

**US EPA Science Advisory Board Integrated Nitrogen Committee (INC) Public
Teleconference March 4, 2009,
1:00 p.m. – 3:00 p.m. (Eastern Time)**

Committee: The SAB Integrated Nitrogen Committee (See Roster - Attachment A)

Date and Time: March 4, 2009, 1:00 p.m. – 3:00 p.m. (Eastern Time)

Location: Participation by Telephone Only

Purpose: The purpose of the teleconference is to discuss a draft report on an integrated strategy for managing reactive nitrogen C)

Attendees: Members of the Integrated Nitrogen Committee (INC)

Dr. James N. Galloway (Chair)

Dr. Thomas L. Theis (Vice-Chair)

Dr. Viney Aneja

Dr. Elizabeth Boyer

Dr. Kenneth Cassman

Dr. Ellis Cowling.

Dr. Russell Dickerson

Dr. Otto C. Doering III

Dr. William Herz

Dr. JoAnn S. Lighty

Dr. William Mitsch

Dr. Arvin Mosier

Dr. Hans Paerl

EPA SAB Staff

Dr. Angela Nugent [Designated Federal Officer, DFO)]

Members of the Public (see Attachment D)

Teleconference Summary:

The teleconference generally followed the meeting agenda (see Meeting Agenda - Attachment C) to discuss the February 18, 2009 INC draft report. The DFO took roll for members of the committee and announced that no written public comment was received and there were no formal requests for public oral comment.

The Chair, Dr. James N. Galloway, asked the committee to focus discussion on the February 18th draft report and proceed chapter-by-chapter. He began first by addressing written comments received for the Executive Summary. Committee members agreed with the comment by Dr. Ellis Cowling to divide summary of report recommendations into three categories: overarching recommendations, specific targets for reduction of reactive nitrogen emissions, and specific recommendations. A member

further suggested that all recommendations be listed in the Executive Summary in a compact format and that the summary be edited to reduce detail about committee procedures. The committee discussed that Appendix 3 would be retained and include a summary of both findings and recommendations, structured into the three categories described by Dr. Cowling. The chair noted that he would address the editorial comments provided by Dr. Cowling.

Members then discussed the figures in the Executive Summary. One member noted that Figure 2 should report all quantities as Tg N/yr and that labels for figures should be revised to be less cryptic or that the text provide a key to acronyms on the same page as the figure. Members agreed that the diagram showing the nitrogen cascade on page 20 was too detailed for the Executive Summary, but they agreed that the Executive Summary should include additional text describing the nitrogen cascade. A member suggested that an additional schematic figure be designed, based on figure 2, showing nitrogen inputs, exchanges, and losses in different environmental systems (i.e., terrestrial, aquatic, and atmospheric). Another member suggested including a copy of the diagram currently on page 158 of the February 18th draft in the Executive Summary to help readers understand how nitrogen numbers would be changed by the specific targets recommended by the committee. A member then suggested including an additional new figure in the Executive Summary showing recent historical increases of nitrogen. Dr. Elizabeth Boyer committed to providing a time series showing increases of reactive nitrogen in the United States by March 13, 2009. The chair requested that this figure show inputs of newly Nr to the US as a function of time.

The Chair noted that there were no significant substantive comments on Chapter 1 to address in the teleconference.

Drs. Viney Aneja and Kenneth Cassman led the discussion of comments received on section 2.2. Dr. Cassman noted that Dr. Cowling suggested some changes to the wording of recommendations; some of those changes were modest and editorial in nature, but others changed the meaning of recommendations. Dr. Cassman voiced concern generally about the redundancy in recommendations across the entire report and noted the need to combine recommendations, where needed.

Dr. Aneja asked Dr. Arvin Mosier to address a comment by Dr. Otto Doering concerning recommendation 24. Dr. Mosier briefly discussed changes in language to remove ambiguity about the 80% reduction in ammonia discussed. Dr. Aneja committed to make that change.

In response to a member's question, Dr. Aneja agreed to clarify language on page 51, line 4, that "greenhouse gases" mean carbon dioxide

Drs. Mosier and Russell Dickerson led the discussion of section 2.3. They characterized the comments received as mostly editorial in nature. One substantive issue pertained to funding 7. Dr. Dickerson expressed concern that Dr. Cowling's proposed text on ammonium deposition was not substantiated by data. Dr. Boyer noted that she

had analyzed NADP data on this issue on a national scale and would send the information to Drs. Dickerson and Mosier to inform any rewording of finding 7.

Dr. Mosier asked the committee for comment on finding 8 on page 74 of the draft report. The committee decided to leave text unchanged, rather than make the change proposed by Dr. Cowling. A member raised questions about Table 14; he asked for units to be designated (i.e., as Tg N or Tg N/year) in the table and to clarify the meaning of the “environmental system” column, because the term “vegetated” was confusing. Dr. Mosier agreed to review and revise the table.

Dr. Dickerson noted that Dr. Cowling had revised language for a recommendation in section 2.3 calling for a change in criteria pollutants. No committee member took issue with this suggestion.

Finally, Dr. Paerl noted his written comments to drop text in section 2.3.1.3, page 75.

Dr. Thomas Theis next led the discussion of section 2.4. He noted that comments received were minor and that the revised language for recommendation 24 pertaining to agricultural emissions would be very helpful.

The committee then spoke of the actions needed to revise the document prior to peer review. Dr. Boyer spoke of the need to review the estimates in the report so they have correct citations and are internally consistent. The chair asked the leads and co-leads, assigned to revise sections of the document, to provide their draft text to Dr. Boyer as soon as possible so that she could check the numbers. The DFO asked all committee members to include her in all email communications pertaining to the committee’s work.

At the chair’s request, the DFO briefly reviewed the proposed schedule. The DFO stated that the current schedule allowed for a four-week external peer review, prior to preparations for the face-to-face meeting tentatively planned for the committee for May 14-15, 2009.

A member of the public then asked if public comments would be accepted on the draft document and if there were plans for future public teleconferences or meetings. The DFO stated that the public could comment, and that a revised version of the document would be the focus for a later committee meeting, now tentatively planned for May 14-15. That revised document and any further revisions of the document to be discussed at a later chartered SAB meeting would provide an opportunity for public comment.

Summary of Action Items

1. Leads and co-leads will revise sections of report assigned to them in light of comments received and teleconference discussion and provide revised text to the DFO by March 11th

2. Dr. Boyer will provide previously analyzed NADP data related to finding 7 to Drs. Dickerson and Mosier to inform any rewording of finding 7.
3. Dr. Boyer will provide a time series showing increases of reactive nitrogen in the United States by March 13, 2009. The chair requested that this figure show increases of reactive nitrogen to air, water, and land.

Respectfully Submitted:

Certified as True:

/s/

/s/

Angela Nugent
Designated Federal Official

Dr. James N. Galloway, Chair
SAB Integrated Nitrogen Committee

List of Attachments

Attachment A: Roster of the SAB Integrated Nitrogen Committee

Attachment B: Federal Register Notice

Attachment C: Meeting Agenda

Attachment D: Attendees from the Public Who Requested or Were Provided Call-in Information

Attachment A:

**U.S. Environmental Protection Agency
Science Advisory Board
Integrated Nitrogen Committee**

CHAIR

Dr. James Galloway, Professor, Department of Environmental Sciences, University of Virginia, Charlottesville, VA

VICE CHAIR

Dr. Thomas L. Theis, Director, Institute for Environmental Science and Policy, University of Illinois at Chicago, Chicago, IL

MEMBERS

Dr. Viney Aneja, Professor, Department of Marine, Earth, and Atmospheric Sciences, School of Physical and Mathematical Sciences, North Carolina State University, Raleigh, NC

Dr. Elizabeth Boyer, Associate Professor, School of Forest Resources and Assistant Director, Pennsylvania State Institutes of Energy & the Environment, and Director, Pennsylvania Water Resources Research Center, Pennsylvania State University, University Park, PA

Dr. Kenneth G. Cassman, Professor, Department of Agronomy and Horticulture, Institute of Agriculture and Natural Resources, University of Nebraska, Lincoln, NE

Dr. Ellis B. Cowling, University Distinguished Professor At-Large Emeritus, Colleges of Natural Resources and Agriculture and Life Sciences, North Carolina State University, Raleigh, NC

Dr. Russell R. Dickerson, Professor and Chair, Department of Meteorology, The University of Maryland, College Park, MD

Dr. Otto C. Doering III, Professor, Department of Agricultural Economics, Purdue University, W. Lafayette, IN

Mr. William Herz, Vice President for Scientific Programs, The Fertilizer Institute, Washington, DC

Dr. Donald L. Hey, President of The Wetlands Initiative and Director, Wetlands

Research, Inc, Chicago, IL

Dr. Richard Kohn, Professor, Animal Sciences Department, University of Maryland, College Park, MD

Dr. JoAnn S. Lighty, Chair and Professor, Chemical Engineering, University of Utah, Salt Lake City, UT

Dr. William Mitsch, Professor, Olentangy River Wetland Research Park, The Ohio State University, Columbus, OH

Dr. William Moomaw, Professor of International Environmental Policy and Director of the Center for International Environment and Resource Policy, The Fletcher School of Law and Diplomacy, Tufts University, Medford, MA

Dr. Arvin Mosier, Visiting Professor, Agricultural and Biological Engineering Department, University of Florida, Mount Pleasant, SC

Dr. Hans Paerl, Professor of Marine and Environmental Sciences, Institute of Marine Sciences, University of North Carolina - Chapel Hill, Morehead City, NC

Dr. Bryan Shaw, Commissioner, Texas Commission on Environmental Quality, Austin, TX

Mr. Paul Stacey, Director, Bureau of Water Management and Land Reuse, Planning and Standards Division, Connecticut Department of Environmental Protection, Hartford, CT

SCIENCE ADVISORY BOARD STAFF

Dr. Angela Nugent, Designated Federal Officer, 1200 Pennsylvania Avenue, NW 1400F, Washington, DC, Phone: 202-343-9981, Fax: 202-233-0643, (nugent.angela@epa.gov)

Attachment B: Federal Register Notice

Science Advisory Board Staff Office; Notification of a Public Teleconference of the Science Advisory Board; Integrated Nitrogen Committee

[PDF Version](#) (2 pp, 74K, [About PDF](#))

[Federal Register: February 10, 2009 (Volume 74, Number 26)]
[Notices]
[Page 6623-6624]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr10fe09-63]

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ENVIRONMENTAL PROTECTION AGENCY
[FRL-8772-2]

Science Advisory Board Staff Office; Notification of a Public
Teleconference of the Science Advisory Board; Integrated Nitrogen Committee

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

SUMMARY: The EPA Science Advisory Board (SAB) Staff Office announces a public teleconference of the SAB Integrated Nitrogen Committee (INC) to discuss the committee's draft report.

DATES: The SAB INC will conduct a public teleconference on March 4, 2009. The call will begin at 1 p.m. and end at 3 p.m. (Eastern Time).

FOR FURTHER INFORMATION CONTACT: Any member of the public wishing to obtain general information concerning the public teleconference may contact Dr. Angela Nugent, Designated Federal Officer (DFO), via telephone at: (202) 343-9981 or e-mail at nugent.angela@epa.gov. General information concerning the EPA Science Advisory Board can be found on the EPA Web Site at <http://www.epa.gov/sab>.

SUPPLEMENTARY INFORMATION: 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. The SAB is a Federal Advisory Committee chartered under the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App. The SAB will comply with the provisions of FACA

and all appropriate SAB Staff Office procedural policies.

Background: The SAB INC is studying the need for integrated research and strategies to reduce reactive nitrogen in the environment. At the global scale, reactive nitrogen from human activities now exceeds that produced by natural terrestrial ecosystems. Reactive nitrogen both benefits and impacts the health and welfare of people and ecosystems. Scientific information suggests that reactive nitrogen is accumulating in the environment and that nitrogen cycling through biogeochemical pathways has a variety of consequences.

Information on the committee's previous meetings was published on January 17, 2007 ([72 FR 1989](#)), March 22, 2007 ([72 FR 3492](#)), August 14, 2007 ([72 FR 4542](#)), November 20, 2007 ([72 FR 65340](#)), March 19, 2008 ([73 FR 4802](#)), and September 23, 2008 ([73 FR 54803-54804](#)). The information is also available on the SAB Web site at http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Nitrogen%20Project.

The purpose of the teleconference is for the SAB INC to discuss the committee's draft report addressing the environmental problems presented by reactive nitrogen and providing recommendations related to an integrated nitrogen management strategy. This report relates to the committee's charge to: (1) Identify and analyze, from a scientific perspective, the problems nitrogen presents in the environment and the links among them; (2) evaluate the contribution an integrated nitrogen management strategy could make to environmental protection; (3) identify additional risk management options for EPA's consideration; and (4) make recommendations to EPA concerning improvements in nitrogen research to support risk reduction.

Availability of Meeting Materials: Agendas and materials in support of the teleconferences will be placed on the SAB Web site at <http://www.epa.gov/sab/> in advance of each teleconference.

Procedures for Providing Public Input: Interested members of the public may submit relevant written or oral information for the SAB to consider during the public teleconference. Oral Statements: In general, individuals or groups requesting an oral presentation at a public SAB teleconference will be limited to three minutes per speaker, with no more than a total of one-half hour for all speakers. To be placed on the public speaker list, interested parties should contact Dr. Angela Nugent, DFO, in writing (preferably via e-mail) five business days in advance of each teleconference. Written Statements: Written statements should be received in the SAB Staff Office five business days in advance of each teleconference above so that the information may be made available to the SAB for their consideration prior to each teleconference. Written statements should be supplied to the DFO in the following formats: One hard copy with original signature, and one electronic copy via e-mail (acceptable file format: Adobe Acrobat PDF, WordPerfect, MS Word, MS PowerPoint, or Rich Text files in IBM-PC/Windows 98/2000/XP format). Submitters are asked to provide versions of each document submitted with and without signatures, because the SAB Staff Office does not publish documents with signatures on its Web sites.

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Accessibility: For information on access or services for individuals with disabilities, please contact Dr. Angela Nugent at (202) 343-9981 or nugent.angela@epa.gov. To request accommodation of a disability, please contact Dr. Nugent preferably at least ten days prior to the teleconferences to give EPA as much time as possible to process your request.

Dated: February 2, 2009.
Anthony Maciorowski,
Deputy Director, EPA Science Advisory Board Staff Office.

Attachment C: Meeting Agenda

**EPA Science Advisory Board
Integrated Nitrogen Committee
Public Teleconference
March 4, 2009, 1:00 p.m. - 3:00 p.m. (Eastern Time)**

Agenda

Purpose: The purpose of the teleconference is to discuss a draft report on an integrated strategy for managing reactive nitrogen.

1:00 – 1:05	Opening of Teleconference	Dr. Angela Nugent, Designated Federal Officer
1:05 – 1:10	Review of Agenda	Dr. James N. Galloway, Chair Dr. Thomas L. Theis, Vice-Chair
1:10 – 1:20	Public comment	To be determined
1:10 – 2:45	Discussion and resolution of committee-identified issues	Committee
2:45– 3:00	Summary and Next Steps	Dr. James N. Galloway, Chair
3:00	Adjourn	

Attachment D: Attendees from the Public Who Requested Call-in Information

Members of public requesting information about or participating in the March 5, 2008 call

Dawn S. Chianese,
ENVIRON

N. N. Dharmarajan
American Electric Power

Justine Harrison, P.E.
ENVIRON International Corporation

Richard Hegg,
USDA-CSREES

Charles Kovach
Florida Department of Environmental Protection, SW District

John J. Jansen
Southern Company

Lucinda Minton Langworthy
Hunton & Williams LLP

Michelle R. Perez
Environmental Working Group

Kate Winston
Inside EPA

EPA

Anne W. Rea,
Office of Air Quality Planning and Standards

Tracy L. Rouleau
Office of Water

Rosaura Vega
Office of Wastewater Management