



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

March 9, 1988

Hon. Lee M. Thomas  
Administrator  
U.S. Environmental Protection  
Agency  
401 M Street, SW  
Washington, D.C. 20460

SAB-EHC-88-017

OFFICE OF  
THE ADMINISTRATOR

Dear Mr. Thomas:

On November 19-20, 1987 the Halogenated Organics Subcommittee of the Science Advisory Board's Environmental Health Committee met in Washington, D.C. to conduct an independent scientific review of the Office of Drinking Water's Draft Drinking Water Criteria Document for 1,2 Dichloropropane. In requesting that the Science Advisory Board review the draft document, the Office of Drinking Water requested an evaluation of whether the drinking water equivalent level (DWEL) for 1,2 Dichloropropane should be based on the non-carcinogenic endpoints of the National Toxicology Program's (NTP) 1986 bioassay in male rats in the absence of other chronic ingestion studies.

The Halogenated Organics Subcommittee unanimously concluded that the DWEL should not be based on this study. It offered five reasons for this conclusion: 1) the dose of 62 mg/kg bw/day represents a No-Observed-Effect-Level (NOEL) for cancer in male rats; 2) the endpoints of survival, body weight (5% lower than control animals), overt signs of toxicity and gross changes in organs and tissues are not sufficiently sensitive; and 3) histological lesions were observed in the testes of some male rats given the 62 mg dose; and 4) the histological evidence of toxicity in the testes and the structural relationship to the male reproductive toxin 1,2 dibromo-3-chloropropane are sufficient evidence that the chemical may be a male reproductive toxin; and 5) the NTP bioassay was not designed to supply data for derivation of a DWEL.

Given the inadequacy of available data for calculating a DWEL, and the mutagenicity of 1,2 Dichloropropane, the Subcommittee recommends that the Office of Drinking Water not derive a DWEL until suitable data are available. The use of additional safety factors applied to the 1986 NTP study are also not recommended.

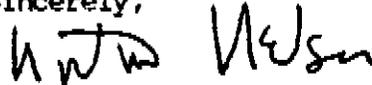
The draft criteria document recommends removing calculations of a 10 day health advisory and approximately 31 day DWEL for a 70 kg adult (actually a 7 day level based upon a 20 day study). The calculations are based upon a Russian abstract (Ekshtat, et. al., 1975). As stated in the draft document page VIII-9), "information such as strain, number of animals, weight and age, as well as which doses caused which effects were not reported." Thus, there is inadequate information on which to base these criteria.

In addition to concerns of possible male reproductive toxicity, central nervous system functional changes may be predicted on the basis of acute gavage data and upon indications of solvent syndrome observed in inhalation studies.

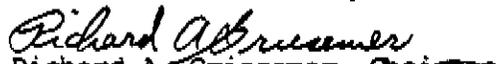
The Subcommittee recommends that drinking water standards not be calculated and then rejected in draft documents. Such calculations can be confusing.

We appreciate this opportunity to present the Board's evaluation of these scientific issues. We request that EPA formally respond to the scientific advice provided in this letter.

Sincerely,



Norton Nelson, Chairman  
Executive Committee



Richard A. Griesemer, Chairman  
Environmental Health Committee



John Doull, Chairman  
Halogenated Organics Subcommittee

U. S. ENVIRONMENTAL PROTECTION AGENCY  
SCIENCE ADVISORY BOARD  
ENVIRONMENTAL HEALTH COMMITTEE  
Halogenated Organics Subcommittee

November 19-20, 1987

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