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

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*
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**TO:** 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, 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 direct 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; or to Mr. Tim Hanley, OAQPS, at phone: (919) 541-4417; or e-mail: 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, $SO_2$, NO/NOy, $NH_3$, $HNO_3$) 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 $PM_{2.5}$ 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?