

**U.S. Environmental Protection Agency  
Clean Air Scientific Advisory Committee (CASAC)  
CASAC Ambient Air Monitoring & Methods (AAMM) Subcommittee**

**Summary Meeting Minutes of the CASAC's Public Advisory Meeting**

**Wednesday, December 15, 2004 – 9:00 a.m. to 4:00 p.m. Eastern Time**

**SAB Conference Center, 1025 F Street, N.W., Suite 3700, Washington, DC 20004**

**Advisory Meeting on the Implementation Aspects of  
EPA's Final Draft National Ambient Air Monitoring Strategy (NAAMS)**

Panel Members: See CASAC AAMM Subcommittee Roster – Appendix A

Agenda: See Meeting Agenda – Appendix B

Purpose: The purpose of this public advisory meeting was for the CASAC Ambient Air Monitoring & Methods (AAMM) Subcommittee to provide advice and recommendations on the implementation aspects of the Agency's National Ambient Air Monitoring Strategy (NAAMS).

Attendees:

Chairs:	Dr. Philip Hopke
AAMMS Members:	Mr. George Allen Dr. Judith Chow Mr. Bart Croes Dr. Kenneth Demerjian Dr. Delbert Eatough Mr. Eric Edgerton Mr. Henry (Dirk) Felton Dr. Rudolf Husar Dr. Kazuhiko Ito Dr. Donna Kenski Dr. Thomas Lumley Dr. Peter McMurry Mr. Richard Poirot Dr. Armistead (Ted) Russell Dr. Jay Turner Dr. Warren H. White Dr. Yousheng Zeng
EPA SAB Staff:	Mr. Fred Butterfield, CASAC Designated Federal Officer (DFO) Dr. Vanessa Vu, Director, SAB Staff Office
Other EPA Staff:	Mr. Tim Hanley, OAR, OAQPS Mr. Phil Lorang, OAR, OAQPS

Other EPA Staff (cont.):	Dr. Richard Scheffe, OAR, OAQPS Mr. Van Shrieves, EPA Region 4 Mr. Jake Summers, OAR, OAQPS
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### Meeting Summary

The discussion followed the issues and general timing as presented in the meeting agenda (Appendix B).

## **WEDNESDAY, DECEMBER 15, 2004**

### Convene Meeting, Call Attendance, Introduction and Administration

Mr. Fred Butterfield, Designated Federal Officer (DFO) for the Clean Air Scientific Advisory Committee, opened the meeting, called attendance, and welcomed all attendees. He noted the CASAC is a Federal Advisory Committee chartered under the Federal Advisory Committee Act (FACA) to provide advice and recommendations to the EPA Administrator, and that the Ambient Air Monitoring & Methods (AAMM) Subcommittee is a standing subcommittee of the Committee that provides its formal advice and recommendations to the Administrator via the CASAC. Consistent with FACA regulations, the deliberations of CASAC are held as public meetings and teleconferences for which advance notice is given in the *Federal Register*. The DFO is present at all such meetings to assure compliance with FACA requirements. He mentioned that there were one (1) individual who had registered with him in advance to provide oral public comments during today's meeting. Mr. Butterfield said a transcript of this meeting is not being taken. However, summary minutes are being taken (by the DFO) for this meeting. These minutes will be certified by the AAMM Subcommittee Chair and posted on the SAB Web Site (<http://www.epa.gov/sab>) after this meeting. Mr. Butterfield noted that all participating Subcommittee members had submitted documentation with respect to possible financial conflicts-of-interest or appearances of a lack of impartiality, which was reviewed by the SAB staff prior to the meeting and found to be satisfactory.

Dr. Vanessa Vu, Director, SAB Staff Office, also welcomed and thanked the members of the CASAC AAMM Subcommittee for taking part in this advisory activity. She also thanked the managers and staff from the EPA's Office of Air Quality Planning and Standards (OAQPS), within the Agency's Office of Air and Radiation (OAR).

### Purpose of Meeting and Welcome

Dr. Philip Hopke, CASAC AAMM Subcommittee Chair, welcomed Subcommittee members and briefly stated the purpose of the meeting, which is to provide advice and recommendations on the implementation aspects of the Agency's National Ambient Air Monitoring Strategy (NAAMS).

### Presentations by EPA's Office of Air Quality Planning and Standards Concerning NAAMS Implementation Issues

Dr. Richard Scheffe and Mr. Tim Hanley of OAQPS gave overview presentations to the AAMM Subcommittee entitled, "Ambient Air Monitoring: Implementation of the National Ambient Air Monitoring Strategy" and "National Ambient Air Monitoring Strategy – Implementation Update," respectively. Subcommittee members engaged Dr. Scheffe and Mr. Hanley with questions and answers during and after these summary presentations. (Hard-copies of these two OAQPS presentations are located in the FACA file for this meeting.)

This was followed by a presentation by Mr. Jake Summers of OAQPS' Information Transfer Division entitled, "Plans for Enhanced Data Access: The Evolution of AQS" (concerning the Agency's Air Quality System database). Subcommittee members also asked Mr. Summers questions during and after his presentation. (A hard-copy of the OAQPS presentation is also located in the FACA file for this meeting.)

### Public Comment Period

Mr. Butterfield, CASAC DFO, facilitated the formal public comment period. There was one (1) individual who presented oral public comments: Mr. Robert Connery of Holland & Hart LLP, speaking on behalf of the National Cattlemen's Beef Association (NCBA). AAMM Subcommittee members were permitted to ask follow-up questions after the public speaker had finished delivering his public statement. (A hard-copy of Mr. Connery's public comments is located in the FACA file for this meeting.)

### Summary of CASAC AAMM Subcommittee Members' Discussions and Deliberations Concerning NAAMS Implementation Issues

In general, AAMM Subcommittee members were of the opinion that the Agency's ambient air quality monitoring program is beginning to implement the changes necessary to bring it in line with the NAAMS strategy document — noting that certain scientific issues will need to be addressed as progress is made in reconfiguring the network and as new knowledge with respect to monitoring, modeling, and effects becomes available. Dr. Philip Hopke, CASAC AAMM Subcommittee Chair, led the Subcommittee through a discussion of the four (4) associated charge questions from Agency staff concerning implementation aspects of the Agency's NAAMS. (The background for this review and the charge questions for this advisory activity are found in the November 19, 2004 memo from Dr. Richard Scheffe of OAQPS that is attached as Appendix C.)

Some of the significant points that members of the Subcommittee raised during their discussion of these charge questions are as follows:

1. *Given limited budgetary resources, does this represent both an appropriate and adequate balance, as reflected by the relative resource allocations provided in Section 11, "Draft Implementation Plan," of the Final Draft NAAMS Document? In addition, are the relative adjustments in the training and guidance approaches proposed in the draft implementation plan consistent with the overall objectives of the National Ambient Air Monitoring Strategy?*

- One AAMM Subcommittee member commented that his primary concern is the lack of a specific plan to fund Level I sites, which would enable continued testing of instrumentation developed with funding from the EPA Supersites program. He noted that, while several such systems are now commercially available, these technologies have not yet grown to maturity. However, the funding of Level I sites will play an enormous role toward ensuring that, within the next decade, instruments that can routinely and automatically measure the composition of atmospheric aerosols will be available. This member added that State and local agencies prefer to use instruments that operate continuously rather than filter samplers, which are more expensive to operate and provide less useful data; Level I sites will provide platforms for evaluating the performance of such instruments.
- Another Subcommittee member recommended that U.S. EPA drop the Photochemical Assessment Monitoring Stations (PAMS) VOC monitoring requirements entirely, as the vast amounts of data collected each summer do not appear to have a client. He noted that this would save at least \$10 million that can be devoted to data analysis and interpretation, baseline funding of the Level 1 sites, enhancement of the Level 2 sites, and environmental justice-oriented monitoring. With respect to the latter issue, this member added that, for screening purposes, low-cost, easy-to-use monitoring technologies should be developed and deployed to assess near-source exposures in low-income communities and communities of color.
- Another member of the Subcommittee acknowledged that there has been significant criticism of the PAMS monitoring network, specifically directed at the lack of data analysis and critical assessment of the utility of these data. He added that he fully supports the intent to divert funds a portion PAMS operational funds to support further data analysis activities, but also suggested that EPA review its past performance as to how it has expended such data analyses funds and the overall effectiveness of those activities. This member also noted that the lack of easily access data dissemination has limited participation and use of these data and stifled innovations in analyses and interpretation.
- It was noted by another Subcommittee member that an important consideration is the allocation of resources for data analysis as an integral part of the network as opposed to end uses of the data as an afterthoughts, adding that planning for an initial set of data analyses is an essential part of the design process. AAMM Subcommittee members also made suggestions that more effort needed to be placed on time-resolved measurements, since long-term integrated measurements lose critical information. One member noted in particular that it is generally better to get *more* detailed time-resolved information for *shorter* time intervals than to have long time interval integrated measurements — adding that, with careful design and appropriate statistical methods, these episodic measurements can still lead to adequate descriptions of annual averages and trends.

2. *Does the Subcommittee have additional suggestions for addressing this need for integration and communication to the broader community of “users,” including scientific researchers (i.e., human health, atmospheric, ecological) and State, local and Tribal (SLT) Agency representatives? More specifically, what is the most effective manner for EPA both to reach-*

*out to this broad user community and, where appropriate, to incorporate their feedback and design input on such issues as monitoring site locations and parameters?*

- AAMM Subcommittee members expressed that that the single most effective way for the Agency to reach out to potential users of its data is to make these data easily accessible via the Internet. To this end, Subcommittee members were encouraged by OAQPS staff's presentation on current plans for Web access, adding that another issue needed to be addressed is computer-to-computer access. One Subcommittee member commented on what he termed the "semi-opaqueness" of the NAAMS process, adding that the most effect way to improve this is by making the system more open and by closing communication feedback loops.
- Another Subcommittee member noted that it would be advantageous for the various monitoring agencies, health agencies and research groups to meet regularly to discuss instrument selection and limitations, data comparability, multi-media pollutants public awareness and other issues. This member also suggested that, additionally, there should be a "meaningful" annual review of each state's ambient air monitoring network — with OAQPS' involvement.
- Still another member of the Subcommittee commented that, as a long-term solution, the Agency should promote data analysis for Level 1, Level 2 and PAMS sites and subsequent publication of the results in peer-reviewed journals. This member also suggested that it might also be worthwhile to hold a panel discussion at annual regional (that is State, local, and Tribal) monitoring workshops, in order to get broader input into network modifications and data use. In particular, these may be an appropriate means to bring the ecological community into the discussions. Panels such as these should include recognized experts in the relevant monitoring and analytical fields who could discuss future monitoring needs and opportunities. He added that, in the near-term, all data users should be alerted to the National Core Monitoring Network (NCore) strategy and impending changes, and encouraged to provide feedback.
- It is not clear that additional efforts are needed to get the health community involved — other than of course making the monitoring data readily-accessible. However, any changes to the network may affect the ability of epidemiologists to use the data, and therefore there needs to be effective communication with this community in particular that will permit the Agency to understand the potential impacts of any changes that are planned for the network.

3. *One of the remaining technical issues relates to harmonizing rural- and urban-based PM<sub>2.5</sub> chemical speciation networks such that both categories of networks utilize consistent sampling and analysis protocols. For example, EPA is considering converting all of the Speciation Trends Network (STN) speciation sites to Interagency Monitoring of Protected Visual Environments (IMPROVE) samplers and IMPROVE laboratory and sample handling protocols. What are strengths and weaknesses of this approach?*

- AAMM Subcommittee members noted that there are existing problems with respect to the "harmonization" of data from IMPROVE and STN that need to be addressed, particularly between the urban and rural networks. To this end, one member offered three specific suggestions: (1) to harmonize X-Ray Fluorescence (XRF); (2) for STN

to convert to the IMPROVE organic and elemental carbon fraction (OC/EC) protocol; and (3) to change from the existing 27 mm sampler to the IMPROVE 47 mm sampler. — in short, addressing the key question is whether or not to change the STN sites to the IMPROVE protocol at this time. This member added that, if these 54 STN sites are fully converted to IMPROVE, it will guarantee the comparability of the data and thus, permit the comprehensive use of the compositional data obtained in the future.

- In response to this suggestion, another AAMM Subcommittee member remarked that this might cause problems with regard to the data quality objectives (DQOs), since the two networks (*i.e.*, STN and IMPROVE) are “vastly different.” Still another member commented that he was “not yet comfortable” with the Subcommittee weighing-in on these issues in a consensus manner without certain caveats and/or questions being asked. It was also noted that it is unclear at present if there is sufficient capacity at the University of California, Davis to handle these additional sites.
- In any case, the AAMM Subcommittee recommends that, to achieve fully comparable data, it will require that all of the samples be collected in an identical manner with identical samplers. These samples would then be analyzed by a single laboratory for any given chemical constituent with a single approach to error estimation, data validation, *etc.*

4. *As EPA implements the National Ambient Air Monitoring Strategy to address multiple monitoring objectives, it will be looking to spatially optimize the ambient monitoring networks. Is it scientifically acceptable to generate air quality surfaces through modeled observations and/or integrated predictive/observational fields that would be of appropriate uncertainty for use in the regulatory decision-making process?*

- Members of the AAMM Subcommittee briefly commented that the generation of surfaces of air quality parameters needs to occur through a combination of measurements and model simulations, adding that both measurements and model results have uncertainties associated with them: measurements are made at specific locations and represent a limited geographical area; while models average results over the minimum size of the grid cell and cannot fully reproduce the local environment.
- One Subcommittee member commented that air quality surfaces generated based on a network of well placed monitors are not only scientifically acceptable, they are better than using observed data from individual monitors to represent the air quality of the geographic area in which the monitors are located. However, another member noted that, given that both satisfy the relevant data quality objectives, he didn't see any scientifically meaningful difference between modeled and measured data.
- Accordingly, it was the emerging consensus of the Subcommittee that the use of integrated predictive/observational fields is the preferred approach, as this approach will help tackle the issues associated with: (1) needing to extend an observation (or sets of observations) both spatially and temporally, as necessary; (2) the process of source apportionment; (3) identifying uncertainties in the representativeness of the observations at a monitoring location; and (4) producing the type of information that can be used by scientific researchers and State, local and Tribal (SLT) agency representatives.

- Subcommittee members remarked that there should be a feedback loop where the information provided by the “integrated system” — that is, both *in situ* and remote (for example, satellite) monitoring coupled with PM modeling and data assimilation — would be able to be assessed in terms of the data-field quality. This should also include fields of the uncertainties in the integrated daily PM levels and, at least, in the annual source apportionments.

Summary, Wrap-up, Next Steps and Closing Remarks

The Chair thanked all members of the AAMM Subcommittee for their participation in this meeting. He asked that all Subcommittee members provide their initial or revised individual written comments concerning the implementation aspects of the NAAMS to him (with a copy to Mr. Butterfield, as the DFO) via e-mail (in MS Word or Adobe PDF file formats) as soon as practicable, but by no later than close of business next Monday, December 20.

The Chair and the DFO will work to develop an initial draft letter for the Subcommittee’s review and concurrence comments by early January 2005. Once all Subcommittee members have concurred on the draft report from this meeting, this letter will be posted on the SAB Web site for public review in preparation for the public advisory teleconference of the statutory CASAC (as the “parent” Federal advisory committee under FACA) to review and approve the draft letter to the Administrator from this Subcommittee’s advisory activity. That teleconference meeting will likely be scheduled to take place in early- to mid-March 2005.

Mr. Butterfield, DFO, also thanked all Subcommittee members and Agency staff for their participation in this two-day meeting, following which he adjourned the meeting at approximately 4:00 p.m. on December 15, 2004.

Respectfully Submitted:

Certified as True:

/s/

/s/

*Fred A. Butterfield, III*

*Philip Hopke, Ph.D.*

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Fred A. Butterfield, III  
CASAC DFO

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Philip Hopke, Ph.D., Chair  
CASAC AAMM Subcommittee Chair

NOTE AND DISCLAIMER: The minutes of this public advisory meeting reflect diverse ideas and suggestions offered by CASAC AAMM Subcommittee members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the members of this panel. The reader is cautioned to not rely on the minutes represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

## Appendix A – Roster of the CASAC AAMM Subcommittee

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**U.S. Environmental Protection Agency  
Science Advisory Board (SAB) Staff Office  
Clean Air Scientific Advisory Committee  
CASAC Ambient Air Monitoring and Methods (AAMM) Subcommittee\***

### **CHAIR**

**Dr. Philip Hopke**, Bayard D. Clarkson Distinguished Professor, Department of Chemical Engineering, Clarkson University, Potsdam, NY  
Also Member: SAB Board

### **CASAC MEMBERS**

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

**Mr. Richard L. Poirot**, Environmental Analyst, Air Pollution Control Division, Department of Environmental Conservation, Vermont Agency of Natural Resources, Waterbury, VT

### **SUBCOMMITTEE MEMBERS**

**Mr. George Allen**, Senior Scientist, Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA

**Dr. Judith Chow**, Research Professor, Desert Research Institute, Air Resources Laboratory, University of Nevada, Reno, NV

**Mr. Bart Croes**, Chief, Research Division, California Air Resources Board, Sacramento, CA

**Dr. Kenneth Demerjian**, Professor and Director, Atmospheric Sciences Research Center, State University of New York, Albany, NY

**Dr. Delbert Eatough**, Professor of Chemistry, Chemistry and Biochemistry Department, Brigham Young University, Provo, UT

**Mr. Eric Edgerton**, President, Atmospheric Research & Analysis, Inc., Cary, NC

**Mr. Henry (Dirk) Felton**, Research Scientist, Division of Air Resources, Bureau of Air Quality Surveillance, New York State Department of Environmental Conservation, Albany, NY

**Dr. Rudolf Husar**, Professor, Mechanical Engineering, Engineering and Applied Science, Washington University, St. Louis, MO

**Dr. Kazuhiko Ito**, Assistant Professor, Environmental Medicine, School of Medicine, New York University, Tuxedo, NY

**Dr. Donna Kenski**, Data Analyst, Lake Michigan Air Directors Consortium, Des Plaines, IL

**Dr. Thomas Lumley**, Associate Professor, Biostatistics, School of Public Health and Community Medicine, University of Washington, Seattle, WA

**Dr. Peter McMurry**, Professor and Head, Department of Mechanical Engineering, Institute of Technology, University of Minnesota, Minneapolis, MN

**Dr. Kimberly Prather**, Professor, Department of Chemistry and Biochemistry, University of California, San Diego, La Jolla, CA

**Dr. Armistead (Ted) Russell**, Georgia Power Distinguished Professor of Environmental Engineering, Environmental Engineering Group, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

**Dr. Jay Turner**, Associate Professor, Chemical Engineering Department, School of Engineering, Washington University, St. Louis, MO

**Dr. Warren H. White**, Visiting Professor, Crocker Nuclear Laboratory, University of California - Davis, Davis, CA

**Dr. Yousheng Zeng**, Air Quality Services Director, Providence Engineering & Environmental Group LLC, Baton Rouge, LA

#### **SCIENCE ADVISORY BOARD STAFF**

**Mr. Fred Butterfield**, CASAC Designated Federal Officer, 1200 Pennsylvania Avenue, N.W., Washington, DC, 20460, Phone: 202-343-9994, Fax: 202-233-0643 ([butterfield.fred@epa.gov](mailto:butterfield.fred@epa.gov)) (Physical/Courier/FedEx Address: Fred A. Butterfield, III, EPA Science Advisory Board Staff Office (Mail Code 1400F), Woodies Building, 1025 F Street, N.W., Room 3604, Washington, DC 20004, Telephone: 202-343-9994)

\* Members of this CASAC Subcommittee consist of:

a. CASAC Members: Experts appointed to the statutory Clean Air Scientific Advisory Committee by the EPA Administrator; and

b. CASAC Subcommittee Members: Experts appointed by the SAB Staff Director to serve on one of the CASAC's standing subcommittees.

## Appendix B – Meeting Agenda

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U.S. Environmental Protection Agency  
Clean Air Scientific Advisory Committee (CASAC)  
CASAC Ambient Air Monitoring & Methods (AAMM) Subcommittee

Public Meeting & Teleconference  
Wednesday, December 15, 2004 – 9:00 a.m. to 4:00 p.m. Eastern Time

SAB Conference Center, 1025 F Street, N.W., Suite 3700, Washington, DC 20004

### Advisory Meeting on the Implementation Aspects of EPA's Final Draft National Ambient Air Monitoring Strategy (NAAMS)

#### Final Meeting Agenda

#### Wednesday, December 15, 2004

9:00 a.m.	<b>Convene Meeting; Call Attendance; Introductions and Administration</b>	Mr. Fred Butterfield, CASAC DFO
9:10 a.m.	<b>Welcome &amp; Opening Remarks</b>	Dr. Vanessa Vu, SAB Staff Office Director
9:15 a.m.	<b>Purpose of Meeting</b>	Dr. Phil Hopke, CASAC AAMM Subcommittee Chair
9:20 a.m.	<b>Overview Presentation on EPA's Final Draft National Ambient Air Monitoring Strategy (NAAMS) and Implementation Issues; Review Charge Questions</b>	Dr. Rich Scheffe & Mr. Tim Hanley, OAQPS Ambient Air Monitoring Group
10:20 a.m.	<b>Break*</b>	
10:35 a.m.	<b>Plans for enhanced data access: The Evolution of AQS</b>	OAQPS Information Transfer & Program Implementation Division
11:00 a.m.	<b>Public Comment Period</b>	Mr. Butterfield (Moderator)
11:30 a.m.	<b>CASAC AAMM Subcommittee Question-&amp;-Answer Session; Discussion and Deliberations</b>	Dr. Hopke, CASAC AAMM Subcommittee Members
12:00 a.m.	<b>Lunch (SAB Conference Center)</b>	
1:00 pm	<b>CASAC AAMM Subcommittee Discussion and Deliberations (Continued)</b>	Dr. Hopke, CASAC AAMM Subcommittee Members
3:45 pm	<b>Summary, Wrap-Up and Next Steps</b>	Dr. Hopke
4:00 pm	<b>Adjourn Meeting</b>	Mr. Butterfield

\*Note: Periodic breaks will be taken as necessary and at the call of the Chair.

## Appendix C – Agency Charge to CASAC AAMM Subcommittee

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

November 19, 2004

OFFICE OF THE ADMINISTRATOR  
SCIENCE ADVISORY BOARD

### MEMORANDUM

**SUBJECT:** Proposed Charge Questions for the CASAC's Advisory Meeting on the National Ambient Air Monitoring Strategy (NAAMS) Implementation

**FROM:** Dr. Richard D. Scheffe, Leader /s/ *Richard D. Scheffe*  
Monitoring and Quality Assurance Group  
Office of Air Quality Planning and Standards (C339-02)

**TO:** Mr. Fred Butterfield  
Designated Federal Officer  
Clean Air Scientific Advisory Committee  
EPA Science Advisory Board Staff Office (1400F)

In July 2003, the National Ambient Air Monitoring Strategy (NAAMS) Subcommittee of the Clean Air Scientific Advisory Committee (CASAC) held a public meeting to review the Agency's draft Strategy document. EPA's Office of Air Quality Planning and Standards (OAQPS) updated the NAAMS document after the CASAC's review of the Strategy. The revision incorporated EPA's responses to the Subcommittee's recommendations.

OAQPS has requested that the Ambient Air Monitoring and Methods (AAMM) Subcommittee of the Clean Air Scientific Advisory Committee (CASAC) conduct an *advisory meeting* to provide additional advice and recommendations on implementation aspects of the Agency's Final Draft NAAMS document. Our understanding is that the CASAC AAMM Subcommittee will conduct this advisory in a public meeting on December 15, 2004, to be held in the offices of the EPA Science Advisory Board (SAB) Staff Office in Washington, D.C. This memorandum transmits the written review, supplementary and background materials, as well as the tentative charge questions, to the CASAC AAMM Subcommittee for this advisory meeting.

**Background.** The draft National Ambient Air Monitoring Strategy (NAAMS or Strategy) was revised after the Agency's prior consultation with the former CASAC National Ambient Air Monitoring Strategy (NAAMS) Subcommittee in July 2003. This revision incorporates EPA's responses to that Subcommittee's recommendations. The primary recommendations from the NAAMS Subcommittee included a request for an implementation plan, and added emphasis on rural- and ecosystem-oriented monitoring, support for the National Core Monitoring Network (NCore) Level 1 program, and training and quality assurance to enhance data consistency across the Nation.

The Strategy foresees moving resources from programs of decreasing value to those of a higher value which respects the partnership across EPA, State, local, and Tribal (SLT) agencies retaining stability for the monitoring programs and allowing SLT flexibility. The transition to the NCore network creates a need for training that addresses new methods, information transfer technologies, and an effective quality assurance program. There are programmatic and technical areas where some type of training or a transfer of information is required. These training needs will be offered by various mechanisms, *e.g.*, satellite broadcasts and videos; hands-on sessions; guidance documents; vendor training of instrumentation; web-based training; and workshops. Broadening the Agency's outreach to the health effects, atmospheric scientists and ecosystem assessment communities are included.

The implementation plan incorporates action-oriented components of the Strategy, *e.g.*, regulation revisions, training, funding, and outreach approaches to facilitate the implementation of the NCore program. The revised monitoring regulations will provide a legal basis for moving forward and will also alleviate some of the unnecessary burdens faced by monitoring agencies and enhance the ability to introduce new technologies into our networks. Additionally, the regulations introduce the NCore system of: multiple-tiered monitoring stations; adjustment of minimum requirements for specific pollutant measurements; new methods performance specifications; periodic network assessments; and new quality assurance procedures.

**Written Meeting Materials.** OAQPS has posted written review and background materials for this Subcommittee meeting on EPA's Ambient Monitoring Technology Information Center (AMTIC) Web site. The Final Draft NAAMS document, which was updated following the July 2003 meeting of the former CASAC NAAMS Subcommittee, is posted at the following URL: <http://www.epa.gov/ttn/amtic/files/ambient/monitorstrat/allstrat.pdf>. Additional background materials for this meeting are found on the "CASAC File Area" page of the AMTIC Web site at URL: <http://www.epa.gov/ttn/amtic/casacinf.html>. Furthermore, it is our understanding that the SAB Staff Office will post a copy of the final agenda and charge to the Subcommittee for this advisory meeting on the SAB Web site at: <http://www.epa.gov/sab> (under "Meeting Agendas") and the Subcommittee's page at: [http://www.epa.gov/sab/panels/casac\\_aamm\\_subcom.html](http://www.epa.gov/sab/panels/casac_aamm_subcom.html), respectively, in advance of the Subcommittee's meeting.

We very much appreciate the efforts of the Subcommittee to prepare for the upcoming meeting. Our team is looking forward to discussing the progress being made on various elements of this project during the Subcommittee's advisory meeting on December 15. In the interim, please di-

CASAC AAMM Subcommittee Meeting, December 15, 2004

rect any general questions regarding the attached materials to me, Dr. Rich Scheffe, at phone: 919-541-4650, or via e-mail at: [scheffe.rich@epa.gov](mailto:scheffe.rich@epa.gov); or to Mr. Tim Hanley, OAQPS, at phone: (919) 541-4417; or e-mail: [hanley.tim@epa.gov](mailto:hanley.tim@epa.gov). Thank you.

Attachment

cc: John Bachmann, OAQPS/OD  
Fred Dimmick, OAQPS/EMAD  
Tim Hanley, OAQPS/EMAD  
Karen Martin, OAQPS/AQSSD  
Bill Lamason, OAQPS/EMAD  
Peter Tsirigotis, OAQPS/EMAD  
James Hemby, OAQPS/EMAD  
Kevin Cavender, OAQPS/EMAD  
Joann Rice, OAQPS/EMAD

## **Attachment: Charge to the CASAC AAMM Subcommittee**

For this advisory meeting, OAQPS is requesting that the CASAC AAMM Subcommittee provide expert advice and recommendations on the following charge questions, which focus on key implementation issues:

1. The CASAC has expressed its support for the Agency’s proposal to redesign the routine PM monitoring network to support PM precursor gas measurements (CO, SO<sub>2</sub>, NO/NO<sub>y</sub>, NH<sub>3</sub>, HNO<sub>3</sub>) at NCore Level II multiple-pollutant sites, and for air quality management decisions and to obtain relevant exposure data for research programs.

Questions: Given limited budgetary resources, does this represent both an appropriate and adequate balance, as reflected by the relative resource allocations provided in Section 11, “Draft Implementation Plan,” of the Final Draft NAAMS Document? In addition, are the relative adjustments in the training and guidance approaches proposed in the draft implementation plan consistent with the overall objectives of the Strategy?

2. The implementation plan proposes a series of communication actions to advance the NCore Level 2 network, in order to more directly support long-term health effects research and provide better support to ecosystem assessments through an increased level of coordination.

Questions: Does the Subcommittee have additional suggestions for addressing this need for integration and communication to the broader community of “users,” including scientific researchers (*i.e.*, human health, atmospheric, ecological) and State, local and Tribal (SLT) Agency representatives? More specifically, what is the most effective manner for EPA both to reach-out to this broad user community and, where appropriate, to incorporate their feedback and design input on such issues as monitoring site locations and parameters?

3. One of the remaining technical issues relates to harmonizing rural- and urban-based PM<sub>2.5</sub> chemical speciation networks such that both categories of networks utilize consistent sampling and analysis protocols. For example, EPA is considering converting all of the Speciation Trends Network (STN) speciation sites to Interagency Monitoring of Protected Visual Environments (IMPROVE) samplers and IMPROVE laboratory and sample handling protocols.

Question: What are strengths and weaknesses of this approach?

4. As EPA implements the National Ambient Air Monitoring Strategy to address multiple monitoring objectives, it will be looking to spatially *optimize* the ambient monitoring networks. This may mean that some redundant monitors in adjacent, but separate, geopolitical areas (*e.g.*, neighboring counties) are “divested” from a given network. Although technically sound, these divestments could result in data gaps which might, in turn, adversely impact regulatory decision-making. The Agency is willing to adopt alternative approaches for assessing regulatory issues such as non-attainment designations, so long as such approaches are scientifically justifiable; hence, the rationale for initiating discussion of these issues with the CASAC.

Question: Is it scientifically acceptable to generate air quality surfaces through *modeled* observations and/or *integrated predictive/observational* fields that would be of appropriate uncertainty for use in the regulatory decision-making process?