



Rule 304(C)(1) sets a 15 pCi/l limitation on gross alpha particle activity. The source of the activity is often trace amounts of radium found in deep aquifers. For the remainder of this Opinion, "gross alpha particle activity" and "radium" will be used interchangeably. On June 21, 1979 the Agency in a letter to Rolling Meadows indicated that the radiological content of the water through its distribution system may be in excess of the 15 pCi/l limit (Pet. 1; Ex. A). The Agency has imposed a moratorium on construction permits within Rolling Meadows as a result of this single analysis (Pet. 3). The Agency has denied a permit for a water main extension to a ten acre development on November 27, 1979. This resulted in expenses to the developer of approximately \$100,000 per month and subjects Rolling Meadows to potential liability for failure to deliver water as contracted. Other contractors have been forced to postpone construction because of the ban (Pet. 3).

Rule 309(C)(1) provides that compliance with the radiological standards is to be determined from the average of four samples obtained at quarterly intervals. Rolling Meadow's contention that the Agency's actions were wrong in the absence of adequate proof that the water was in violation of the standards should have been brought before the Board in the context of a permit appeal pursuant to Rule 311 and Part V of the Procedural Rules.

Rolling Meadows contends that the permit denial is wrong unless the Agency produces four quarterly analyses. The Agency contends that it cannot award a permit until Rolling Meadows produces the four analyses. Both parties assume that Rule 309(C)(1) establishes a rule of proof in permit issuance. However, the first sentence of Rule 309(C)(1)(a) applies directly only to enforcement actions. For purposes of permit issuance it is possible for the applicant to satisfy the burden of showing that no violations of the rules will occur with evidence which is less significant statistically.

The Board does not generally award variances where it is unlikely that the Petitioner is in violation of the rules. The Board is satisfied that the single sample in this case demonstrates a violation of the standard with sufficient certainty to justify the award of a variance.

Petitioner has attached no cost estimates for reducing its radium levels to within the applicable standard. The Agency states that the alternative of softening as a treatment technique presents the twin problems of high cost and creation of a radioactive waste product for which disposal facilities are generally unavailable (Rec. 4).

Bills have been introduced in Congress to alter the radiological standards or extend the time required for compliance (Rec. 4). The Board has previously noted an expert opinion that the standards could be increased considerably and still provide adequate protection (Village of Glasford v. EPA, PCB 79-238, February 7, 1980). The Agency believes that if there are any health threats from Rolling Meadows current level of radiation, it is a long term threat. Therefore, matched against the possibility that the standard may be raised, the expense and difficulties of immediate compliance and the apparent availability of Lake Michigan water to Rolling Meadows in the reasonably near future, the Agency believes that a variance should be granted.

Rolling Meadows has received a Lake Michigan allocation for 1977 through 1981 (Rec. 3). It has previously been unable to act on this allocation but has now acted (Amended Pet., June 19, 1980). It has applied for a further allocation during current Lake Michigan water allocation hearings. Because Rolling Meadows has entered into an enforceable agreement to become part of a regional water system, it is entitled to receive a variance until January 1, 1983 despite the limitation of January 1, 1981 for exemptions under the federal regulations (Section 14(a)(2)(b) of the Safe Drinking Water Act (Amended Pet.; Amended Rec.)).

The Board concludes that because of the above factors Rolling Meadows would suffer arbitrary or unreasonable hardship if required to either suspend extension of its water system or to come into immediate compliance with the radiological standards. In addition to the conditions discussed above, Rolling Meadows will be required to periodically provide notice of this variance to its customers, to continue its sampling program, to continue its efforts to receive a Lake Michigan water allocation and to periodically report to the Agency. Rolling Meadows will also be required to explore the availability of landfill sites which could accept radiation bearing water softening waste.

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

#### ORDER

The City of Rolling Meadows is granted a variance from the 15 pCi/l gross alpha particle activity limitation of Rule 304(C) of Chapter 6: Public Water Supplies subject to the following conditions:

1. This variance will expire January 1, 1983.

2. Petitioner shall, in consultation with the Agency, continue its sampling program to determine as accurately as possible the level of radioactivity in its wells and finished water.
3. Petitioner shall continue its efforts to receive a Lake Michigan water allocation and keep the Agency periodically informed as to the progress of that activity. Petitioner shall explore the possibility of developing other alternative water sources to provide adequate blending water should it be required to meet the present requirements for alpha particle activity or radium 226 and 228 in its water supply.
4. Petitioner shall explore the availability of landfill sites which can and will accept radioactive water softening waste if blending of additional water sources proves to be not a feasible alternative.
5. Petitioner shall provide notice of this variance to its customers in writing at least once every three months.
6. Within forty-five days of the date of this Order, Petitioner shall execute and forward to the Illinois Environmental Protection Agency, Division of Public Water Supplies, 2200 Churchill Road, Springfield, Illinois 62706 a Certificate of Acceptance and Agreement to be bound to all terms and conditions of this variance. This forty-five day period shall be held in abeyance for any period this matter is being appealed. The form of the Certificate shall be as follows:

CERTIFICATION

I, (We), \_\_\_\_\_, having read and fully understanding the Order in PCB 80-70, hereby accept that Order and agree to be bound by all of its terms and conditions.

SIGNED \_\_\_\_\_

TITLE \_\_\_\_\_

DATE \_\_\_\_\_

IT IS SO ORDERED.

Mr. Dumelle concurs.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order were adopted on the 10<sup>th</sup> day of July, 1980 by a vote of 5-0.

Christan L. Moffett  
Christan L. Moffett, Clerk  
Illinois Pollution Control Board