THE NELAC INSTITUTE

Audit Findings Myths and Legends

Panel Discussion

Environmental Measurement Symposium 2016

August 8, 2016 Assessment Forum

Panelists

- **Kristin Brown,** Utah Environmental Laboratory Certification
- **George Detsis,** US DOE
- **John Gumpper**, ChemVal Consulting
- **Aaren Alger**, Pennsylvania Department of Environmental Protection

Myth or Legend?

- Supplies/chemicals must have a date received and date opened noted on the container.

Myth or Legend?

- The posted phone lists did not have document control numbers.

Myth or Legend?

- Not performing a method blank using DI water for settleable solids or paint filter tests.

Myth or Legend?

- The laboratory was using a toaster oven for drying TDS samples.

Myth or Legend?

- The laboratory's SOP isn't specific enough. It does not state to record the temperature or to plug in the refrigerator. The SOP only states to put the samples in a refrigerator with a calibrated thermometer.

Myth or Legend

- The laboratory was performing TCLP extractions outside in the back porch area of the lab due to space limitations in the building.

Myth or Legend

- The analyst squirted ethanol on the micro benchtop and lit it up with an igniter to sterilize the benchtop.

Myth or Legend

- The laboratory was using a pool kit to analyze for Total Residual Chlorine.

Myth or Legend

- It doesn't matter if every analyst performing the test is certified, as long as there is an analyst on staff who is certified.

Myth or Legend

- The laboratory was using a second source check standard when the method asked for the same source as the calibration standard.

Myth or Legend

- Microbiology testing lab is noncompliant because the garbage can was too big so it didn't need to be emptied daily.

Myth or Legend

- The calculator must be calibrated at least annually.

Myth or Legend

- Lab results are written in such chicken scratch that no one can verify what the actual results are.

Myth or Legend

- During an on-site assessment in May 2016, the assessors observed a lab employee mouth pipetting – microbiology WWTP samples.

Myth or Legend

- When discussing the positive and negative check sample requirements for Fecal Coliform, the analyst asked if he could “spit on the media and use it as the positive fecal coliform check”.

Myth or Legend

- A lab was observed to run a nitrate sample within hold but over the calibration curve. The sample was diluted and run out of hold. The lab reported the diluted result with the original undiluted analysis date because “we knew it would be rejected because it was run out of hold.”

Myth or Legend

- All of the pH results were 7.0, upon checking the meter, it wasn't plugged in and the sticker/decal showing 7.0 was still on the face plate.

Myth or Legend

- Temperature records are pre-filled in for the whole month.

Myth or Legend

- The laboratory was using converted baby incubators for microbiological incubators.

Myth or Legend

- Analytical testing was signed off by employees that haven't worked in the lab for years.

Myth or Legend

- The laboratory Project Management section is not under the direct oversight of quality management.

Myth or Legend

- In the laboratory's current system, the reports indicate that it is the quality managers who are taking responsibility for the data. There are no records to indicate that the technical directors review or assure that reported data are reliable.

Myth or Legend

- The laboratory master thermometer documentation showed an expiration date of 2016 (no date or month).

Myth or Legend?

- The records of maintenance for the GC/MS units used for semivolatile organic analyses and the GC/ECD units used for pesticide analyses do not include routine maintenance such as liner changes, other injection port maintenance, column trimming, etc.

Myth or Legend

- There are no records of preventative actions.

Myth or Legend

- The laboratory is not applying the correction factor when recording the temperature of the water bath used to heat the KD apparatus used to concentrate semivolatile extracts.

Myth or Legend

- For NH3 by ISE, the laboratory is not recording a raw number when it is below the RL. Across technologies, the raw value must be recorded before any averaging or rounding.

Questions?

Thank you all for participating.