

September 23, 1997

EPA-SAB-EC-COM-97-002

Ms. Carol M. Browner  
Administrator  
US Environmental Protection Agency  
401 M St. SW  
Washington, DC 20460

Subject:       Commentary on the Question of Agency Benchmark Values for  
                  Ecological Toxicity

Dear Ms. Browner:

#### SUMMARY

This Commentary from the SAB Executive Committee is meant to alert the Agency to the question of the need for and advisability of an institutional mechanism that will lead to Agencywide consensus values to characterize ecological toxicity of pollutants.

#### BACKGROUND

At its July 23, 1997 meeting the SAB Executive Committee (EC) reviewed a draft report from its Ecological Processes and Effects Committee (EPEC) dealing with OSWER guidance on "ecotoxicity threshold" values. The intent of the ecotoxicity threshold values is to provide guidance to workers in the field on whether the levels of pollutants at contaminated sites merit more rigorous risk assessments or not, based on ecotoxicity concerns. Operationally, this would mean that if the level of contamination is below some level (the "threshold"), then a more sophisticated ecological risk assessment is not called for. If, on the other hand, the level of contamination is above the threshold, then more rigorous ecological risk assessment would be undertaken.

You have recently received the Board's advice ("Evaluation of Superfund Ecotox Threshold Benchmark Values for Water and Sediment", EPA-SAB-EPEC-LTR-97-009, August 8, 1997) on the focused question of ecotoxicity threshold.

However, larger concerns surfaced during the course of the discussion by the EC that the SAB intends to investigate further. For example, the fact that there are a number of different approaches taken by different groups inside and outside the Agency to derive these ecotoxicity threshold values raises the possibility of users "shopping around" for a value that suits their particular needs. Also, the wide range of organisms that exist in the various types of ecosystems across the country raises new questions about the adequacy of research and test methods upon which ecotoxicity

threshold values might be based. Such questions generally do not arise when examining comparable toxicity issues associated with human health. In the latter instance, the Agency developed the Integrated Risk Information System (IRIS) more than a decade ago to address the "shopping around" issue associated with human toxicity values; cf., q1\*s and RfDs.

We recognize the value of having such consensus numbers on ecotoxicity available when devising and selecting risk reduction options.

Because it is such an important, Agency wide issue we plan to mobilize a cross-SAB group to explore the scientific problem and technical prospects in embarking upon development of such a system. Our intention is to have a Consultation with appropriate parties from across the Agency to learn about ecotoxicity values and to share insights with professionals within the Agency. From these discussions, we will generate some ideas about an appropriate course of action for the Board and the Agency in order to address these issues.

We look forward to your reaction to this commentary and to any suggestions that the Agency might have as the SAB develops its plans in this area.

Sincerely,  


Dr. Genevieve Matanoski, MD, MPH  
Chair, Executive Committee  
Science Advisory Board

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SCIENCE ADVISORY BOARD  
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