



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

EPA-SAB-LTR-DWC-92-001

October 19, 1991

OFFICE OF  
THE ADMINISTRATOR

Honorable William K. Reilly  
Administrator  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460

Subject: Review of the Office of Drinking Water's Revised Criteria Document on Nitrate/Nitrite

Dear Mr. Reilly,

The Science Advisory Board's Drinking Water Committee (DWC) met in Washington, D.C., April 4-5, 1991. Among the documents reviewed was the revised Drinking Water Criteria Document for Nitrate and Nitrite of October 15, 1990. The Committee previously reviewed this topic in 1987 (report EPA-SAB-EHC-87-029). Although most of the questions raised by the DWC in the course of that review have been addressed, there are two issues which remain as areas of concern to the Committee members:

- a. A carcinogenicity classification has not been assigned in the criteria document. We understand, however, that the question of carcinogenicity is being addressed currently by the Agency's Carcinogenic Risk Assessment Verification Endeavor Committee (CRAVE), as well as by an interagency group. The DWC would be pleased to review the carcinogenicity assessment document when available.
- b. The most sensitive exposed group, i.e., infants with gastrointestinal disturbances, may not be protected adequately because the Walton study, used as a basis for determining the maximum contaminant level (MCL), has certain limitations.

The specific concerns of the Committee on the latter issue (adequate protection of the most sensitive group and the selection of an MCL of 10 mg/L) are:

- a. The assumption that the most sensitive subpopulation of infants, i.e., those with acute diarrhea, had adequate representation in the Walton study is not

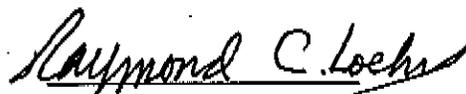
validated or verified. Also the reporting process did not contain a formal mechanism for reporting the incidence of methemoglobinemia, a consequence of nitrate ingestion. It is the DWC's understanding that methemoglobinemia is not a reportable disease.

- b. The responses given by Agency staff to the comments of the Committee indicate that drinking water contributes 50% of the nitrate intake. However, the MCLG is based on an assumption of 100% nitrate/nitrite intake from drinking water.
- c. The EPA stated that the National Academy of Sciences 1977 report Drinking Water and Health (National Academy of Science, Washington DC, 1977), confirms the value of 10 mg/L, but did not note that this report also states "there is little margin of safety" at this level (page 424, op. cit.).

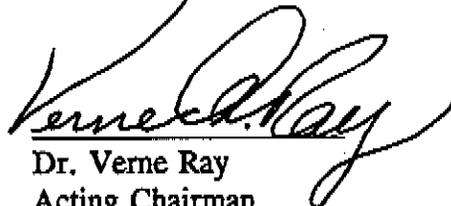
The Committee recognizes that additional research information is required to move forward the risk assessment process for nitrate/nitrites and that this information will not be available in the near future. Until the carcinogenicity assessment and additional epidemiological information on the most sensitive population is available, the Committee believes that it cannot contribute further to the Criteria Document.

We appreciate the opportunity to review this subject, and look forward to your response on the issues we have raised.

Sincerely,



Dr. Raymond C. Lochr  
Chairman  
Executive Committee



Dr. Verne Ray  
Acting Chairman  
Drinking Water Committee

Enclosure

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