



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

OFFICE OF THE ADMINISTRATOR
EPA SCIENCE ADVISORY BOARD

April 14, 2003

MEMORANDUM

SUBJECT: US EPA Science Advisory Board (SAB) Environmental Health Committee (EHC) Supplemental Guidance for Assessing Cancer Susceptibility (SGACS) for Early-life Review Panel – Documentation for Panel Formation Determinations

FROM: Sue Shallal, Ph.D., Designated Federal Officer
EPA Science Advisory Board Staff Office (1400A)

TO: Vanessa Vu, Ph.D., Director
EPA Science Advisory Board Staff Office (1400A)

This memo addresses the set of determinations that are necessary for starting a review by the SAB. It provides background information on this SAB review activity and then addresses:

- A) the type of Panel that will be used to conduct the review, the name of the Panel, and identification of the Panel Chair; the types of expertise needed to address the charge;
- B) identification of parties who are potentially interested in or may be affected by the topic to be reviewed;
- C) whether the charge involves a Particular Matter and how conflict of interest regulations under 18 U.S.C. 208. apply to members of the panel;
- D) how regulations concerning “appearance of lack of impartiality” under 5 C.F.R. 2635.502 apply to members of the panel;
- E) how individuals were placed on the “Proposed List” posted on the SAB website as candidates for the panel; and
- F) how individuals were placed on the final panel.

This memo serves to document the status of decisions on each of these topics and to document the SAB Staff Office Director’s approval of those decisions.

I. Background

In February 2003, the Office of Research and Development (ORD) National Center for Environmental Assessment (NCEA) requested that the SAB conduct a peer review of the draft document entitled, “Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Exposure to Carcinogens” (SGACS). The focus of this guidance is on childhood exposures to chemicals that may result in cancer later in life. The guidance is based on the Agency’s analysis of available data that provides information about differential susceptibility across life-stages. The data were derived from human population exposure to radiation and laboratory animal studies exposed to chemical carcinogens. This document provides a possible approach for assessing cancer susceptibility from early-life exposure to carcinogens.

The Agency has requested that the Science Advisory Board (SAB) conduct this review in an expedited manner and utilize the expertise of two other EPA advisory committees, the FIFRA Science Advisory Panel (SAP) and the Children’s Health Protection Advisory Committee (CHPAC). By including members of these three EPA advisory bodies in the review of this guidance, the requesting office hoped to benefit from their unique expertise in children’s risk assessment and to obtain timely advice.

The charge to the panel: SAB Staff, Director of the SAB and the Agency negotiated the following charge which falls into two categories, Questions Concerning the Guidance Document and Other Questions.

QUESTIONS CONCERNING THE GUIDANCE DOCUMENT

1. The Agency seeks the Science Advisory Board’s review of the soundness of the Agency’s position that the existing scientific information and data support the conclusion that there is greater susceptibility for the development of tumors as a result of exposures in early lifestages as compared with adults to chemicals acting through a mutagenic mode of action. Are there any key studies that the Agency has overlooked in reaching this conclusion?
2. For chemicals acting through non-mutagenic modes of action, the Agency concludes that a range of approaches needs to be developed over time for addressing cancer risks from childhood exposures. Please comment on the Agency’s conclusion that the scientific knowledge and data are insufficient at this time to develop generic guidance on how to address these chemicals and a case-by-case approach is more suitable. Is the SAB aware of any additional data for chemicals acting through non-mutagenic modes of action relevant to possible early lifestage sensitivity?
3. Assuming that it is appropriate to conclude that there is differential lifestage susceptibility to chemicals acting through a mutagenic mode of action, the Agency’s guidance uses a default approach that adjusts cancer slope factors (typically from conventional animal bioassays and/or epidemiologic studies of adult exposure) to address the impact of early-lifestage exposure. Please comment on the appropriateness of this approach.

4. When considering differential susceptibility, the Agency's guidance separates the potential susceptible period into two age groups, 0 - 2 years and 2 - 15 years. These groupings were based on biological considerations rather than exposure considerations. The first grouping, 0 - 2 years of age, is meant to encompass a period of rapid development and the second grouping, 2 - 15 years of age, was selected to represent middle adolescence approximately following the period of rapid developmental changes during puberty. Please comment on the appropriateness of these age groupings with respect to susceptible lifestages given the current knowledge.

5. The Guidance provides a quantitative approach to account for the greater susceptibility of early-life exposure to chemicals that act through a mutagenic mode of action. An adjustment factor of 10 is applied to the cancer slope factor (derived from animal or epidemiology studies) for exposures before 2 years of age, a factor of 3 is applied for ages between 2 and 15 years, and no adjustment after the age of 15. Please comment on the appropriateness of these adjustment factors based on the analysis of available data.

OTHER QUESTIONS

6. The Agency recognizes that consideration of children's risk is a rapidly developing area and, therefore, the Agency intends to issue future guidance that will further refine the present guidance and possibly address other modes of action as data become available. The Agency welcomes the SAB's recommendations on other modes of action that may be most fruitful to assess in similar future analyses.

7. The analysis presented in the current Guidance relies on neonatal and early-life exposure studies. Can the SAB recommend how to best incorporate data from transplacental or in utero exposure studies into future analyses?

8. The Agency welcomes the SAB's recommendations on critical data needs that will facilitate the development of future guidance addressing differential lifestage susceptibility.

II. Determinations

A) Type of Panel that will be used to conduct the review, the name of the Panel, and identification of the Panel Chair; types of expertise needed to address the charge: The SAB, after receiving the request to review EPA's Office of Research and Development document entitled "Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Exposure to Carcinogens", determined that a broad base of expertise was required. It was decided that candidates with the following expertises were needed: carcinogenicity; biostatistics; toxicology; epidemiology; pediatrics; radiation biology; risk assessment and/or the application of the Agency's risk assessment guidelines. Further, the SAB Environmental Health Committee (EHC) was selected to address the charge questions. Pursuant to ORD's request and in order to assemble a panel with the required expertise, the SAB Environmental Health Committee (EHC) was supplemented with members from the SAB Radiation Advisory Committee (RAC), the

FIFRA Science Advisory Panel (SAP) and the Children's Health Protection Advisory Council (CHPAC). By including members of the three EPA advisory bodies in the review of this document, the SAB staff have attempted to assemble a panel with the necessary expertise in children's risk assessment and to receive a peer review report that reflects the scientific views of these advisory bodies on the charge questions in an expedited manner. The panel charged with reviewing the "Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Exposure to Carcinogens" document will be referred to as the SGACS review panel. As the current Chair of the SAB Environmental Health Committee, Dr. Henry Anderson, was selected as the Chair of the SGACS review panel.

The SAB, in its March 4, 2003 FR Notice introduced the proposed experts to address the SGACS document. In the FR notice, the proposed panel consisted of 13 candidates with the relevant expertises. Public input was sought in the form of information, analysis or documentation to assist the SAB staff in making a final decision concerning the panel membership.

B) Identification of parties who are potentially interested in or may be affected by the topic to be reviewed: Interested parties are those who follow risk assessment developments and EPA's implementation of new risk assessment approaches (i.e., the regulated community, public interest groups, and others).

C) Whether the charge involves a Particular Matter¹ and how conflict of interest regulations apply to members of the panel: In consultation with EPA Senior Ethics Counsel, it was determined that this SAB panel activity in addressing the charge does not qualify as a particular matter because the advice of the panel will not involve deliberations, decisions, or actions that are focused on the interests of specific people or a discrete and identifiable class of people. The review does not focus on the interests of specific people (i.e., it is not a "specific party matter") albeit it may result in adoption of broad policy options directed to the interests of a large and diverse group of people.

In order to determine how conflict of interest regulations apply to members of the panel, the SAB Staff conducted an analysis for each panel member to determine whether the following provision of 18 U.S.C. 208 applies: "*An employee is prohibited from participating personally and substantially in an official capacity in any particular matter in which, to his knowledge, he or any person whose interests are imputed to him under this statute has a financial interest, if the particular matter will have a direct and predictable effect on that interest.*"

¹The term "particular matter" refers to matters that involve deliberation, decision, or action that is focused on the interests of specific people or a discrete and identifiable class of people. The term may include matters that do not involve formal parties and may extend to legislation or policy-making that is narrowly focused on the interests of a discrete and identifiable class of people. But the term does not cover consideration or adoption of broad policy options directed to the interests of a large and diverse group of people. [5 C.F.R. 2640.103(a)(1)]

For this review, the SAB Staff assume generally that the panel members will be participating personally in the review and that they will be participating substantially. Following standard procedures, the SAB Staff determine, on a case-by-case basis whether there is any financial interest in this matter on the part of the Special Government Employee (SGE); the SGE's spouse or minor child; a general partner; an organization in which the SGE is serving as an officer, director, trustee, general partner, or employee; or a prospective employer. The SAB Staff assumes generally for this review that the panel's advice on the matter under review will not have a direct effect on the financial interest of panelists.²

D) How regulations concerning “appearance of lack of impartiality” under 5 C.F.R. 2635.502 apply to members of the panel. The Code of Federal Regulations state that “*Where an employee knows that a particular matter involving specific parties is likely to have a direct and predictable effect on the financial interest of a member of his household, or knows that a person with whom he has a covered relationship is or represents a party to such matter, and where the person determines that the circumstances would cause a reasonable person with knowledge of the relevant facts to question his impartiality in the matter, the employee should not participate in the matter unless he has informed the agency designee of the appearance problem and received authorization from the agency designee.*”

The SGACS review activity is not a specific party matter, so there is no legal issue concerning “conflict of interest” under federal regulations. Additionally, SAB Staff selected individuals that had no previous involvement in the development of the document to be reviewed in order to alleviate issues regarding “lack of impartiality”. “Involvement” in this case was defined as: no authorship of the document, collaboration with the authors in developing this document, prior peer review, or authorship of public comments on the document. SAB Staff have also precluded individuals who receive research funding from EPA which is directly linked to age-related differential susceptibility to carcinogens.

E) How individuals were selected for the “proposed panel” posted on the SAB website as proposed candidates for the panel. As mentioned earlier, in March 2003, the SAB Staff selected candidates based upon their membership on one of EPA's three advisory committees that address cancer issues especially as related to children; additionally the candidates were chosen due to their expertise and credentials, availability, and willingness to serve. SAB Staff, in an effort to be responsive to the concerns of interested parties and pursuant to the FACA

²A particular matter has a direct effect on a financial interest if a close causal link exists between any decision/action to be taken in the matter and any expected effect of the matter on the financial interest. An effect may be direct even though it does not occur immediately. A particular matter does not have a direct effect on a financial interest, however, if the chain of causation is attenuated or is contingent upon the occurrence of events that are speculative or that are independent of, and unrelated to, the matter. A particular matter that has an effect on a financial interest only as a consequence of its effects on the general economy is not considered to have a direct effect. 5 C.F.R. 2640.103(a)(3)(i).

requirements for balanced membership³, ensured that the composition of the panel reflected varied points of view. A request for information on the proposed panel and notification of an upcoming meeting appeared in the *Federal Register* on March 4, 2003 (68 FR 10240-10241; See Attachment 1).

F) How individuals were selected for the final panel. SAB Staff considered the following information when making its final selections: (a) the Confidential Financial Disclosure Forms (EPA form 1130-48) completed by all Proposed Candidates; (b) responses from proposed candidates to queries about their “points of view” and relationship to the review material to be considered by the panel (Attachment 3); (c) background information assembled by the SAB staff office and (d) information solicited from the public. The SAB received six sets of public comments in response to its request for “information, analysis, or documentation” that the SAB Staff should consider in making its selection of members of the panel (Attachment 2 lists the names of groups and individuals submitting public comments). These submissions were received by the time the public comment period closed on March 18, 2003.

After reviewing all pertinent information that was provided by all prospective panelists, it was determined that there is no conflict of interest for any panel member. The final panel membership reflects changes that have been made in an effort to avoid an “appearance of lack of impartiality”. The selected 12 panel members are:

Dr. Henry Anderson, Wisconsin Division of Public Health, Madison, WI (CHAIR)
Dr. David Hoel, Medical University of South Carolina, Charleston, SC
Dr. Richard W. Hornung, University of Cincinnati, Cincinnati, OH
Dr. James E. Klaunig, Indiana University, Indianapolis, IN
Dr. Ulrike Luderer, University of California at Irvine, Irvine, CA
Dr. Anne Sweeney, Texas A&M University, Bryan, TX
Dr. Richard J. Vetter, Mayo Clinic, Rochester, MN
Dr. Daniel A. Goldstein, M.D. Monsanto Company, St. Louis, MO
Dr. Melanie Marty, CA/EPA Office of Environmental Health Hazard Assessment, Oakland, CA
Dr. Stuart Handwerker, M.D., University of Cincinnati, Cincinnati, OH
Dr. Steven G. Heeringa, University of Michigan, Ann Arbor, MI
Dr. Christopher J. Portier, National Institute of Environmental Health Sciences, Research Triangle Park, NC

Concurred,

/s/

Vanessa Vu, Ph.D.
Director
EPA Science Advisory Board Staff

Date: April 14, 2003

³ 41 CFR § 102-3.30 (c) *Balanced membership*. An advisory committee must be fairly balanced in its membership in terms of the points of view represented and the functions performed.

- Attachment 1: *Federal Register* Request for information on the proposed panel and notification of an upcoming meeting published March 4, 2003 (68 FR 10240-10241).
- Attachment 2: List of the Names of Groups and Individuals Submitting Public Comment on the SGACS Proposed Panel
- Attachment 3: Questions posted to proposed candidates about their "points of view" and relationship to the review material to be considered by the panel
- Attachment 4: Roster of individuals selected for the Panel

ENVIRONMENTAL PROTECTION AGENCY
[FRL-7457-6]

EPA Science Advisory Board, Environmental Health Committee,
Notification of an Upcoming Meeting and Request for Information on the
Proposed Panel for the Review of the Supplemental Guidance for
Assessing Cancer Susceptibility From Early-life Exposure to Carcinogens
(SGACS)

AGENCY: Environmental Protection Agency (EPA).
ACTION: Notice.

SUMMARY: Request for Information on the Panel and Notification of an Upcoming Meeting.

DATES: April 24, 2003--Teleconference meeting of the Environmental Health Committee Submissions concerning the proposed panel are due by March 18, 2003.

ADDRESSES: U.S. EPA Science Advisory Board (1400A), Suite 6450P EPA, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0001 (zip code for FedEx--20004).

FOR FURTHER INFORMATION CONTACT: Dr. Suhair Shallal, Designated Federal Officer, by telephone/voice mail at (202) 564-4566, by fax at (202) 501-0582; or via e-mail at shallal.suhair@epa.gov. General information concerning the EPA Science Advisory Board can be found on the EPA SAB Web site at: <http://www.epa.gov/sab>.

SUPPLEMENTARY INFORMATION:

1. Background on the EPA Science Advisory Board: The U.S. Environmental Protection Agency (EPA or Agency) Science Advisory Board (SAB) is providing notification of an upcoming meeting and requesting information on the proposed SCAGS review panel.

The SAB was established by 42 U.S.C. 4365 to provide independent scientific and technical advice, consultation, and recommendations to the EPA Administrator on the technical basis for Agency positions and regulations. This panel will comply with the provisions of the Federal Advisory Committee Act (FACA) and all appropriate SAB procedural policies. Those selected to serve on the SCAGS review panel will review the draft materials identified in this notice and respond to the appropriate charge questions. Upon completion, the panel's report will be submitted to the SAB executive committee for final approval.

2. Background on this advisory activity: Pursuant to a request by EPA's Office of Research and Development, the SAB will conduct a peer review of the draft document entitled Supplemental Guidance for Assessing Cancer Susceptibility from Early-Life Exposure to Carcinogens. In a separate FR Notice, EPA announced the availability of, and the opportunity to comment on the above mentioned document.

The SAB was selected to lead this review due to its experience in reviewing various documents associated with the EPA's Draft Cancer Guidelines and the relevance of the expertise of its members to this review. In 1996, EPA published for public comment proposed revisions to

EPA's 1986 Guidelines for Carcinogen Risk Assessment ([61 FR 17960](#), April 23, 1996). Since the 1996 proposal, EPA's Science Advisory Board (SAB) has conducted three scientific peer reviews. In February 1997, the Science Advisory Board's Environmental Health Committee (SAB EHC) was asked to review the proposed revisions to the Agency's first cancer guidelines issued in 1986 (<http://www.epa.gov/sab/pdf/ehc9710.pdf>). In January 1999, the EHC met again to consider selected sections of the draft Guidelines that were revised to address recommendations from the public and the earlier SAB review (1997) of the Guideline (<http://www.epa.gov/sab/pdf/ec15.pdf>). A third meeting took place in July 1999 to provide advice and comment to the EPA on issues related to applying the provisions of EPA's proposed revised Cancer Risk Assessment Guidelines to children (<http://www.epa.gov/sab/pdf/ec0016.pdf>).

Availability of the Meeting Materials--The materials for this review are available from the Office of Research and Development's National Center for Environmental Assessment, Risk Assessment Forum Web site, located at: <http://cfpub.epa.gov/ncea/raf/index.cfm>. For questions and information concerning the materials, please contact Dr. William P. Wood, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave, NW., Washington, DC 20460; tel. (202) 564-3361, or e-mail: risk.forum@epa.gov.

3. Meeting via Teleconference of the Environmental Health Committee--April 24, 2003: Pursuant to the Federal Advisory Committee Act, Public Law 92-463, notice is hereby given that the Environmental Health Committee of the U.S. EPA Science Advisory Board (SAB) will meet on Thursday, April 24, 2003 via teleconference at 3 p.m.-5 p.m. Eastern Standard Time (EST) to begin the review of the EPA's Office of Research and Development draft document entitled, Supplemental Guidance for Assessing Cancer Susceptibility From Early-Life Exposure to Carcinogens (SGACS). This document provides a possible approach for assessing cancer susceptibility from early-life exposure to carcinogens. The purpose of the teleconference is: (a) To discuss the charge and the adequacy of the review materials provided to the SGACS Review Panel; (b) to clarify any questions and issues relating to the charge and the review materials; (c) to discuss specific charge assignments to the SGACS Review Panelists; and (d) to clarify specific points of interest raised by the Panelists in preparation for the face-to-face meeting. All times noted are Eastern Standard Time. The meeting is open to the public, however, seating is limited and available on a first come basis. Important Notice: Documents that are the subject of SAB reviews or consultations are normally available from the originating EPA office and are not available from the SAB Office--information concerning availability of documents generated by the SAB and the relevant Program Office is included above.

The meeting will begin on April 24, 2003 at 3 p.m. EST and adjourn no later than 5 p.m. EST that day. The meeting will be held at EPA Headquarters, Washington, DC, Ariel Rios North, room 6013. For further information concerning this meeting, please contact the individuals listed at the beginning of this Federal Register notice. A copy of the draft agenda for the meeting will be posted on the SAB Web site (www.epa.gov/sab) (under the AGENDAS subheading) approximately 10 days before the meeting. Information concerning a subsequent face to face meeting will be forthcoming in a separate Federal Register notice.

Providing Oral or Written Comments at SAB Meetings--It is the policy of the EPA Science Advisory Board (SAB) to accept written public comments of any

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length, and to accommodate oral public comments whenever possible. The EPA SAB expects that public statements presented at its meetings will not be repetitive of previously submitted oral or written statements. Oral Comments: In general, each individual or group requesting an oral presentation at a face-to-face meeting will be limited to a total time of ten minutes (unless otherwise indicated). For teleconference meetings, opportunities for oral comment will usually be limited to no more than three minutes per speaker and no more than fifteen minutes total. Interested parties should contact the DFO at least one week prior to the meeting in order to be placed on the public speaker list for the meeting. Speakers may attend the meeting and provide comment up to the meeting time. Speakers should bring at least 35 copies of their comments and presentation slides for distribution to the reviewers and public at the meeting. Written Comments: Although the SAB accepts written comments until the date of the meeting (unless otherwise stated), written comments should be received in the SAB Staff Office at least one week prior to the meeting date so that the comments may be made available to the review panel for their consideration. Comments should be supplied to the DFO at the address/contact information noted below in the following formats: one hard copy with original signature, and one electronic copy via e-mail (acceptable file format: Adobe Acrobat, WordPerfect, Word, or Rich Text files (in IBM-PC/Windows 95/98 format)). Those providing written comments and who attend the meeting are also asked to bring 35 copies of their comments for public distribution. Should comment be provided at the meeting and not in advance of the meeting, they should be in-hand to the DFO up to and immediately following the meeting. The SAB allows a grace period of 48 hours after adjournment of the public meeting to provide written comments supporting any verbal comments stated at the public meeting to be made a part of the public record.

Meeting Access--Individuals requiring special accommodation at this meeting, including wheelchair access to the conference room, should contact Ms. Zisa Lubarov-Walton (lubarov-walton.zisa@epa.gov) or by telephone/voice mail at (202) 564-4533 at least five business days prior to the meeting date so that appropriate arrangements can be made.

4. Solicitation of information on the Proposed Review Panel: To provide the Agency with meaningful input, we have determined that the following expertise is needed for the review: toxicology including carcinogenicity; biostatistics; epidemiology; pediatrics; radiation biology; risk assessment and the application of the Agency's risk assessment guidelines. As requested by EPA's ORD, the EPA Science Advisory Board's Environmental Health Committee, a standing committee of the Board, will conduct this review. The SAB EHC will be augmented with members from the SAB Radiation Advisory Committee, the FIFRA Science Advisory Panel (SAP) and the Children's Health Protection Advisory Council (CHPAC) to form the SGACS review Panel. By including members of the three EPA advisory bodies in the review of this document, the requesting office hopes to benefit from their unique expertise in children's risk assessment and to receive a peer review report which reflects the views of these bodies on the charge questions in an expedited manner. Therefore, we are not soliciting additional experts for this review.

The SAB Staff Office will post the names and biosketches for members of the review Panel on the SAB Web site at: <http://www.epa.gov/sab>.

The public has the opportunity to provide information, analysis or other documentation relevant to the membership of the panel before the

SAB Staff Office makes a final decision. Information, analysis or documentation must be received by the Designated Federal Officer (DFO) no later than March 18, 2003. Please see the address/contact information noted above. The complete SAB process for panel formation described in the Overview of the Panel Formation Process at the Environmental Protection Agency Science Advisory Board, which can found on the SAB's Web site at: <http://www.epa.gov/sab/pdf/ec02010.pdf>.

For the EPA SAB, a balanced review panel (i.e., committee, subcommittee, or panel) is characterized by inclusion of candidates who possess the necessary domains of knowledge, the relevant scientific perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the charge. Information provided by the public will be considered in the selection of the panel, along with information provided by candidates and information gathered by EPA SAB Staff independently on the background of each candidate (e.g., financial disclosure information and computer searches to evaluate a nominee's prior involvement with the topic under review). Specific criteria to be used in evaluating an individual subcommittee member include: (a) Scientific and/or technical expertise, knowledge, and experience (primary factors); (b) availability and willingness to serve; (c) absence of financial conflicts of interest; (d) scientific credibility and impartiality; and (e) ability to work constructively and effectively in committees.

Dated: February 26, 2003.
Robert Flaak,
Acting Deputy Director, EPA Science Advisory Board.

Attachment 2

List of the Names of Groups and Individuals Submitting Public Comment on the HHRS Short List

1. Jennifer Sass, PhD, Natural Resources Defense Council
2. Cindy Folkers, Energy Future Project Coordinator, Nuclear Information & Resource Service
3. Lynn H. Ehrle, Senior Research Fellow, Cancer Prevention Coalition
4. Sarah Brozena, Acting Staff Leader, American Chemistry Council
5. Rudi H. Nussbaum, PhD, Prof. Emeritus, Portland State University
6. Joseph Mangano, National Coordinator, Radiation and Public Health Project

Attachment 3

Questions Posted to Short List Candidates about Their "Points of View" and Relationship to the Review Material to Be Considered by the Panel

1. Have you had any previous involvement with the review document(s) under consideration, including authorship, collaboration with the authors, or previous peer review functions? If so, please identify that involvement.
2. Have you served on previous advisory panels or committees that have addressed the topic under consideration? If so, please identify those activities.
3. Have you made any public statements (written or oral) on the specific topics addressed in the document to be reviewed? If so, please identify those statements.
4. Have you made any public statements that would indicate to an observer that you have taken a position on the specific topics addressed in this review? If so, please identify those statements.

**U.S. Environmental Protection Agency
Science Advisory Board
Supplemental Guidance for Assessing Cancer
Susceptibility (SGACS) Review Panel**

CHAIR

Dr. Henry Anderson, Chief Medical Officer, Division of Public Health, Wisconsin Division of Public Health, Madison, WI

Also Member: Executive Committee

SCIENCE ADVISORY BOARD (SAB) MEMBERS

Dr. David Hoel, Distinguished University Professor, Department of Biometry and Epidemiology, Medical University of South Carolina, Charleston, SC

Dr. Richard W. Hornung, Director, Division of Biostatistical Research, IHPHSR, University of Cincinnati, PO Box 670840, Cincinnati, OH, 45267-0840

Dr. James E. Klaunig, Professor and Director, Department of Pharmacology and Toxicology, School of Medicine, Indiana University, Indianapolis, IN

Dr. Ulrike Luderer, Assistant Professor, Department of Medicine, Center for Occupational and Environmental Health, University of California at Irvine, Irvine, CA

Dr. Anne Sweeney, Associate Professor, Department of Epidemiology/Biostatistics, Health Science Center, School of Rural Public Health, Texas A&M University, Bryan, TX

Dr. Richard J. Vetter, Head, Radiation Safety Program, Mayo Medical School, Mayo Clinic, 200 1st Street, S.W., Rochester, MN, 55905

**CHILDREN'S HEALTH PROTECTION ADVISORY COMMITTEE (CHPAC)
MEMBERS**

Dr. Daniel A. Goldstein, M.D., Director, Medical Toxicology, Monsanto Company, St. Louis, MO 63167

Dr. Melanie Marty, Ph.D., CA/EPA Office of Environmental Health Hazard Assessment, Chief, Air Toxicology and Epidemiology Section, Oakland, CA 94612

FIFRA SCIENTIFIC ADVISORY PANEL (SAP) MEMBERS

Dr. Stuart Handwerger, M.D., Director, Division of Endocrinology, Cincinnati Children's Hospital Medical Center, University of Cincinnati, Cincinnati, OH 45229

Dr. Steven G. Heeringa, Ph.D., Director, Statistical Design and Analysis, Institute for Social Research, University of Michigan, Ann Arbor, MI 48016-1248

Dr. Christopher J. Portier, Ph.D., Director, Environmental Toxicology Program, National Institute of Environmental Health Sciences, Research Triangle Park, NC 27709-12233

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