



Laboratory Mentor Session

Topic 2:

Analyst Proficiency



Purpose

To discuss issues about the Environmental Laboratory Accreditation process in:

- an open discussion format;
- a neutral environment;
- a manner that accesses any TNI committee;
- a productive environment where all unresolved issues are brought to the appropriate TNI committee for action.





TNI Training Disclaimer

- The material presented in this session is for informational purposes only. It is designed to promote understanding, consistency and clarification of technical and accreditation requirements. It should not be considered a change or alteration of the Accreditation standards, the published methods, a regulatory agency requirement or a position of TNI.
- The opinions expressed by the learned speakers, trainers or panel participants are their own and are not necessarily intended to infer an official decision or interpretation by TNI or an accrediting authority. Interpretations of requirements are solely in the purview of the accrediting authorities and TNI board of directors.
- Questions and issues raised may be referred to the appropriate TNI committee or decision making body for consideration or action as appropriate.



Mentors

- John R. Gumpfer
ChemVal Consulting, Inc.
- Ilona Tauton
TestAmerica
- David Caldwell
State of Oklahoma
- And everyone else here!



Ground Rules

- Mentors will recognize the speaker by passing the microphone to them.
- The Mentors role in the discussion will be to:
 - correct misconceptions,
 - control the discussion to pertinent topics, and
 - to provide links between people and solutions
- Mentors are resources, but not encyclopedias!



PARKING LOT flip chart

Use this for things that you would like to address but:

- 7) You are too shy
- 8) It is off subject
- 9) You'd like a separate discussion on this topic.



Use the microphone to enter into the discussion.

Please wait to be recognized.

Sidebars are considered the “good stuff”. Please share.





Second Session Topics

- Demonstrations of Capability
 - Which Option is preferred and why?
 - How is the record of demonstration documented?





For what it's worth...

- Documenting DOCs is one of the more difficult systems to implement successfully in a laboratory. It's right up there with making sure every container of standards and reagents is properly labeled.





First Topic

Initial Demonstrations
of Capability



From the Standard

- **C.1 PROCEDURE FOR DEMONSTRATION OF CAPABILITY**
- A demonstration of capability (DOC) must be made prior to using any test method, and at any time there is a change in instrument type, personnel or test method (see 5.5.4.2.2).
- All demonstrations shall be documented through the use of the form in this appendix.



Exception

(Grandfather clause)

- 5.5.4.2.2. c) In cases where a laboratory analyzes samples using a method that has been in use by the laboratory before July 1999, and there have been no significant changes in instrument type, personnel or method, the continuing demonstration of method performance and the analyst's documentation of continued proficiency shall be acceptable. The laboratory shall have records on file to demonstrate that a demonstration of capability is not required.





Second Topic

Documentation of
Continuing Proficiency



Continuing Proficiency

- **5.4.1.5.h)** ...The technical director(s) (however named) shall certify that personnel with appropriate educational and/or technical background perform all tests for which the laboratory is accredited. Such certification shall be documented.



Continuing Proficiency, Cont.

- 5.5.2.6.b) ensuring that all technical laboratory staff have demonstrated capability in the activities for which they are responsible. Such demonstration shall be documented. (See Appendix C);
- Note: In laboratories with specialized “work cells” (a well defined group of analysts that together perform the method analysis), the group as a unit must meet the above criteria and this demonstration must be fully documented.





Continuing Proficiency, Cont.

5.5.2.6.c.3) Analyst training shall be considered up to date if an employee training file contains a certification that technical personnel have read, understood and agreed to perform the most recent version of the test method (the approved method or standard operating procedure as defined by the laboratory document control system, 5.4.2.3.d) and documentation of continued proficiency by at least one of the following once per year:



Continuing Proficiency, Cont.

- i. acceptable performance of a blind sample (single blind to the analyst);
- ii. another demonstration of capability;
- iii. successful analysis of a blind performance sample on a similar test method using the same technology (e.g., GC/MS volatiles by purge and trap for Methods 524.2, 624 or 5035/8260) would only require documentation for one of the test methods;
- iv. at least four consecutive laboratory control samples with acceptable levels of precision and accuracy; or
- v. if i-iv cannot be performed, analysis of authentic samples with results statistically indistinguishable from those obtained by another trained analyst.



John's Favorites

- Number 1: Proficiency Testing Samples
- Pros: Easy to Document
- Cons: Only 2 per year per method. This makes it difficult for labs with more than 2 analysts per method.



John's Favorites

- Number 2
- Four consecutive LCSs
- Pros: They're already being analyzed
- Cons: Tracking is more difficult



Additional Stuff

- Note that analyses without spiking solutions (TSS, VS, pH, etc.) as well as non-chemical analyses (micro, WET) must be addressed separately.
- Does the demonstration need to be performed every 365 days, once per (calendar?) year, or what?

