

**CASAC AAMM Subcommittee Review of  
Ambient Air Lead Monitoring Method - Peer Review**

Comments by AAMM Subcommittee Member Yousheng Zeng

***Charge Question 1: What are your comments on the use of the low-volume PM<sub>10c</sub> FRM sampler as the Pb-PM<sub>10</sub> FRM sampler?***

I support the EPA proposal to use the low-volume PM<sub>10c</sub> FRM sampler as the Pb-PM<sub>10</sub> FRM sampler. The PM<sub>10c</sub> FRM sampler is better defined and better understood than the earlier PM<sub>10</sub> sampler. This method will also provide consistency with PM<sub>10</sub> and PM<sub>2.5</sub> monitoring network; data comparability for evaluation of Pb-PM<sub>10</sub> and PM<sub>10</sub> inhalation pathway; and monitoring operation efficiency (same samplers for both PM<sub>10</sub> and Pb-PM<sub>10</sub>).

However, I share the same concern with some committee members. With this method, the monitoring results will be naturally lower because PM<sub>10</sub> samples, not TSP samples, will be collected for Pb analysis. If the revised Pb NAAQS is not set low enough to account for the absence of Pb associated with particles larger than 10 μ, the new Pb NAAQS may not provide additional protection to human health.

***Charge Question 2: What are your comments on the use of XRF as the Pb-PM<sub>10</sub> FRM analysis method?***

I support the approach proposed by Mr. Dirk Felton to use ICPMS (or AA as he mentioned during previous consultation meeting) as FRM for sample analysis and use XRF as FEM. A similar approach has worked well for SO<sub>2</sub> where a manual method is the reference method and instrumental methods are FEM and widely used in day-to-day monitoring operations.

***Charge Question 3: What are your comments on the specific analysis details of the XRF analysis method contained in the proposed Pb-PM<sub>10</sub> FRM analysis method description?***

I don't have comments on this issue.

***Charge Question 4: Do you think the precision, bias, and MDL of the XRF method for the proposed Pb range will be adequate?***

At this point, we really don't know what will be the final Pb NAAQS. It appears that the proposed analysis method (either XRF or ICPMS) should be adequate to produce needed monitoring data. However, it is highly recommended to use the Data Quality Objective (DQO) model that EAP used for evaluation of Pmc in 2004. During the public conference call on July 14<sup>th</sup>, 2008, EPA indicated that EPA was working on a DQO model for Pb. It would be most desirable to use the DQO model to help finalize these parameters (precision, bias, and MDL).

***Charge Question 5: Are there any method interferences that we have not considered?***

I don't have comments on this issue.