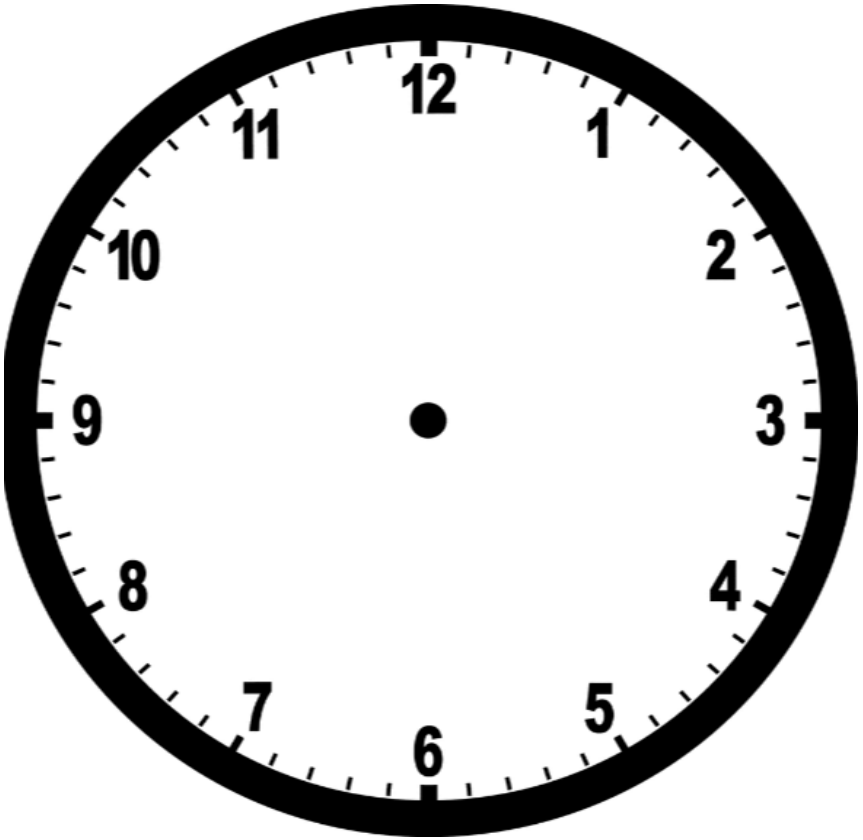
Custom Instrumentation Services Corporation

2016 USERS GROUP PRESENTATION:
REGULATORY CLARIFICATIONS

NO TIME FOR PART 60!



QA TESTING: Part 75 vs. Part 60

- **PART 75 PROVIDES INSTRUCTIONS ON BOTH TIME & LIMITS.**

- **PART 60 PROVIDESINSTRUCTIONS ON LIMITS ONLY. SO WHAT DO YOU DO WHEN TIME RUNS OUT!**

…BECAUSE THEY SAID SO!
(just not out loud.)

40 CFR 60 CGA

EPA (via email dated 05/16/2016-garnett.kim@epa.gov) indicates that "40 CFR 60, Appendix F, Procedure 1 does not specify whether or not the unit must be operating when performing a cylinder gas audit, CGA. It is *not* necessary to be operating in order to perform a CGA"

HIGH (CO_2 CGA) ANXIETY!

40 CFR 98.34(c)(6)

For certain applications where combined process emissions and combustion emissions are measured, the CO_2concentrations in the flue gas may be considerably higher than for combustion emissions alone. In such cases, the span of the CO_2 monitor may, if necessary, be set higher than the specified levels in the applicable regulations. If the CO_2 span value is set higher than 20 percent CO_2, the cylinder gas audits of the CO_2 monitor under appendix F to part 60 of this chapter may be performed at 40 to 60 percent and 80 to 100 percent of span, in lieu of the prescribed calibration levels of 5 to 8 percent CO_2 and 10 to 14 percent CO_2.

PEAKING OR PEAKING?

PART 75 PEAKING UNITS
vs.
PEAKING UNITS

- **Operational Peaking Unit (Peaker)-A Unit that generally runs only when there is a high or peak demand.**
- **Part 75 Peaking Unit- In general, a unit that operates ≤ 10% of its annual potential (Part 72 Capacity Factor ≤ 10%)**

- **For Example: A unit with a Maximum output of 100 MW/hr. has the potential to generate 876,000 MW/yr.**
  - **100 MW/hr. * 8760 op. hr./yr. = 876,000 MW/yr.-potential**
  - **Actual MW operated in the year = 66,750 MW/yr.-actual**
  - **CF = 66,750 / 876,000 * 100 = 7.6%**

THE USE OF SPECIAL K

Part 60: Subpart D vs Method 19

40 CFR 60, Subpart D:

K = MW * 2.59 E-9 lb.-mole/dscf ppmvd

40 CFR 60, Appendix A: Method 19:

K_NOX = 1.194 E-7 lb./dscf ppmvd

K_SO2 = 1.660 E-7 lb./dscf ppmvd

EPA (via email dated 09/02/2015-johnson.steffan@epa.gov) indicates “The concept of the K-factor unit conversion =(2.59E-09…)is unique to 60.45…” “…for the purposes of complying with Federal Standards… you would want to be certain to follow the requirements of the rule “ specified.

CAN BAD CALS BE ERASED?

OOPS! I MADE A BAD CAL.

- Calibrations and/or linearities that fail as a result of non-CEMS related issues, ***do not get reported.***
- Examples include: Gases reversed; gases not turned on, power failure to system etc.
- Non-CEMS related calibration fails ***do not necessarily*** affect other QA tests like the RATA.

EPA (via email dated 07/23/2013-schakenbach.john@epa.gov) indicates "If the auto cal was failed due to a problem unrelated to the CEMS, and the CEMS subsequently passed a calibration without any non-routine adjustments…the RATA does not need to be restarted."

EPA (via email dated 09/12/2016-nichols.louis@epa.gov) When asked if non-CEMS failed linearities or calibrations needed to be reported, the EPA responded "…do not report those non-tests."

HANDS OFF!

I wouldn't touch that if I were you!

Part 75 Emissions Monitoring Policy Manual – 2013

Question 10.4

Topic: Hands-off Requirement for QA Testing

Answer: For daily calibration error tests, hands-off means that the ***zero and upscale calibrations are performed in succession, with no adjustments*** to the monitor. For linearity tests and RATAs, the hands-off requirement means that ***only routine calibration adjustments*** (as defined in Appendix B, Section 2.1.3) ***are allowed during the test***. For example, if the linearity test for a peaking unit extends over more than one day and a routine daily calibration error test is performed before completing the linearity check, the monitor may be adjusted after the daily calibration error test, but only in a routine manner (i.e., so as to match (to the extent practicable) the calibration gas tag value) …

GOT BACKUP?

WHEN DAHS CAPUT! IS DATA LOST?

Question 14.3

Topic: DAHS Failure

Answer: Yes. Since the DAHS must "provide a continuous permanent record" of all measurements and required information, ***if a source has a device capable of collecting and storing data when the data acquisition system is not functioning properly, then the source has met the intent of the Part 75*** rule. If the analyzer is meeting performance specifications, the data can be stored in this device and the calculations performed later. Missing data procedures are not required in this circumstance…

MER-ACAL IN DC!

EPA ALLOWS US TO FOLLOW THEIR RULES ON FUEL SPECIFIC MER

EPA (via email dated 06/11/2015- nichols.louis@epa.gov) indicates that 40 CFR 75.33(c)(7) &(8) does indeed allow sites to use fuel specific maximum emission rate (MER) values instead of the worse-case-scenario fuel.

Note DAHS must have ability to perform separate data substitution for each fuel.

& OTHER STUFF

- 40 CFR 60, SUBPART KKKK – TWO LIMITS

Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).

- **INSTRUMENT AIR**

Question 9.10

Topic: Use of Instrument Air for Calibration

Question: May a utility use scrubbed instrument air, with an assumed O2 concentration of 20.9% O2, for calibration of an O2 monitor?

Answer: Yes. However, the O2 monitor span must be set greater than or equal to 21.0% O2. ***Furthermore, the utility must document that the conditioned gas will not contain concentrations of other gases that interfere with instrument O2 readings*** (a certification statement from the vendor of the gas scrubbing system or equipment will suffice). Also, in the QA/QC plan for the plant required by Appendix B, include routine maintenance and quality control procedures for ensuring that the instrument air continues to be properly cleaned.

- **PROCESS PLANTS**

EPA (via email dated 11/27/2013- nichols.louis@epa.gov) indicates that 40 CFR 75.33(c)(7) &(8) “We have had Cement Kilns and process heaters in the NOx Budget Program”.

Questions?

- Thanks –

Reggie Williams
Environmental Scientist
Custom Instrumentation Services Corporation (CiSCO)
Englewood, CO
(303) 790-1000
rwilliams@ciscocems.com