UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

JUN 15 2008

MEMORANDUM

SUBJECT: CASAC Peer Review and Consultation on Monitoring Issues for Lead National Ambient Air Quality Standard (NAAQS)

FROM: Lewis Weinstock
Acting Group Leader
Ambient Air Monitoring Group
Office of Air Quality Planning and Standards (C304-06)

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

Attached are materials for review by the Clean Air Scientific Advisory Committee's (CASAC) Ambient Air Monitoring and Methods (AAMM) Subcommittee. These materials will be the subjects of a peer review and consultation by the AAMM Subcommittee, scheduled for a teleconference to be held on July 14, 2008. I am requesting that you forward these materials to the AAMM Subcommittee to prepare for the peer review and consultation.

This project, entitled *Lead (Pb) National Ambient Air Quality Standards (NAAQS) Review: Monitoring Issues*, has been requested by EPA's Office of Air Quality Planning and Standards (OAQPS), within EPA's Office of Air and Radiation, in anticipation of potential revisions to the Pb NAAQS. The peer review will cover the proposed Federal Reference Method (FRM) for the measurement of Pb in particulate mater less than 10 micrometers in diameter (Pb-PM_{10}). The consultation will cover the need and approach for development of a low-volume Pb in total suspended particulate (Pb-TSP) method as an FRM or Federal Equivalent Method (FEM). Charge questions associated with both the peer review and the consultation are provided below.

The upcoming consultation will support the EPA by providing scientific advice as the EPA Administrator considers potential revisions to the Pb NAAQS; a notice of final rulemaking is to be signed by September 15, 2008. We are requesting an expedited schedule to assist EPA in meeting the September 15, 2008 deadline for finalizing the Pb NAAQS review.

We appreciate the efforts of you and the Subcommittee to prepare for the upcoming meeting and look forward to discussing this project in detail on July 14, 2008. Questions regarding the enclosed materials should be directed to Mr. Kevin Cavender, EPA-OAQPS

(phone: 919-541-2364; e-mail: cavender.kevin@epa.gov).

Document Associated with Subcommittee's Peer Review:

- **Attachment 1 – *Draft Federal Reference Method (FRM) Lead in PM10 (Pb-PM10)***

  Background and Summary: In order for monitoring data to be used in determination of attainment with the NAAQS, the data must be collected with a FRM or FEM. A number of options under consideration for the Pb NAAQS indicator would require the EPA to develop a FRM and FEM criteria for the measurement of Pb in PM_{10}. The EPA has proposed language for a FRM for Pb-PM_{10} based on the existing FRM sampler for low volume PM_{10c} in Appendix O to Part 50 of the Code of Federal Regulations (CFR) coupled with analysis by x-ray fluorescence (XRF). The attached document includes the proposed regulatory text for the FRM for Pb in PM_{10}.

  Charge Questions:

  What are your comments on the use of the low-volume PM_{10c} FRM sampler as the Pb-PM_{10} FRM sampler?

  What are your comments on the use of XRF as the Pb-PM_{10} FRM analysis method?

  What are your comments on the specific analysis details of the XRF analysis method contained in the proposed Pb-PM_{10} FRM analysis method description?

  Do you think the precision, bias and MDL of the XRF method for the proposed Pb range will be adequate?

  Are there any method interferences that we have not considered?

Document Associated with Subcommittee's Consultation:

- **Attachment 2 – *Options for the Development of a Low Volume Lead in Total Suspended Particulate (Pb-TSP) Sampler***

  Background and Summary: Problems with the current high-volume Pb-TSP sampler have been highlighted as part of the on-going Pb NAAQS review. As part of the NAAQS review, EPA proposed network design requirements that could result in the need for a significant expansion and/or reallocation of Pb monitors. Due to the concerns over the existing high-volume Pb-TSP sampler, EPA requested comments on the need for a FRM or FEM low-volume Pb-TSP sampler. The attached document discusses options for the development of a low-volume Pb-TSP sampler for use in the Pb network.

Charge Questions:

Would a low-volume Pb-TSP sampler be an improvement over the existing high-volume Pb-TSP sampler? What advantages and disadvantages do you see associated with a low-volume Pb-TSP sampler?

What inlet designs would be best suited for a low volume Pb-TSP sampler? What designs are not appropriate for a low-volume Pb-TSP sampler?

What is your preferred approach for the development of a low-volume Pb-TSP sampler, and why?

If the EPA were to develop a low-volume Pb-TSP FRM, how important is it that the sampling capture efficiency be characterized for varying particle sizes?

If the EPA were to develop a low-volume Pb-TSP FRM, should the new FRM replace the existing high-volume Pb-TSP FRM, or should the EPA maintain the existing FRM?

Is it appropriate to accept alternative sampler and inlet designs as FEM?

Are the proposed FEM testing criteria for Pb methods adequate to ensure equivalence of alternative sampler and inlet designs? If not, what additional testing requirements should be considered?

Attachments

cc: Fred Dimmick, OAQPS/NERL
Robert Vanderpool, ORD/NERL
Karen Martin, OAQPS/HEID
Deirdre Murphy, OAQPS/HEID
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