Things Testers Do

DeAnna Oser
Georgia EPD
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Measurement Technology Workshop

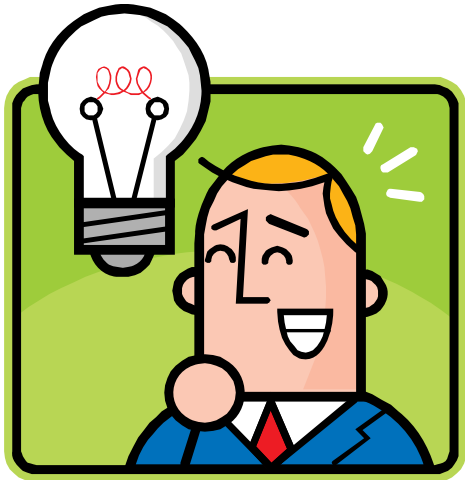
Agenda

- How did we get here?
- Sloppy Testing Practices
- Testers Viewpoint on Regulators
- Putting it all together – What now?
- Open discussion – more experiences?
- Your thoughts…

How We Got Here…

WARNING:

Testers may
behave DIFFERENTLY
depending on the state
in which they test!



How We Got Here….cont'd

- Input from State and Local Agencies
  - Sloppy testing practices observed

- Objective–
  - Share experiences of sloppy (and good) testing behavior
  - Share tester's critiques of OUR behavior

At the end of the day....

The more knowledge we share,

the more effective we are

Survey to Regulators

- Feedback requested on common sloppy mistakes testers make
  - Things that if we didn't have to spend time insisting they be done correctly, the test would go much smoother
  - Things you just can't believe a professional actually DID

- Result –
  - Make other states aware of issues
  - Anonymous "Wall of Shame"
  - Testers will just DO IT RIGHT – the FIRST time
  - **QSTIs make mistakes and shortcut methods also**

DISCLAIMER

- Observances were focused on the negative –
  - There are a LOT of GOOD testers out there
- No information on the consequence of these behaviors was collected (such as was warning given, the run repeated, test rejected, sheriff called in, etc.)
- No information given on the TYPE of test at the time
- States have varying comfort levels with the rigidity of the method
  - More on that later….

Things Testers Do – Setting up the Test

- Submit test plans and narratives to test reports that are templates-
  - No actual useful information
- Probes of insufficient length because they did not measure the stack diameter prior to the test
- Misinformation on the moisture content of the stack and planned moisture removal system not adequate
- Using the test to train new personnel and having only inadequately trained personnel who cannot answer typical testing questions

Things Testers Do – Manual Methods

- Not having the method available for their reference
- Not accounting for process variations (such as temperature) when choosing equipment
- Assembling the train with the nozzle in the wrong orientation
- Not traversing the stack
- Tightening the train before the leak check – or standing on the line during the leak check

Things Testers Do – Recovery

- Shaking off a Method 5 filter
- Failing to brush the nozzle or liner
- Not having the correct reagents or amounts charged in the impingers
- Performing the recoveries – for the FIRST time in the field and no CFR
- Contaminating sample by careless work – especially in Method 29

Things Testers Do – Instrumental

- Using an inappropriate compounds or concentrations for QA
  - Propane to spike Method 320 formaldehyde train
  - Using a span gas of 100 ppm when the emissions are actually single digit and claiming non-detectable
- Not allowing the system to stabilize during calibrations or bias checks
- Manipulating values from a data logger system

Things Testers Do- Instrumental

- Not recording one minute data for instrumental tests and “fudging” the times post-test calibrations occurred to cover a short test
- Changing pressures or set point values on an FID during the calibration or bias checks
- Changing the target value on a dilution system to obtain an acceptable concentration

The Other Side

- Survey of SES Membership
- Specific Questions geared to critique us
- What do the regulatory observers do well – or not so well?
- About 20 testers responded

Survey Questions

- Are regulators generally knowledgeable of the test methods and underlying regulations?
- Have you seen mistakes made by regulators?
- Things that regulators do well
- Things that regulators do poorly
- Does the regulator interfere with the testing?
- Do regulators follow proper safety procedures?

Regulators Knowledge

- Survey says…
  - Yes – 50%
  - No – 28%
  - Somewhat – 22%
- No “hands-on” experience with the method
- Focus on checklists rather than what affects the quality of the test

Mistakes Made

- Survey says ….
  - Yes – 69%
  - No – 31%

- Many of the "mistakes" were due to being rigid with the interpretation of the method

- Instances of regulators mistaken memory of method specifics
  - Temperatures (148°F for Method 5)
  - Differences between Part 60 and Part 75 requirements
  - Not allowing for a leak correction per Method 5

Things Done Poorly

- Regulators who assume an AETB test team needs no auditing
- Regulators who notice a problem in the field
  and SAY NOTHING
  (This was the biggest complaint by multiple testers)
- Regulators who only watch the leak check and none of sample collection or recovery

More Things Done Poorly

- Regulators who focus only on the specifics of the leak check
  - We need to understand what makes a difference to the quality of the data
- Regulators who do not comment on test plans/protocols until they arrive onsite
- Regulators who do not ask “why” modifications were made to the protocol in the field before rejecting a test

Things Done Well

- Regulators who are direct with their expectations and are willing to work with tester and source to get a good representative test program
- Regulators who understand what changes in the method affect good data being collected
- Regulators who ask questions (at the right time) and observe all parts of the test

More Things Done Well

- Regulators who give positive feed back (if earned) to tester and source
- Regulators who review test plans and reports in a timely manner
  - Prior to the test with sufficient time to make necessary adjustments
  - Soon after the report submitted so the tester can recall what happened and why
- Regulators who are willing to make a decision in the field or call into the office for a decision so the test can proceed
- Testers understood our need to see leak checks and sampling procedures in tight spots, etc.
- All responders commented that regulators follow proper safety procedures

What Does This Mean for Us?

- We need to find ways to become **more knowledgeable** on the methods
  - Know what requirements in the method will affect good representative data and what won't make much of a difference
  - Find ways to share our knowledge
    - This workshop
    - OAQPS Monthly Calls
    - Talk to each other
    - Share checksheets for the methods
  - Find ways to get our "hands on" the methods

Things We Can Do

- Ask questions in the field
  - Not “gotcha” questions but ones to increase our knowledge
- Watching the “good” testers perform the methods
- Be open minded –
  - Why are they asking to deviate the method?
  - Will it affect the quality of the results?
  - Is it acceptable for your purpose?
- The more we know, the better we can audit the tester to ensure that good representative data is collected

Open Discussion/Experience

What problems are you aware of that you think others would benefit from discussing?

Your thoughts...

- Is this type of information you would like to see in future newsletters?

- How can we share knowledge
  - On experiences with testers?
  - On knowledge/experience with the methods?

Contact Information

DeAnna Oser
Unit Manager - Combustion and Minerals
Source Monitoring Unit
Georgia EPD
(404) 363-7120
DeAnna.Oser@dnr.state.ga.us