

ILLINOIS POLLUTION CONTROL BOARD
March 22, 1990

CITY OF BATAVIA,)
)
Petitioner,)
)
v.) PCB 89-183
) (Variance)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

CONCURRING OPINION (by B. Forcade):

I concur with the majority's request for additional information from the Agency. However, one point deserves particular emphasis from the standpoint of human health. I specifically request that the Agency address this issue in their recommendation.

The Amended Petition filed on March 14, 1990 shows two years worth of analysis on well #3 at levels of combined radium of about 29 pCi/l. This level in drinking water is clearly a cause for concern. The record does not reveal how the water distribution system is organized. It certainly is possible that those homes nearest well #3 would have been supplied with water preferentially drawn from well #3. If so, homes nearest that well could have had combined radium levels near 30 pCi/l for many years. As clearly emphasized in the March 8, 1990 concurring opinion - there is no support in the record for a conclusion that combined radium levels above 20 pCi/l are safe.

I sincerely want to know what the Illinois EPA believes are the health risks associated with such highly contaminated water (six times the current health based standard), and what method they use to calculate such health risks. The Risk Assessment document (Risk Assessment of Exposure to Radium and Fluoride in Illinois Public Water Supplies, R 85-14, Ex. 45, p.38-41) has estimated the excess lifetime cancer risk from consumption of drinking water containing combined radium concentrations at or above 20 pCi/l to be approximately 1 cancer in 5000 people so exposed. This puts a ceiling on the risk level, which appears to be based on the assumption that combined radium concentrations would not exceed 20 pCi/l.

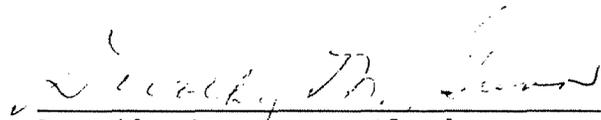
The specific number for actual extra lifetime risk above that associated with a combined radium concentration of 5 pCi/l is calculated using the formula provided in the Report [Extra Lifetime Risk = 1.4×10^{-5} (concentration - 5)]. For those water supplies at or below the current regulatory health standard of 5

pCi/l, the lifetime risk would be (1.4 x concentration) of excess cancers per 100,000 persons exposed to that concentration. For a combined radium concentration of 29 pCi/l, the extra lifetime risk would be 34×10^{-5} , or 1 excess cancer for each 2941 people so exposed. I want to know how many people have been drinking water at those levels and for how long.



Bill Forcade
Board Member

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Concurring Opinion was filed on the 26th day of March, 1990.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board