

ILLINOIS POLLUTION CONTROL BOARD
July 11, 1985

CITY OF AURORA,)
)
 Petitioner,)
)
 v.) PCB 85-51
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY)
)
 Respondent.)

CONCURRING OPINION (by J.D. Dumelle):

The key health testimony in this proceeding contains both errors and doubtful assumptions. In my view the Board should have only given variance from restricted status and not from the 5 pCi/l drinking water combined radium standard itself until these matters are adequately explained.

Dr. Richard E. Toohey of Argonne National Laboratory presented his testimony at the hearing on June 25, 1985. No cross-examination was made.

A major assumption made by Dr. Toohey was that average water consumption is only one liter a day as compared to the two liter per day figure traditionally used by USEPA (R. 27). But no data were presented by Dr. Toohey on this point. One must remember that coffee and soup made with local water must be included in radium intake computations. The boiling process does not, of course, remove or neutralize radium.

A second problem with Dr. Toohey's testimony is his use of the 50 uCi radium intake "threshold" in the face of an 8-year-old boy getting cancer after a 9 uCi intake (R. 34). This immediately raises a question as to possible lower "thresholds" on even younger children and on infants.

Lastly, Dr. Toohey's computations appear off by a factor of 4.5. If one estimates lifetime (75 year) intake of radium at USEPA's standard of 5 pCi/l using two liters per day it comes to 0.27 uCi not the 0.06 uCi he asserts (R. 25). Similarly, the time needed to ingest 10 uCi of radium is not 13,000 years but 2,740 years or again a factor of 4.5 (R. 24).

My concern is about those who are longtime Aurora residents. They continue to take in radium at 14 pCi/l. By age 75 they will have taken in 0.77 uCi. Is this hazardous? We just don't know.

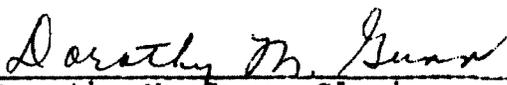
The assumption as to water intake (one liter per day versus two) seems highly questionable. The induction of cancer in a child at a far lower level than is being used is bothersome. Finally, the computations appear in error.

I would urge USEPA to quickly re-evaluate the radium standard and clarify its scientific status.



Jacob D. Dumelle, P.E.
Chairman

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Concurring Opinion was filed on the 22nd day of July, 1985.



Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board