

TNI Stationary Source Audit Sample (SSAS) Expert Committee July 15, 2015 Teleconference Minutes**Attendance:**

Tom Widera – Chair ERA (Provider)	Committee member	Present
Charles Simon – Vice Chair VOC Reporting, Inc. (Laboratory)	Committee member	Present
Mike Hayes Linde (Provider)	Committee member	Absent
Paul Meeter, Weston Solutions (Stationary Source Tester)	Committee member	Absent
Bob O'Brien Sigma-Aldrich (Provider)	Committee member	Present
Gregg O'Neal North Carolina DAQ (State Government)	Associate member	Present
Michael Schapira Enthalpy (Laboratory)	Committee member	Present
Katie Strickland Element One, Inc. (Laboratory)	Committee member	Present
Stanley Tong EPA Region 9 (Federal Government)	Associate member	Present
Ed MacKinnon – TRC Environmental Corp (Tester)	Committee member	Present
Danny Wong New Jersey DEP (state Government)	Committee member	Present
Maria Friedman – Test America (Laboratory)	Associate Member	Absent
Michael Klein New Jersey DEP (State Government)	Associate member	Present
Jim Serne TRC Environmental Corp (Stationary Source Tester)	Associate member	Absent
William Hirt ANAB (Provider Accreditor)	Guest	Present
Nishant Bhatambrekar GE Power and Water	Guest	Present
Katie Shonk AQS	Guest	Present
Randy Query, A2LA (Provider Accreditor)	Guest	Present
Jennifer Duhaut Sigma Aldrich (Provider)	Guest	Present
Brandy Hughes Alliance Source Testing	Guest	Present
Maggie Cangro Catalyst Air Management	Guest	Present

Call to Order

Tom Widera called this meeting to order at 15:05 hours EDT. There was a quorum present.

Review of minutes

Tom Widera thanked Katie Strickland for the excellent job on the June 16, 2015 minutes and asked if there were any corrections or changes. Michael Klein mentioned that Charles Simon had sent him a copy of the minutes with several typographical and grammatical corrections to which he added several more. He will email Tom the typographical and grammatical corrections. Mike Schapira requested a change to the wording in the last sentence on the bottom of page 7. Tom called for a motion to accept the minutes with the one edit and the typographical and grammatical corrections. Bob O'Brien so moved and Ed MacKinnon seconded the motion. All members voted "aye" with one abstention (Stanley Tong). The minutes were accepted with the stipulated corrections.

Tom Widera stated that the TNI meeting had not provided the SSAS committee with a computer and projector for this meeting, so he would like to focus the discussion on a few important topics that have been under recent discussion. Tom also mentioned that his job title with ERA has changed and that he would now have more time to dedicate to the SSAS committee and wants to get resolution on current topics under discussion.

Method 25 Gaseous Audit Samples

Tom Widera said that Charles Simon wants the Providers to include true air samples along with the liquid and filter samples currently provided.

Charles was not on the call at that point so Tom led the discussion by directing comments to Randy Query and Bill Hirt, the two Provider Accreditor representatives. Tom said that at the beginning of the program ERA tried to make gaseous audit samples for Method 25, but providing air canisters was not their strong point and they had many difficulties, resulting in extreme cost. So, ERA out-sourced the task to gas vendors.

Bob O'Brien said that Sigma Aldrich tried making the Method 25 audit samples using SUMMA canisters and liquid injections, but the costs were so high that the selling price would have to be more than \$1000 per sample.

Tom Widera reiterated that the high cost of gaseous audit samples was the biggest issue. Charles Simon had suggested in earlier meetings that certified EPA protocol gas vendors could be used to make the samples and deliver them to SSAS providers, who would then handle the distribution, reports and statistics. We want to know how feasible this would be under the current regulations.

Brandy Hughes stated that the \$1000 cost would place a big burden on the customer. Tom said that ERA charges \$1200 for TO-15 air samples and that is what they'd have to charge for Method 25 audit samples if they made them. However, a gas vendor should be able to produce the samples at a much lower cost.

Michael Klein asked if anyone knows the costs to EPA for Method 25 audit samples. Stan Tong did not know. Brandy Hughes suggested that we reach out to a state. No one had a cost.

Maggie said that there have been past efforts to provide gaseous audit samples for stack testing without much success, and we may want to reach out to states like Kentucky to find out the current state.

Charles Simon joined the call at 1528 and Tom brought him up to the current conversation point on gaseous audit samples for Method 25, and the need to have a supplier for the gases. Bill Hirt said they have an analogous situation with a PT provider for wine tasting that subcontracts with a winery to provide their audit samples. So it's acceptable to subcontract the samples. Bob O'Brien and Tom Widera agreed they could not afford to do the whole process front to back of providing these gas samples, so they would have to be able to subcontract the samples.

Bob O'Brien asked who would bear the cost and responsibility for testing, the Provider or the Supplier? Tom Widera asked Charles Simon what approach he had in mind.

Charles said that we've been discussing two general ways to do this. The subcontractor can prepare the samples with enough gas volume for the SSAS Providers to perform all of the required concentration and stability tests, but ultimately the responsibility for the accuracy of the sample falls on the vendor. These vendors are certified and make EPA protocol gases and have all of those responsibilities, so let them supply the samples and be responsible for the concentration and let the Providers distribute them and be responsible for all of the reporting. That divides out liability. The bottom line is you need to have gas vendors produce them. They can supply them cheap. Charles has acquired them for less than one hundred dollars in the past. Then the Providers would have to put their level of service on top of that for acquisition, distribution, reporting, etc., which is not free. So they would probably be somewhat costly, but the Providers would compete on the price. There are many gas vendors that can manufacture the samples.

Charles Simon asked Bob O'Brien and Tom Widera what they would like to do to get started. We have the Method 25 samples on the Table and we have current acceptance criteria, so we can go forward with providing the samples, if we can secure them, and accumulate statistics to revise acceptance criteria if needed.

It was pointed out that the program rules require the Providers to be responsible for the accuracy of the samples, so it would be up to the Providers to place their own performance requirements on the suppliers. The suppliers could do all of the physical work, including verification testing, and the Accreditors would examine the way that is done for each Provider.

Tom Widera asked if there would be a problem if both Providers used the same supplier. Charles Simon said that would be unlikely since there are hundreds of vendors who can make these samples, including two in Florida that have already made them. Tom said both Providers may be comfortable with the same vendor. Charles said that both Providers would still have to compete on their end for the added services. Where or how they acquire the samples should not matter.

All agreed that the cost for verification and all other testing needs to remain with the manufacturer since they can do it at the lowest cost. The samples would have to be shipped to the Providers to assure the identification trail. Some in-house quality assurance testing would be done by the Providers.

There was some discussion on shipping labels to manufacturers instead of shipping cylinders twice. Charles Simon said each cylinder has a unique ID number stamped into the metal. That may be a way to track them cost effectively. We need to establish a protocol then get going and adjust as needed.

Brandy Hughes said that when performing Method 25 there is a contingency to use Method 25A if the concentration is too low, so if we had audit samples they may not be needed.

Charles Simon said that this would be rare since the rule for allowing the use of Method 25A is based on a VOC concentration of <50 ppmC as measured by Method 25. We don't have audit samples this low. If Method 25A shows very low concentrations, most regulators will allow Method 25A. Some regulators will allow the use Method 25A if the VOC concentration is <50 ppmC as determined by Method 25A, barring undetectable VOC like formaldehyde.

Michael Klein said New Jersey bases this 50 ppmC limit on Method 25 test results. Many tests in his state have Method 25 and Method 25A run simultaneously, and Method 25A results may be accepted if Method 25 shows <50 ppmC.

Charles Simon said the limit many times doesn't matter since compliance can be shown by Method 25 when the concentration is <50 ppmC. Method 25 audits are supplied in the range of 150 -2500 ppmC, so the lowest one would be used for all low VOC source tests, even <50 ppmC sources. The permit will stipulate the method to be used.

The audit samples can be acquired cheaply from gas vendors, so how can we go forward? Tom said we have enough information to go forward, so now it's a business decision. Is there enough volume to justify doing this? We need to find a gas vendor, set criteria for them and have the Accreditors verify and accept procedures.

Charles Simon pointed out that we are trying to provide gaseous samples as mandated by the Federal Register. Method 25 and Method 6 are the two methods for which this can be done. The

same gas vendors that make the bias (audit) gases for CEM methods in the field will make the SSAS gaseous audits.

SO₂ is the other potential gaseous audit sample, so we should consider this sample. Tom Widera pointed out that the gaseous SO₂ audit sample is not currently listed on the Table, so it would be more complicated to do. We need to consider getting this on the SSAS Table before proceeding. Charles Simon pointed out also that gaseous SO₂ audit samples have not been used before, so we would need to develop acceptance criteria statistics via a pilot study, similar to what we did for the new Method 25 audits. SO₂ is sampled at much higher flow rates and bigger cylinders will be needed.

Charles Simon estimated a demand of 200-400 Method 25 audit samples per year. Tom summed up that we have the Method 25 sample on the SSAS Table, and that volume sounds acceptable.

Michael Klein said he talked to EPA about the cost of Method 25 audits and they indicated \$350-\$500 each. New Jersey was doing about 2 Method 25 tests/month (about 24 audits/yr.).

Charles Simon said that his company does about 50-100 tests per year and Wayne Stollings company, now owned by Montrose Environmental, does 3-4 times as many tests.

There was further discussion about the number of Method 25 audit samples expected per year, and the estimate was not changed. Charles Simon said that generally we should expect one audit sample per source, and on an inlet/outlet test there are two sources with very different concentrations. However, on some single sources, like asphalt plants in the Ohio Valley, he received two audit samples with each set of three compliance samples; sometimes high and low concentrations, sometimes nearly the same concentrations.

Michael Klein stated that Method 25 is supposed to be used for destruction efficiency only and that the use on an asphalt plant is a misapplication. Charles Simon agreed, but said that unfortunately there is not a more accurate method available and the Ohio Valley states have to accurately track and report their VOC emissions to the NAAQS database (National Ambient Air Quality Standards) from all sources, including hundreds of synthetic minor asphalt plants that emit a few pounds to a few tenths of pounds per hour of mixed VOC. Method 25A does not give consistent or accurate results due to the high moisture content of the stack gas and the oxygenated VOC present in these source emissions. So, Method 25 is the most accurate way to measure these emissions.

Tom Widera wants to contact EPA and find out the potential demand for Method 25 audit samples to evaluate the commercial feasibility of supplying them. There must be profit to be made to get approval. Charles Simon suggested that Tom contact Ray Merrill (at OAQPS). Tom will make some calls and track down the information.

The cost of the Method 25 audits was discussed. EPA's cost of 350-500 dollars each was agreed to be reasonable, but \$1000 per sample was not considered reasonable. Charles Simon mentioned that

there are additional costs with the audit samples due to the time it takes to collect and analyze the samples. He also said that he called his clients in the past and they were all appalled at a cost of \$1000 per audit sample. Even with the lower cost for the audits, he estimated they will add about \$3000 per test. Both Method 25 labs, VOC Reporting and Triangle Environmental Services, have websites with prices either posted or available so Providers can evaluate the additional cost associated with the audit samples to help arrive at prices.

Tom Widera and Bob O'Brien agreed that they need to know the potential volume from EPA in order to determine if there is a return on investment potential before proceeding. Michael Klein had some information from the beginning of the SSAS program that indicated EPA was supplying 70 sets (140 samples) of Method 25 audits for the years going back to 2009. Charles Simon added that the demand dropped off sharply the last two years of the program, which were 2009 and 2010. In earlier years, particularly the mid 1990's, not all compliance tests used audits, so demand is expected to be greater now that audits are required. It's likely that audits will be required for every Method 25 compliance test when they become available. He still thinks there will be a demand of 200-400 Method 25 audit samples per year. There was no further input on this topic.

Bill Hirt reminded everyone that ACLASS has changed its name to ANAB, the ANSI-ASQ National Accreditation Board. ACLASS will no longer be used.

Method 8 Audit Failure Study

Tom Widera asked Mike Schapira if he had any input on this topic. Mike has been reviewing the data sent by William Daystrom in order to organize the data into spreadsheets for individual labs in order to send them a questionnaire without including data from other laboratories. He's still working on this and is nearly finished. He needs input from Bob O'Brien and Tom. Bob is concerned about releasing laboratory ID information. Bob and Tom agreed that they need to see the actual letter and spreadsheets before releasing any information that would help identify laboratories.

Tom Widera said that the SO₂ data are not a problem so Mike Schapira can eliminate this portion and the task will be streamlined. Tom asked for comments about the letter drafted by Mike. All agreed that the letter is good as written and should provide the information we seek. Mike will add a date analyzed column to help the labs find their audit sample analyses, and will limit the search request to sulfuric acid by Method 8.

Tom Widera indicated that the SO₂ statistics indicate no problem with a 95% pass rate, so this shows that only the Method 8 data are an issue. Tom would like to settle this issue as quickly as possible.

Regulator Contact List

Tom Widera will table this issue for now. He will draft a form letter for our comment to send to Regulators to get an updated list. So far the Regulator list looks accurate for the names that are on it.

Audit Sample Concentration Ranges

Stan Tong sent Tom Widera a list of audits that have been ordered outside the Table range. Nearly all of the concentrations were below the lowest listed values. Tom asked if the current ranges are feasible. Are most audit samples on the low end of the ranges? Are there any at the high end? Over 80% of ERA audit samples are in the lower 30% of the concentration range. Should we re-evaluate the current ranges?

Mike Schapira stated that the Table ranges were developed from historical data, and that many of the lower concentration ranges had poor performance. So, extending the ranges lower may create problems.

Tom Widera said the Providers' concern is the high end of the range because they make concentrated forms that users have to dilute. To make a direct standard is considered custom and triples the cost. Do we really need these high concentrations? Can we lower the upper ends? Do regulators see requests for the high end of the ranges?

Katie Strickland commented that the high ranges are mostly metals on filters. They rarely see high concentrations in impinger solutions. Mike Schapira said they do the HCl and SO_x audits and they only occasionally see high concentrations.

Stan Tong commented that most testers seem to be ordering audits at the expected stack concentrations and not based on the rule or the permit limit. Tom Widera agrees, that is what they see as well. However, the Providers have to have the full range of concentrations available and many high end samples are just sitting on the shelf.

Stan Tong said that he'll discuss this issue of lowering the high end of the concentration ranges since many of these samples are sitting on the shelf, on the next regulatory call and see the reaction.

Michael Klein asked if it would be more cost effective for Providers to just have the low end samples on the shelf and make the occasional high concentration samples only when needed. Tom Widera answered that this would not affect the cost because of all the analytical work involved.

Tom reiterated that the vast majority of sample requests are at the low end of the ranges, >80% in the lowest 30% of the range. Only a few high HCl samples have been sold. Gregg O'Neal added that perhaps we should lower both the upper and lower end of the ranges. Tom said we need to consider the ability to accurately analyze the lower concentrations.

Hg on Filter.

This analyte is on the Table but is not currently required. We have collected 163 data points so far with a 94% pass rate and Tom Widera asked if this is enough data to consider putting this back on the list of required audits. Mike Schapira asked if the data are across the ranges. Tom will ask

William Daystrom for the concentrations. Mike said we need 20-30 data points at each concentration level to develop acceptance criteria.

There was a consensus that we should get the information from William and evaluate the statistics for the current range and acceptance criteria.

There was no other discussion on this topic.

Adjournment

Stan Tong moved that we adjourn the meeting. The motion was seconded. All agreed. The meeting was adjourned at 1640 hours EDT. Tom will email everyone with a proposed date for our next meeting.