

Dr. Thomas Armitage, Designated Federal Officer
EPA SAB Staff Office (1400F)
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

January 18, 2007

Dear Dr. Armitage:

Thank you for the opportunity to comment on the *Draft Advisory Report – Advice to EPA on Advancing the Science and Application of Ecological Risk Assessment in Environmental Decision Making* prepared by the Science Advisory Board’s Environmental Processes and Effects Committee. The Report provides a clear, concise discussion of a range of important questions and controversial issues facing risk assessment practitioners in a number of agencies and programs. Beyond any short-term impact on EPA risk assessment practices, I believe that the SAB report and the discussions leading up to it will prove to be a pivotal stage in longer-term efforts to advance ecological risk assessment practices.

I would like to offer a comment on the recommendation in the Report’s “Contaminated Site Management” section that CERCLA risk assessments investigate large-scale spatial, temporal, or population-level effects (versus organism-level effects). A similar recommendation in the Report’s more general “Findings and Recommendations” section emphasizes a need for techniques for assessing risks at all levels of biological organization (community, habitat and landscape scales) and a need for the use of population models in ecological effects assessment. The Report acknowledges that CERCLA requires that the risk assessment focus on the site in question, and that under CERCLA, a contaminated site remedy must be protective of the environment within its boundaries. Nevertheless, the Report encourages EPA to further evaluate how large scale or population effects could be investigated in the context of legal and regulatory requirements that may limit the focus of assessments. This appears to be a policy recommendation that goes beyond technical and scientific advice.

It is not entirely clear whether the Committee intends to recommend that risk assessments focus on effects at higher levels of biological organization *in addition to* organism-level effects or *instead of* them. In either case, the relevance of organism-level risk estimates to risk management decisions within a given regulatory program seems to be primarily a matter of policy. For this reason, I suggest that the Committee consider omitting from the Report (or at least from the “Contaminated Site Management” section of the report) the recommendations that EPA risk assessments should evaluate risk at the population, community, and landscape levels of biological organization. If the Committee believes it is important to make this policy recommendation, then they should explicitly differentiate it from other recommendations that are more technical in nature.

At the same time, the validity of using organism-level measurements to estimate population or community-level risks seems to be primarily a technical/scientific question, as opposed to a policy issue. Accordingly, I would suggest that the Committee consider expanding the Report slightly to emphasize the uncertainties inherent in: (1) extrapolating from organism-level measurements to population-level risk estimates and (2) using organism-level risk estimates as surrogates for population risk estimates.

Overall, I think that the Committee has succeeded in the difficult task of integrating the divergent opinions and disparate recommendations offered during the February 2006 public workshop into a coherent summary report. Thank you for your hard work and valuable contributions.

Sincerely,

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