

**QA Strategy Workgroup Conference Call Notes**  
**Thursday 07/16/03**

**Attendees**

Donovan Rafferty	Michael Papp
Richard Heffern	Gordon Jones
Keith Duncan	Basil Coutant
Shelley Eberly	John Glass
Leonard Marine	Andy Johnson
Jeff Wasson	Michael Miguel
Melinda Ronca-Battista	Susan Kilmer
Bill Puckett	Terry Rowles
Mark Shanis	Patricia Malero
Anna Kelly	Kuenja Chung
Rachael Townsend	

There may have been individuals who called in after the call got started. If I missed your name, please e-mail me and I'll add it to the attendee list. ***Action items listed in bold italics***

The goals of this meeting was primarily to discuss the document entitled "*Proposal: A New Method for Estimating Precision and Bias for Gaseous Automated Methods for the Ambient Air Monitoring Program.*"

**Precision and Bias Statistics**

OAQPS is recommending developing the precision and bias measurement quality objectives on confidence intervals at the site level of data aggregation. Since the criteria pollutant data are used for very important decisions (comparison to the NAAQS) it is felt that providing precision and bias estimates at upper confidence limits provides a higher probability of making appropriate decisions. This statistic provides a conservative approach to measuring precision and bias. The intent of this is to move organizations to a "performance based" quality system; allowing organizations that show tight acceptable results the flexibility in reducing the frequency of certain QC checks and the ability to focus their quality system resources where it will do the most good.

Estimates of both bias and precision will be derived from the bi-weekly "precision" checks. Since every site performs the precision checks at an acceptable frequency we have enough information to assess and control data quality at this level.

A focus group made up of OAQPS, EPA Regions and monitoring organizations reviewed three statistical estimates of ozone precision and bias by means of a number of data models and real concentration data from AQS. The focus group recommended using an absolute bias confidence interval and the signed CV confidence interval as the statistic for setting the acceptable measurement quality objectives for the data quality indicators of precision and bias.

Shelly Eberly provided a concise review of the activities that took place during the focus group discussions and referred to information provided in the proposal. In addition, we reviewed the

precision and bias data from the 4 gaseous pollutants which show that for 95% of the 3-year precision and bias estimates for all 4 pollutants are below 8.5%

The next stage of the process would be to identify the appropriate precision and bias measurement quality objectives that will satisfy the data quality objectives (DQOs) for the 4 gaseous pollutants. OAQPS has completed the ozone DQOs and plans on distributing this to the QA Strategy Workgroup by 7/18/03. It is anticipated precision and bias MQOs would be somewhere between 5-10%. Upon acceptance of these MQOs, the QA Strategy Workgroup could then complete the Validation Templates and include the new requirements in CFR.

**Discussion:**

There were some minor editorial and clarifying comments made about the proposal but it appeared the document was written in a manner that was comprehensible.

No participant on the call expressed concern about moving to the new statistical approach. We had a few positive comments about moving forward with the approach because we are providing a rationale for the quality of data needed for the program since one can see how bias and imprecision effect decision errors.

There was a comment that once these MQOs are expressed in CFR does this open the door for someone to invalidate a site that may not meet the gray zones or the MQOs. OAQPS has been adamant that this should not be the case since the gray zone express probabilities, not fact. In addition since the DQOs and MQOs are related to 2-3 years of data, if we can perform local and national data evaluation at appropriate frequencies we should be able to control the data to meet our DQOs.