

The Avogadro Group, LLC

Source Emissions Testing and Emissions Specialists

EGU MACT Emission Testing and Monitoring Requirements

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Testing and Initial Compliance Requirements

- Performance Tests to demonstrate compliance

OR

- CEMS (for HCl, HF, SO₂, Hg)
or Hg sorbent traps
 - PM CEMS or CPMS
(continuous parameter monitoring system)
- (All valid data from first 30 days of unit operations
with a certified CEMS, PM CEMS or PM CPMS)

Performance Tests

- Filterable PM (EPA Method 5) *surrogate for metals* (Alternately, non-Hg metals EPA Method 29)
- Hg by CEMS or sorbent traps (Method 30B)
- HCl (EPA Method 26 or 320, or 26A if droplets) (Alternately, if unit has FGD, SO₂ by CEMS; valid data from first 30 days)
OR use HCl CEMS; valid data from first 30 days
- Oil-fired units; same as above, except:
 - no Hg, just FPM or metals
 - HF as well as HCl (test or CEMS) or in some cases, show fuel moisture < 1%

Performance Tests

- Other possibilities:
 - Low Emitting EGU – test to qualify as LEE (advantage: less frequent testing)
 - Previous recent test results may be OK
- PM CPMS – may reduce testing frequency; annual rather than quarterly
- PM CEMS – certification and audits
- Note: Dioxins and Furans – work practice standards – optimize combustion, etc.

Performance Test Issues

- You might include testing for other issues in the same program – PM_{2.5}, RATA, etc.
(be sure the test methods chosen will cover all the regulations and objectives)
- Test run times must be sufficient for detection
 - some of these limits are very low!
 - Run times may be long (4 hours plus)
- There are options (FPM or metals? HCl or SO₂? CEMS or test?) to consider and plan

Continuous Compliance Requirements

- If CEMS used for initial compliance:
 - use CEMS with QA requirements similar to 40 CFR Part 75 (annual RATA and quarterly audits)
- If stack tests used for initial compliance:
 - Quarterly tests - FPM (or metals), HCl/HF
- Exceptions...

Continuous Compliance Requirements

- Exceptions...
- PM CPMS with Operating Limit
 - test annually, not quarterly
- If LEE for Hg, just annual Method 30B test
- If LEE for non-Hg, reduced test frequency
- If oil-fired using quarterly HCl/HF tests, need monitoring plan to ensure compliance
- If limited-use oil-fired, work practice standards with optimization (no testing)

Reporting and Recordkeeping

- Notifications – 60 days prior to test, then compliance status 60 days after test
 - Electronic Reporting Tool – WebFIRE (there have been issues with this system)
- Semi-annual compliance reports (unless using CEMS – ECMPS like Part 75)
- Keep records of notifications, reports, data, etc.

Low Emission Limits and Testing

- FPM 0.3 lb/MWh (existing units)
0.007 lb/MWh (new units)
 - this is only about, at best, 3X the detection limit for a 2-hour test run (so, longer runs may be advisable or required)
- Hg 0.013 lb/GWh (some existing units)
0.0002 lb/GWh (some new units)
 - this is about 5 to 10X the practical limit for a 30-minute test run (so should be OK)

Summary

- Decide how to conduct performance test
 - stack test, CEMS, CPMS?
 - FPM or metals, HCl or SO₂, etc.
- Decide how to determine continuous compliance (this likely drives the decision)
 - Quarterly tests, CEMS, CPMS, etc.
- Plan carefully – operations, testing schedule, notifications and reporting
 - Quality testing will save overall cost!

Questions ???

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