water from the Justice-Willow Springs Water Commission, which receives its water from Chicago, in quantities sufficient to supply 50% of its water needs, as a temporary alternative until Lake Michigan water is permanently available from the DuPage Water Commission, Chicago has already given its preliminary authorization to the Justice-Willow Springs Water Commission to service Willowbrook. (Amend. Pet. Ex. A). Willowbrook is willing to accept the Agency's recommended conditions as long as the variance is granted for eighteen months to enable Willowbrook to complete its negotiations and secure delivery of the water. (Amend Pet., p. 5)

The Agency believes that Willowbrook's hardship is self-imposed. First, the Agency asserts that Willowbrook, by using Argonne National Laboratory (Argonne), failed to use a certified laboratory as required in the PCB 86-65 Board Order. Various correspondence and assertions indicate that: the Agency had stated in a letter to Willowbrook on January 26, 1987 that a certified laboratory must be used and that the only two laboratories certified for radium analysis are Teledyne Isotopes in Northbrook and Radiation Measurements in Mundelein; on February 4, 1987, Willowbrook nevertheless was verbally allowed by the Agency to use Argonne (which apparently is not pursuing certification); the Agency shortly reversed itself on March 16, 1987, in writing; Willowbrook nevertheless continued to use Argonne, which the Agency stated is a reputable laboratory but whose results the Agency believes should be disregarded. The Agency additionally notes that federal regulations require that radium analyses for determining compliance with the radium standard be performed by State certified labs or they cannot be considered, citing 40 CFR 141.28(a). Willowbrook believes that it had the understanding and approval of a representative of the Agency even after receiving correspondence stating otherwise, that it attempted to comply with the intent of the Board Order and that the Argonne results should be accepted. (Agency Rec. p. 6, Attach 1-4, Amend Rec. p. 3)

The second area where the Agency believes Willowbrook had a self-imposed hardship concerns Willowbrook's failure to consult with the Agency in implementing its blending program, thus

violating the Board Order. The Agency stated that, if consulted it would have recommended trying sequestration to comply with the iron standard, possibly resulting in compliance with both the iron and radium standard. Willowbrook acknowledges that it had felt that its use of independent consulting engineers provided sufficient professional advice but that, in hindsight, it believes it would have been beneficial to consult with the Agency, (Agency Rec., p. 9, Amend Pet. p. 3)

The Agency also asserts that Willowbrook has few outstanding requests for water main extensions and thus has not demonstrated sufficient hardship in this respect. Willowbrook believes the lowering of requests is seasonal, noting that it had ten requests each in 1986 and 1987 and anticipates that this will continue in 1988 and 1989, and also that Willowbrook has large unimproved lands and is in DuPage County, one of the fastest growing counties in the State. Willowbrook also asserts that it may need to provide quick service when private wells still serving many of its existing residents fail. The Agency replies that this latter problem can be dealt with by delivery of water (Amend Pet. p. 2, Agency Amend, Rec. p. 4).

Neither the Agency nor Willowbrook believe that, for the term of this variance, significant health risk will occur for the limited population to be served by new extensions, citing testimony in PCB 85-54 and R85-14 by Richard E. Toohey, Ph.D.

Both also agree that there are no Federal impediments to a grant of variance, since only State regulations are involved.

The Agency does not appear to object to Willowbrook's compliance option, but does point out that the Village may need to blend with its shallow well water in any event to achieve compliance throughout its distribution system.

#### Board Response

While much of Willowbrook's hardship is self-imposed, the Board is inclined to give Willowbrook the benefit of the doubt insofar as a) some of the problem resulted from some confusing communication with the Agency, b) there is every indication that Willowbrook has been seeking in good faith to come into compliance, although it certainly was not properly following certain dictates of the prior Board Order and c) the indications are that Willowbrook's new compliance option will be successful. The Board also notes that utilizing Lake Michigan water as quickly as possible is likely the best option.

Under the circumstances, the Board will accept the Argonne Laboratory data.\* In its recommendation in PCB 86-65, the Agency itself recommended that the Board require the use of a certified laboratory (Agency Rec. June 17, 1986, p. 11, PCB 86-65); notwithstanding, on February 2, 1987, the Agency gave verbal permission to Willowbrook to continue using Argonne. While the Board certainly does not absolve Willowbrook of its own responsibilities, the Board points out that the same condition at issue here requires consultation with the Agency, which Willowbrook did. The record here does not provide enlightenment as to the reasons for the Agency's verbal advice regarding Argonne and the certification situation. Given the confusion, Willowbrook's decision to rely on the Agency's verbal advice and not change laboratories for the last few months of its variance is not completely indefensible. Under these circumstances, and considering the fact that there has been no challenge to the quality of Argonne's radium testing program, the Board declines to hold that Willowbrook's hardship in this instance was entirely self-imposed.

Regarding the second area where the Agency believes Willowbrook's hardship was self-imposed, Willowbrook does not excuse its failure to consult with the Agency regarding its blending program. Had Willowbrook consulted with the Agency, the Agency asserts that there was a possibility that the blending problems might have been cured. However, this record does show that Willowbrook did get professional help and took other steps to move forward towards timely compliance by temporary blending means.

Willowbrook has had all along an ultimate compliance plan, i.e., full use of Lake Michigan water. The problem has arisen here because of its difficulties in achieving compliance in the interim. In its earlier PCB 86-65 variance, Willowbrook rejected the alternative of constructing treatment facilities, arguing that the construction and user costs are excessive, particularly since such facilities will be in operation for only a short time. The Agency agreed, essentially because lime or lime-soda softening, or ion exchange softening treatment methods also create disposal problems (PCB 86-65, Agency Rec. p. 7,8). The

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\* The Board notes that the Agency's remedy raises certain questions: if all of Willowbrook's results were to be disregarded, only the Agency's analysis could be considered for reimposing restricted status; however, 40 CFR 141.28(b), as well as the Board's certification condition, relieve the Agency of the certification requirement and this record does not indicate who performed the Agency's analysis. While Willowbrook's variance could be denied for violation of the Board Order, the Board is uncertain what enforcement purpose is served by throwing out otherwise valid results.

option of choice, the blending of its deep well with its shallow wells, has yet to work. The negotiations for Willowbrook's new option, buying 50% of its water from the Justice-Willow Springs Water Commission, are well underway, and the Agency appears to accept the potential of these negotiations as a means of compliance.

There is little question that most of Willowbrook's hardship has been self-imposed. The Board certainly does not countenance deviations from conditions established in its Orders. However, Willowbrook has not exhibited any resistance to achieving timely compliance, and did comply with major aspects of the prior Board Order. Also, Willowbrook's assertion of the need to build water main extensions based on past experience and the fact that it is in a rapidly growing area is not unreasonable.

The somewhat thin hardship showing even considering the lack of any significant environmental effects during an 18 month variance is a close call. However, Willowbrook's good faith, if in part mis-directed, efforts to comply persuade the Board that Willowbrook would incur an arbitrary or unreasonable hardship were variance to be denied. The Board also notes the benefits of keeping Willowbrook on an enforceable compliance schedule. The Board will adopt in the large measure the Agency's recommended conditions. However, the Board will delete the certification requirement. Variance from state law does not require the use of a certified laboratory; however the Board cautions Willowbrook that, at the very least when it is ready to demonstrate compliance, failure to submit results from a certified laboratory showing compliance risks continuing exposure to enforcement for violation of the radium standards. The Board also will add a year to the recommended program completion deadlines solely to provide time to gather for the four quarterly readings necessary to demonstrate compliance pursuant to 35 Ill. Adm. Code 605.105(a).

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

#### ORDER

The Petitioner, the Village of Willowbrook, is hereby granted a variance from 35 Ill. Adm. Code 602.105(a) (Standards for Issuance) and from 35 Ill. Adm. Code 602.106(b) (Restricted Status), but only insofar as those rules relate to the combined radium standard of 35 Ill. Adm. Code 604.301(a), subject to the following conditions:

1. This variance shall expire no later than October 4, 1990, and shall expire earlier under the following circumstances:

- a) This variance shall expire on October 4, 1989 unless the Village of Willowbrook has completed by then a program capable of demonstrating compliance by providing 50% of its water, and including any necessary blending, from the Justice-Willow Springs Water Commission.
  - b) This variance shall expire on such earlier date as analysis pursuant to 35 Ill. Adm. Code 605.105(a) shows compliance.
  - c) This variance shall expire as otherwise provided in Paragraphs 2 and 3 of this Order.
2. This variance shall expire on August 19, 1988 if by that date the Village of Willowbrook has not either a) provided the Agency with a copy of an executed contract with the Justice-Willow Springs Water Commission to purchase 50% of the Village of Willowbrook's water needs, or b) notified the Agency of its intent to implement a compliance program by using its three shallow wells for blending purposes. The blending program shall proceed according to Paragraph 3.
  3. Pursuant to Paragraph 2 and in consultation with the Agency, the Village of Willowbrook shall, no later than February 4, 1989, or this variance shall expire on that date, implement an appropriate program to use its three shallow wells for blending purposes to bring its combined radium-226 and radium-228 levels in its drinking water into compliance with the 5 pico Curies per liter maximum allowable concentration standard for radium-226 and radium-228 in its distribution system and finished water. This program shall consider sequestration as provided in 35 Ill. Adm. Code 604.203(b).
  4. The combined radium-226 and radium-228 concentration in the Petitioner's distribution system shall not exceed 10 pico Curies per liter (10 pCi/l) during the term of this variance.
  5. In consultation with the Agency, the Petitioner shall continue its sampling program to determine as accurately as possible the level of radioactivity, including radium-226 and radium-228, in its wells and finished water. Until this variance expires, the Village of Willowbrook shall collect monthly samples of its water from its distribution system and shall composite and analyze these water samples quarterly by a laboratory certified by the State of Illinois for radiological analysis so as to determine the concentration for combined radium-226 and radium-228. The results of the analyses shall be reported to the Water Quality Unit, Division of Public Water Supplies, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62703, within 14 days of the receipt of each analysis. At the option of the Petitioner, the monthly samples may be

analyzed when collected. The running average of the three most recent monthly sample results shall be reported to the Illinois Environmental Protection Agency at the previously given address within 14 days of the receipt of said analysis.

6. 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, the Petitioner shall send to each user of its public water supply a written notice to the effect that the Petitioner has been granted by the Illinois 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 maximum allowable concentration standard of 5 pico Curies per liter of combined radium-226 and radium-228.
7. 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, the Petitioner shall send to each user of its public water supply a written notice to the effect that the Petitioner is not in compliance with the combined radium-226 and radium-228 maximum allowable concentration standard of 5 pico Curies per liter. The notice shall state the average content of the contaminant in question in samples taken since the last notice period during which samples were taken.
8. The Petitioner shall take all reasonable measures with its existing equipment to minimize the level of combined radium-226 and radium-228 in its finished water.
- 9) Within 45 days of the date of this Order, Petitioner shall execute and forward to Thomas Davis, Enforcement Programs, Illinois Environmental Protection Agency, 2200 Churchill Road, 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), \_\_\_\_\_, having read the Order of the Illinois Pollution Control Board, in PCB 87-114, February 4, 1988, understand and accept the said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.



\_\_\_\_\_  
Petitioner

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

\_\_\_\_\_  
Title

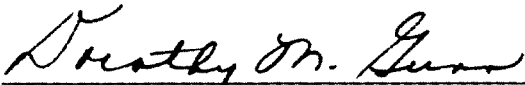
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Date

10. Section 41 of the Environmental Protection Act, Ill. Rev. Stat. 1985 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.

J. D. Dumelle and B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 4<sup>th</sup> day of February, 1988, by a vote of 5-2.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board