TNI Stationary Source Audit Sample Expert Committee Teleconference
May 23, 2011

Attendance:

Maria Friedman, Chair	Committee member	present
Mike Hayes	Committee member	present
Michael Klein	Committee member	present
Gregg O'Neal	Committee member	present
Michael Schapira	Committee member	present
Jim Serne	Committee member	absent
Richard Swartz, Vice-chair	Committee member	present
Stanley Tong	Committee member	present
Ken Jackson	Program Administrator	present
Ty Garber	Associate member	absent
Shawn Kassner	Associate member	present
Mike Miller	Associate member	present
William Mills	Associate member	absent
William Daystrom	Guest	present
Paul Meeter	Guest	present

1) Double-check receipt of documents to be referenced in this teleconference

Maria asked the committee to confirm receipt of the documents e-mailed May 20, 2011, and the string of e-mails forwarded on May 20, 2011. All confirmed receipt.

2) Review and approve minutes from teleconference on May 16, 2011

It was noted that Shawn had corrected the typographical error for Mn in the 04-28-2010 subcommittee minutes, and it had been posted on the website. Also, the action item (Shawn's e-mail to Candace at EPA regarding Method 25) was complete. Richard moved to accept the minutes, and Gregg seconded the motion. All 7 Committee members present voted in favor.

3) Chair Update

Maria reported that EPA has accepted the modified standard and has approved the program. The SSAS table has not yet been posted. It will be posted when approved by the Committee, but the old table will be posted first if providers are approved before the modified table is ready. Maria will request TNI to e-mail prospective providers and will invite A2LA and ACLASS as provider accreditors. The accreditors will be asked to hold providers to the old SSAS table for now, but to make sure they can accommodate future changes in the table.

Applications for committee membership for Theresa and Paul are awaited from TNI, and William will check the progress. When the applications are received, Maria will send them out to the Committee members for vote, then to the TNI Board. Both new members would represent Stationary Source Testers.

4) Continue discussions re. SSAS Table

The Committee continued to work through the latest version of the table; found on the website at http://nelac-institute.org/ssas/table/prop2011.php. This was listed as "Proposed SSAS Table" and with an effective date of August 1, 2011.

Method 29 (Metals in Impinger Solutions).

Maria questioned the data for As. The subcommittee minutes of 5/12/2010 indicated two different concentration ranges, but only one appears in the table. It was pointed out that all data points were within the +/- 25% acceptance limits, so the subcommittee had agreed the range 0.2 – 20 ppm was appropriate.

The Committee members approved unanimously all metals listed under Method 29, Hg by Methods 29 and 101A, and Pb by method 12.

Method 25.

As noted in the minutes of the May 16, 2011 conference call, Shawn had e-mailed Candace at EPA, noting that the subcommittee had observed the historical data indicating that at concentrations below 150 ppm C there is a great deal of variability to the data. Although Method 25 states that the lower end of the concentration for the method is 50 ppm C, the sub-committee feels that the historical data do not support this level for audit samples. He attached the data analysis the sub-committee completed for Candace's review. He also stated that the subcommittee feels that the current acceptance criterion of +/- 20% produces a failure rate of over 41%, which the subcommittee feels is too high. He attached a failure rate comparison for her review. Shawn asked: (i) if EPA could provide more information or analytical data as to how the lower end of 50 ppm C was determined for Method 25; and (ii) whether EPA has an opinion regarding widening of the acceptance criteria and raising of the lower concentration range for the audit samples based on the statistical analyses the sub-committee completed.

Michael Klein also e-mailed Candace, stating his argument that if the method says you can quantify accurately to 50 ppm C (hence Shawn's request for EPA documentation), then audits need to be available down to 50 ppm C. He further argued that since these audits are unique in that they audit both the tester and the laboratory, the statistical analysis does not portray the situation as cleanly as for the other audits. Laboratories probably could pass audits more frequently than they have if there were not issues with the samplers. One idea floated was to have two audits for Method 25, one that is sampled and one that is analyzed directly, but this idea hasn't been fully thought out. He argued that tests in NJ do a better job of passing audits since they provide oversight of all of the Method 25 tests, but he did concede that Shawn's data show they also have some trouble at the lower end (again a reason to ask for EPA documentation) but he has not looked into whether a particular tester or testers could be the reason for the troubles at the lower end in NJ. Michael added that audits are supposed to show you have confidence in the data. If we just loosen the standards to fit the audit results data, he questioned what has been accomplished in terms of quality assurance of the stack test samples. If indeed it is a problem with the method, then fix the method. If it is a problem with the implementation of the method, then the audits are doing what they were intended to do; i.e., flag questionable data. Hopefully, EPA has data to support that when the method is done properly, samples and audits can reliably be analyzed down to

the current minimum reliable detection level, or maybe this level needs to be raised until the method can be improved.

Candace responded that EPA suspected the criteria for Method 25 may be a little tight but never did a detailed statistical analysis. The EPA final rule gives the criteria for setting the acceptance limit based on historical data. The new TNI standard allows the use of EPA's original acceptance criteria of +/- 20% until the program resets the standards based on a review of the first two years of data. The choice is TNI's. As for the 50ppm C limit on Method 25, that is not going to change. Method 25 is one of the more complicated methods to run, and the testers must pay close attention to what they are doing. She said the point of the audit sample is to determine confidence in the test/analytical measurement. If TNI feels that a 150 ppm is the lowest level that they feel with confidence that a competent tester/lab can measure then that is their choice. The rule in no way dictates what concentrations have to be provided. Candace did not agree that tightening acceptance criteria is necessarily a good way to improve measurements. The point is to determine if the tester/lab did a competent job. If the acceptance criteria are set too low then all you are doing is possibly failing tester/labs who did a good job. This is why she thinks it is important to look at historical data to see what is reasonable for a good lab. She agreed that NJ testers typically do much better on the Method 25 audits, and most audits in general, because NJ goes to the test sites and watches what is going on.

Maria then commented that she did not support raising the lower end of the Method 25 concentration range to 150 ppm C. Samples are requested down to 50 ppm C. EPA is not inclined to change that, and it seems the Committee is being asked to raise the number to 150 ppm C only to reduce the number of Method 25 audit samples with unacceptable results. If there are issues with how the method is performed, either on the tester side or in the laboratory, then audit samples are <u>precisely</u> the means we want to use to attempt to identify the problem; and for that, we would want <u>more</u> data at the lower range, not less. As stated in the past, ultimately it is the regulators who will decide which audit sample results are acceptable to them, regardless of the evaluation by the provider. If audit samples are collected at 50 ppm C and there are failures at the existing +/- 20% criteria, the regulators may choose to accept the data regardless, taking into account the known (unresolved) issues surrounding Method 25. Likewise, if the committee changes the acceptance criteria (e.g., use a regression equation) with the net effect that more Method 25 audit samples are evaluated by the providers as acceptable, regulators may impose more stringent requirements and deem such samples as non-acceptable. Maria stated that she realized the above makes an argument for “who cares what the acceptance criteria are, the regulators can do what they want anyway.” Although this is technically true, another way of looking at the matter is that most regulators will probably accept the evaluations given by the providers, and so acceptance criteria in the SSAS Table <u>do</u> matter – as those are the criteria that will be applied and ultimately govern the acceptability of most audit sample results. For that reason alone, we must continue to exercise discretion in any changes involving acceptance criteria. Maria pointed to evidence that something is wrong with Method 25 audit sample analysis, particularly at low levels, but since not all data show these issues (e.g., NJ) suggests that the problem is not implicit in the method itself, but lies elsewhere. If there is a problem, the way to identify it and fix it does not lie in making it easier for audit samples to be deemed acceptable (by widening the acceptance criteria); what you would have then after a couple years is a new set of historical data showing labs had “acceptable” audit sample results. Two years of testers and labs receiving

"acceptable" evaluations from providers based on relaxed acceptance criteria would instill in participants a sense that everything is fine – that they are carrying out procedures in the proper way, with no need for improvement. Over time, this would skew the definition of what is a "well qualified" lab toward those with worse performance (in terms of performance in relation to assigned values). This is not the direction in which we should be going. She suggested a better approach would be to retain the existing acceptance criteria and continue to collect more data over the next two years. Perhaps the issue is significant enough that a task force could be established to analyze the specific issues related to Method 25, with a goal toward improving the performance of all testers and labs, if possible, or at least identifying what sets the better performing participants apart from the rest. The bottom line is, we need more data, and more insight into the variables affecting tester and lab performance.

A further discussion followed the Committee's review of the above e-mail correspondence. Michael Schapira said it was originally proposed that the testers and the laboratories should be evaluated separately, but that would not be achieved if only the laboratory showed up as being responsible for the audit sample result. Gregg said that laboratories would be relying on testers to get good samples to them to analyze, so maybe there should be a standardized procedure for testers to know how to get the sample over to the sampling system so there would be a reliable comparison. Maria asked if the result should be linked to the tester. Mike Miller asked if there is a separate column on the reporting form to identify the tester. William believes testers and laboratories are being tracked and searchable for all methods. In response to a suggestion that laboratories might reject some testers, because it would reflect on the laboratory if the data were poor, Shawn pointed out that only the regulator would receive that information. Maria asked if the regulators could develop a standard procedure for getting the audit sample from the cylinder to the sampling train. Gregg thought such a procedure would be method-driven, not regulator-driven.

Most of the regulators on the call had not witnessed Method 25 being sampled in the field. Maria suggested that Regulators ask their testers how they are doing it, and perhaps a uniform procedure will appear.

Action Item: Richard will ask his co-workers for input on a possible standard procedure. Stan will also check.

In response to a question by Paul Meeter, it seems that audit samples do not come with any collection instructions.

Maria suggested the Committee wait for input from Richard, Stan, and the regulators. Shawn pointed out they should be told to sample the same way as regular samples.

There was some discussion about the origin of the 50 ppm C level for Method 25. EPA did not seem to have any information about it; any studies that were done may date to the early 1990's and be in EPA's files.

Action item: Michael Klein will ask Candace if EPA has any further information the Committee does not know about, and will report back to the Committee before the next meeting

Michael Klein said he supports Maria's comments from her e-mail forwarded on May 20, 2011, and said we need audits down to 50 ppm C. Shawn disagreed, saying the data do not support it due to the variability below 150 ppm C.

Michael Schapira asked how we would devise a procedure that tests both the tester and the laboratory. Maria said the information that Richard and Stan may receive from their co-workers re. a standardized Method 25 sample collection procedure may be the starting point. The Regulators group (headed by Richard) was requested to solicit and compile information and report back to Committee for next meeting's discussion.

Since it is not known if the major error is in the sample transfer or in the laboratory, Shawn asked if the laboratory could also test the cylinder contents directly. Paul pointed out this would not work, since there is a trap used in the field and this needs to be tested in the laboratory. Maria thought the laboratories are only testing the non-condensible portion from the cylinder and not the trap. The possibility of providing two identical cylinders and having the laboratory analyze one cylinder directly, and using the other for the sampling train was suggested, but this would be complex and expensive. Gregg asked how many Method 25 audit samples had been analyzed. Shawn reported that in 2009 there were 45 audit samples; the last sample was reported in October 2009 from Ohio, and Ohio had the greatest number of samples. Maria summed up by saying that this kind of dialogue is what we need in order to discover the best solution, and that there is no motion at this time to accept the subcommittee's proposed limits.

Method 315

No changes had been proposed by the subcommittee, so no vote will be needed.

Method 23

The Committee referred to Richard's earlier comments titled "SSAS Table notes". Richard referred to the subcommittee's minutes which showed several discrepancies with the table. Shawn offered to check on this. Richard questioned the removal of various D/F isomers, and Shawn explained the subcommittee had decided to limit the list to those isomers the regulators were looking for. He pointed out the audit samples would be very expensive if all the isomers were included, but he asked the regulators to let him know if any required isomers had been omitted.

The Committee decided not to vote until Shawn reported back.

Action item: Shawn will check discrepancies between the subcommittee minutes and what was presented on proposed SSAS Table, per the discussion above.

Method 24 & 24A

These have been deleted, since no audit samples were sent out for several years, and hence there are no data. However, Maria suggested it should be decided at the next meeting whether or not to delete these two methods from the table.

5) Adjournment

The meeting was adjourned 3:15 pm EDT

The next meeting is scheduled for June 6, 2: 00 – 3:30 pm EDT.

TNI Stationary Source Audit Sample Expert Committee Teleconference Agenda for May 23, 2011:

6) Double-check receipt of documents to be referenced in this teleconference

7) Review and approve minutes from teleconference on May 16, 2011

8) Chair Update

9) Continue discussions re. SSAS Table