



The health effects of barium are set out at 33 PCB 185, 186 (1979). There is not enough evidence to show that there is an unreasonable risk to public health at these concentrations.

Illinois has been delegated primary enforcement responsibility for the barium standard. Section 35 of the Environmental Protection Act, Ill. Rev. Stat. 1983, ch. 111½, par. 1035 requires that variances be consistent with the Safe Drinking Water Act (SDWA), 42 U.S.C. §300(f) et seq. and regulations pursuant thereto. These regulations are located at 40 C.F.R. Part 142, Subparts E and F (1983).

In granting what amounts to a federal variance under §1415 of the SDWA, a state with primary enforcement responsibility must find that

- (1) Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the maximum contaminant levels of the drinking water regulations despite application of the best technology, treatment techniques, and other means, which the Administration finds are generally available (taking costs into consideration); and
- (2) The granting of a variance will not result in an unreasonable risk to the health of persons served by the system. (Section 1415 of the Safe Drinking Water Act, 42 U.S.C. Section 300(g)-4).

Turnberry Utilities, Inc. v. IEPA, PCB 79-257, (37 PCB 551, 553, 1980); Village of Altona v. IEPA, PCB 80-74, (39 PCB 69, 1980); Village of Wataga v. IEPA, PCB 80-30, (38 PCB 193, 1980).

Although two cases were variances for small water supplies, the Board has authority to grant variances for large water supplies, as discussed below. The federal exemption Section 1416 for large water supplies imposes strict compliance deadlines. This mode was based on U.S. Environmental Protection Agency (USEPA) reliance on its Manual for treatment techniques for water supplies serving more than 1000 consumers [entitled "Manual of Treatment Techniques for Meeting the Interim Primary Drinking Water Regulations" (EPA-600/9-77-005, first printing May 1977, revised 1978) Manual]].

The Manual identifies some treatment technologies and serves as helpful guidance. However, under Section 1415, the Administrator of the USEPA must issue regulations. As the Agency correctly asserts:

[t]he USEPA Administrator has not yet issued any regulation stating what is the best technology or treatment technique that is generally available, taking costs into consideration, for barium or any other contaminant regulated under the SDWA.

(Agency Rec. at 9). Therefore, the Board has determined that since the Administrator of the USEPA has issued no regulation under (1), the Board has the authority to grant individual variances consistent with a federal variance to both small and large water supply systems, providing, of course that the Petitioner can demonstrate arbitrary or unreasonable hardship.

Technical feasibility has been demonstrated but the alternate treatment methods are economically infeasible at this time. There is no evidence in the record to show that granting the variance would result in an unreasonable risk to public health.

The Agency and City both state that the U.S.E.P.A. has given advanced notice of proposed rulemaking concerning barium and other inorganic chemicals and expects to propose maximum contaminant levels (MCLs) by June, 1986. 48 Fed. Reg. 45502, October 5, 1983.

The City asks for a variance period until January 1, 1987, while the Agency recommends 5 years or until one year after the Board changes the barium standards, whichever is first. As explained below, in order to better insure compliance, the Board will grant a variance for only two years. The Board is at a loss as to why the City has a) not investigated a system of blending, b) not reported to the Agency every 6 months regarding possible new barium removal techniques and c) not submitted a compliance program, all as required by Board Order, PCB 81-1. The Board expects full compliance with its Orders. Additionally, the Board notes that this previous variance expired Jan. 1, 1984.

Balancing the great expense to comply with the minimal threat to the public health, the Board finds that to require immediate compliance with the barium standard would impose an arbitrary or unreasonable hardship. Variance is hereby granted from 35 Ill. Adm. Code 604.202 consistent with condition.

#### ORDER

The City of Crystal Lake is granted a variance from 35 Ill. Adm. Code 604.202 until July 1, 1986 subject to the following conditions:

1. That the variance is to allow use of the high barium wells, but in any case the concentration of barium shall not exceed 4 mg/l.
2. Petitioner shall continue to investigate the compliance options it has identified, but shall also investigate the possibility of blending. Petitioner shall investigate means of using less water from well #8, and shall provide the Agency with data on the barium content of its standby wells.
3. Beginning on or about January 1, 1985, and at annual intervals thereafter, the Petitioner shall communicate with the Agency in order to ascertain whether new barium removal or blending techniques applicable to its system have been developed and identified.
4. As expeditiously after identification of a feasible compliance method as is practicable, but no later than January 1, 1986, Petitioner shall submit to the Agency a program (with increments of progress) for bringing its system into compliance with barium standards.
5. That Petitioner shall take all reasonable measures with its existing equipment to minimize the level of barium activity in its finished water.
6. That Petitioner notify the Agency's Region II Manager, Public Water Supplies, Illinois Environmental Protection Agency, 595 South State Street, Elgin, Illinois 60120 within ten days of receipt of any and all complaints about Petitioner's water which has as its source or may have as its source the well with the high barium.
7. That pursuant to 35 Ill. Adm. Code 606.201, Petitioner shall send to each user of its public water supply a written notice to the effect that Petitioner has been granted by the Pollution Control Board a variance from the barium standard in the first set of water bills issued after the grant of this variance and every three months thereafter. The notice shall state the average content to barium in samples taken since the last notice period during which samples were taken.
8. That within forty-five days of the date of this Order, Petitioner shall execute and forward to Wayne Wiemerslage, Enforcement Programs, Illinois Environmental Protection Agency, 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.

CERTIFICATION

I, (We), \_\_\_\_\_, having read the Order of the Illinois Pollution Control Board in PCB 84-2 dated May 29, 1984, understand and accept said Order, realizing that such acceptance renders all terms and conditions thereto binding and enforceable.

\_\_\_\_\_  
Petitioner

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 29<sup>th</sup> day of May, 1984 by a vote of 6-0.

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