TNI Stationary Source Audit Sample (SSAS) Expert Committee August 7, 2017 Teleconference Minutes

Attendance:

Tom Widera – Chair ERA (Provider)	Committee member	**Present**
Vacant – Vice Chair		
Andrew Chew EPA (Federal Government)	Committee member	**Absent**
Ed MacKinnon TRC Env. Corp. (Stationary Source Tester)	Committee member	**Absent**
Gregg O'Neal North Carolina DAQ (State Gov.)	Committee member	**Present**
Katie Gattis Element One, Inc. (Laboratory)	Committee member	**Present**
Michael Klein New Jersey DEP (State Government)	Committee member	**Absent**
Mike Hayes Linde (Provider)	Committee member	**absent**
Paul Meeter Weston Solutions (Stationary Source Tester)	Committee member	**absent**
Michael Schapira Enthalpy Analytical, LLC (Laboratory)	Committee member	**Present**

Jim Serne TRC Env. Corp. (Stationary Source Tester)	Associate member	**Absent**
Maria Friedman	Associate Member	**Present**
Sheri Heldstab Chester Lab Net	Guest	**Present**

Call to Order

Tom Widera began the meeting at 1:07 EDT. A quorum was not present.

Membership

Stan Tong contacted Tom to indicate that EPA Region 9 will not renew its TNI membership and will, therefore, not be able to continue serving on the SSAS committee. Tom told Stan that he does not need to be a member to sit in on the calls. Stan and Andrew Chew will be a big loss to the committee. The committee is now down to 8 members. TNI requires membership of 5-15. Tom spoke to Michael Klein who mentioned he would try to seek interest at today's EPA call.

Requirement to run samples together

Sheri Heldstab led a conversation regarding the necessity in Section 4.4.1 of V1M3 that the audit sample must be run at the same time, using the same equipment, and same personnel as the test samples. Sheri indicated that it is not uncommon to have reruns for these analyses. Sometimes analytical runs have taken up to 52 hours. Sheri is concerned that with these long runs, having to rerun one sample can cause a rerun of the entire analytical sequence. Sheri would like to change the wording to allow a lab to rerun only the samples that need to be rerun. Sheri indicated that the lab often does a "quick and dirty" screen of the audit sample to determine what dilution the sample needs to be run. Mike S. said not to do this. He indicated that since all samples were run together initially only run the samples that need to be rerun. Katie indicated that her lab does the same thing. She indicated that it is still part of the same batch. Sheri wants to know if we can change the language to make this clearer. Tom indicated that we could use terminology that allow for reruns to be done without rerunning the whole sequence. Katie indicated that the module does not specify that all samples need to be run on the same analytical sequence but in the same batch. Sheri suggested we use the term "Sample Delivery Group" and not batch. Tom indicated that the module does not specify that the samples need to be on the same calibration. So it leaves room for samples to be run on different calibrations as long as the analysis is conducted by the same personnel, same preparation, same equipment, etc. Sheri indicated that the hang up is with the term batch. A batch can mean a group of 20 samples, but it can also have several other interpretations. Katie discussed adding a definition of the term batch. Tom replied that he CSDExC is working on a glossary of terms. Tom wants to see how our definition batch compares to the glossary and if they are too different than we could come up with our own definition to modify the standard.

Sheri indicated that Section 4.4.2 requires results be simultaneously reported to the Provider and Regulatory Agency. She asked the labs if they do this or report to their clients. Katie indicated that for some clients they actually send preliminary reports and get feedback prior to sending to the Regulator. Mike S. said that many Regulators want the data up front. Tom asked for Gregg's input and he said he likes to have the information up front. Katie has gotten feedback early on from some Regulators when they got a report from the Provider and did not get data from the lab. They indicated that they wanted the data.

Sheri restated that if we change batch to sample delivery group then we should be good. Tom replied that when the CSDExC finalizes the definition of batch, he will send that definition to all and see how we feel about the definition.

Mike S. suggested to just rerun the samples that need rerunning and put that into the narrative for the report.

Preprinting Tester, facility, lab, and Regulator information on the data reporting forms

Katie brought up the topic of having the lab, Regulator, tester, and facility information pre-printed onto the data reporting forms from the Providers. Katie's lab ran into an incident recently. They received two audits that were sent at the same time to the tester by the Provider. The tester then swapped the audit samples and sent the samples to the wrong labs. A big mess ensued that required the Regulators to approve acceptance of the samples received instead of the ones that were supposed to be sent. The information for tester, facility, Regulator, lab was not pre-printed on the reporting sheets, so the issue was not brought to light until after samples were run. Katie is proposing that we add language in V1M1 to require the Provider to pre-print this information. This can possibly be placed in Section 8.2. This information is required in Section 11.2, but this section does not come into play until after reporting. Sheri has also encountered this. Katie suggested taking language directly from 11.2 and add it to Section 8. Bump 8.3 to 8.4 and add this information as the new 8.3.

Tom indicated that ERA already does this, so it is possible. Tom asked what the labs currently do if they receive audit paperwork that was pre-printed with one lab and the tester changes labs at the last minute.

Katie indicated that they will call the Provider to have this information clarified on the paperwork. They also contact their client to confirm it was sent to the correct lab. Sheri and Mike say they contact the client.

Sheri also indicated that there have been projects where a tester has kept an audit sample for 9 months and then sent it for a completely unrelated project. Tom mentioned that ERA is currently investigating a failed audit that was held by the tester for 9 months and then shipped to the lab. The problem being that there can be no guarantee regarding the conditions that sample was being kept by the tester for that length of time. Therefore, if the audit fails after that extended time, was it due to potential improper storage by the tester or by analytical issue by the lab. Do we want to address how long a tester can hold onto an audit sample before it becomes invalid. Katie asked if it is possible for a tester to return an unopened sample to the Provider if there is a delay in sampling, for a credit or swap-out of the audit sample. Tom indicated that ERA cannot re-use samples sent out of the facility. ERA has a policy that they can issue a 50% credit for samples returned within 5 days of receipt. Tom cannot speak for ERA policy, but assumes that no Provider would be willing to provide credit or swap-out of audit samples if this provision were placed into the Standard.

Sheri asked what ERA does if an audit never comes back with a result. Tom replied that ERA will guarantee the sample for 1 year stored under proper storage conditions. Therefore, the tester and lab have 1 year from receipt to return a result. After that 1 year, the sample will be considered out of expiration.

Sheri and Mike both indicated that the client and/or tester are left on the hook for the cost of audits that are unused.

Tom asked Kyle Flowers, Retired Alabama DEM, how often projects get postponed and for how long. Kyle said it was rare for projects to get delayed for longer than a few months. Tom said he would like to get feedback from the Regulators how they feel about audit results received from samples left with the tester for a period of 9 months or so.

Significant Figures/Instruction Sheets

Tom got approval and sign off on instruction sheets requiring reporting data to 3 significant figures. Until the modules can be revised to require the reporting to three significant figures at least ERA's instructions will have the requirement.

Based on M8 feedback from the committee, ERA is also removing the hydrogen peroxide preservative requirement. This should clear up any confusion resulting from an old version of M8.

Updating V1M1

The Notice of Intent to revise the modules was placed onto the TNI website. The notice will stay on the TNI website until August 15 for public comments.

Tom summarized the discussion of V1M1 from the June 2017 call.

Section 6 – Tom indicated that the Providers do not need run the audit samples using the same methods that the labs use. They just need to prove equivalency in their test methods. The equivalency method must be approved by the Provider Accreditor prior to use for verifying the audit sample. The Provider is required to verify the assigned value of the audit sample within 1/3 of the acceptance limit that the labs get and need to provide a repeatability of 1/6 of the lab acceptance limit. Sheri asked if the Providers dilute the sample

the same way the labs are required to. Tom indicated that being consistent with the PT modules, the Provider just needs to verify the analyte content. Tom brought up whether the committee feels that the Providers should analyze the samples using the same methodology as the labs or is verifying the assigned value by an equivalent method acceptable.

Sheri indicated that the only issue she sees is with the Method 29 where the method calls for evaporating the sample. Katie indicated that they do not follow that procedure but rather do a "dilute and shoot". Tom indicated that the instructions from the Provider only detail how to take the concentrated sample and dilute that sample to make the "Audit" sample. The instructions from the Provider do not address how to "prep" the sample. The instructions indicate to analyze the diluted samples per the normal procedures.

Sheri and Katie both agreed that the methods don't always quantitatively return 100% of an analyte. Silver in Method 29 is a good example. So if the Providers are saying in their verification that you should recover, for example, 100 ppb of silver by an equivalent method, then that won't be the same as for method 29. Then the Provider should run the samples by Method 29. Tom replied that it looks like we are talking about 2 different things. The SSAS tables use historical data from the audit program to set acceptance limits based on expected recoveries and standard deviations. Therefore, if analytes recover low or produce high %RSDs, then the SSAS Table limits take that into account. The Providers verification procedures just verify how much analyte was spiked into the sample.

If silver is a bad actor, then we need to look at the SSAS tables and see if the limits and concentrations are set properly. If we are seeing a high failure rate, then we need to look into this and determine if a change in the SSAS Table is necessary. This is the process we are in currently for the M8 sulfuric acid audits.

Tom mentioned that we need to look into the extent of the failures. Are the failures at 70% or at 20%. Are the failures at the high end of the range or at the low end of the range? Are the failures from the same labs? Once this is determined, we can get a better idea of why the failures are occurring.

With the fact that the Providers are just verifying the amount added and it has no bearing on the control limits, then how the Providers should be able to verify the amount added should not matter. Katie asked if, with the exception of method 8, don't the Providers run the samples the same way as the methods. Tom indicated that ERA does for the most part. But we do not prep the samples first. For example, for the nitrogen oxides, the prep procedure converts nitrate to nitrite and then the lab analyzes nitrite. ERA would run nitrate and not nitrite.

Sheri felt that with the information given that the issue is the SSAS table limits and that is what needs to be addressed. Katie agreed with Sheri. Sheri asked what we should tell Regulators in the meantime for analytes such as silver. Unfortunately, it is up to the Regulator to accept or reject data based on the audit. So this would need to be handled on a case by case basis. The Regulators may want additional data or look into past analyses.

Section 7 – there were no other changes beyond the verification of the assigned values. Tom indicated that all analytes are verified either against a NIST SRM if it exists or against a third source standard provided by an ISO Guide 34 Provider.

Section 8 – Tom brought up the issue about how often an audit sample can be sent. Section 7.5 requires that each audit sample have a unique identifier. Using that statement, several years ago the module was revised to allow the same audit batch to be sent to a lab up to 8 times in a year, as long as it was not sent to the lab consecutively or more than once a month. This has eased the burden of providing enough different batches some but not nearly enough. The burden is still pretty heavy. ERA is sometimes getting 5-6 orders a week for the same lab and cannot keep up with the demand. The initial concern from the Regulators was

that if we keep sending the same batch over and over then the labs may start to learn the assigned value. Tom argued that some labs are getting so many samples that for them to spend the time to learn the concentrations would be counter productive for the lab. Tom opened up the discussion to see what can be done to ease the burden even further. Tom is concerned that if the number of requests for the same labs continues to grow, then several things can happen. Either more batches need to be produced, a custom batch needs to be made, the tester needs to be told they may have to wait a few weeks, or the tester will be told they have to go to the other Provider, who may also have no samples available. A higher batch production by ERA would cause prices to go up. Custom samples cost about 4-5 times what normal samples cost. Making a tester wait for samples may result in a sampling event getting missed.

Currently there are only two Providers. Maria suggested having the two Providers partner. Tom indicated that this would not be agreeable to ERA. Katie's problem with the statement is that just because a sample is shipped according to the statement does not necessarily mean that the lab is receiving the sample according to this schedule. Projects get delayed or lab designations change at the last minute. It would not be unlikely to get the same batch of audit samples several times in one day. So this statement is not realistic anyway. Labs do not know what batch is being received anyhow since they have unique identifiers. Katie feels it would be more work to try to figure the batch issue out than it would be just to run the audit samples. Sheri agreed with this statement. Tom indicated that the Provider has no control of when the sample gets to the lab. Katie asked how many batches of audit samples ERA keeps in stock at a given time. Tom indicated that there may be as many as 30 batches of HCl at any given time.

Maria asked how labs would know they got the same batch. Tom replied that they don't. Mike S. brought up the possibility of producing a single batch of samples and then changing the dilution instructions so that the final dilution volume would change. Tom indicated that the difficulty with that is the way the batches are tracked in the ERA database. Instructions are uploaded and associated with each individual batch. If the final volume in the instructions would change, then the instructions would need to be associated with each individual project and not each batch of samples. Another issue this causes is that labs would get instruction sheets with a variety of final volumes for the same audit product. The possibility of using the wrong instructions for an audit sample would increase for both the Provider and the lab.

Tom mentioned that when the program started, the committee was not expecting that the same 3 labs were going to run 70% of the audit samples, so this burden was not expected.

Sheri mentioned that she is certain she has received an audit from two different testers on the same day and run on those on the same analytical sequence. Tom indicated that she is not the only one who has said that.

At this point time ran out and the call was dropped.

Next: October 17, 2 pm Eastern
Meeting Adjourned 3:08 pm

Next Minutes Authors
October – Michael Klein
November – Mike Schapira
December – Ed MacKinnon