
MATS Rule Implementation

**EPRI 2015 CEMS User Group Conference
Richmond, VA – June 3, 2015**

**By Dru Sanders
RMB Consulting & Research, Inc.
(919) 791-3128**

MATS Rule Implementation

- ◆ Existing Unit Compliance Date = April 16, 2015
 - Demonstrate compliance no later than 180 days after April 16, 2015
 - » Equates to October 13, 2015
 - Includes CEMS installation/certification, boiler tune-ups and performance tests
 - Allow time to obtain 30-boiler operating day averages
 - » Must have 30 days of data prior to October 13, 2015
 - Post April 16, 2015 potential compliance risk
- ◆ May Apply for One-Year Extension

MATS Rule Implementation

- ◆ Subpart UUUUU Relies on Part 63 General Provisions
 - §63.7 general provisions for performance tests
 - §63.8 general provisions for CEMS (CMS) performance evaluation tests
 - §63.9 notification requirements
 - §63.10 recordkeeping and reporting requirements

MATS Rule Implementation

- ◆ Site-Specific Monitoring Plan (SSMP)
- ◆ Site-Specific Performance Evaluation Plan (for CEMS)
- ◆ Site-Specific Performance Test Plan (for stack testing)
- ◆ Quality Assurance (QA) Plans
- ◆ Boiler Tune-ups
- ◆ Performance Evaluation & Test Reports
- ◆ Notification of Compliance Status

Site-Specific Monitoring Plan

- ◆ Site-Specific Monitoring Plan (SSMP) Contents
 - Section 63.10000(d)
 - Required for CEMS and CMS
 - Develop (and submit if requested) at least 60 days prior to performance evaluation tests
 - Not required for CEMS operating in accordance with Parts 60 and/or 75 (Section 63.10000(d)(2))
 - More detail than a standard Part 75 Monitoring Plan
 - Recommended as an in-house reference document

Site-Specific Monitoring Plan

- ◆ Site-Specific Monitoring Plan continued
 - Installation of CEMS relative to unit's pollution control device(s)
 - Performance & equipment specifications for CEMS & DAHS
 - Schedule for performing initial & periodic performance evaluations
 - Performance evaluations & acceptance criteria, including ongoing QA procedures

Site-Specific Monitoring Plan

- ◆ Site-Specific Monitoring Plan continued
 - Ongoing operation & maintenance procedures,
 - Conditions that define when CEMS are out-of-control & corrective action, and
 - Ongoing recordkeeping & reporting procedures.
 - Recommend including other MATS compliance (i.e., quarterly testing, Hg LEE testing)

Site-Specific Monitoring Plan

- ◆ Site-Specific Monitoring Plan continued
 - If using quarterly PM testing & Startup Definition 2, Section 63.10010(1) Site-Specific Monitoring Plan
 - » Monitoring system installation
 - » Performance & equipment specifications
 - » Ongoing operation & maintenance procedures
 - » Ongoing recordkeeping & reporting procedures
 - » Operate & maintain monitoring system according to Site-Specific Monitoring Plan

ECMPS & Hardcopy Monitoring Plan

- ◆ Hg CEMS Monitoring Plan (Section 7.1.1, Appendix A, Subpart UUUUU)
- ◆ HCl CEMS Monitoring Plan (Section 10.1.1, Appendix B, Subpart UUUUU)
 - ECMPS Monitoring Plan printout,
 - Data flow diagrams,
 - Test protocols, and
 - Monitor span & range calculations.
- ◆ Overlap Between SSMP Content
- ◆ Due At Least 21 Days Prior to Compliance Date

Site-Specific Performance Evaluation Plan

- ◆ Site-Specific Performance Evaluation Plan
 - Sections 63.10007(a) and 63.8(e)
 - For new Hg, PM and HCl CEMS
 - Develop (and submit if requested) at least 60 days prior to first performance evaluation test (initial certification)
 - Include discussion of all performance evaluation (certification) tests

Site-Specific Performance Test Plan

- ◆ Site-Specific Performance Test Plan
 - Sections 63.10007(a) and 63.7(b)
 - For MATS compliance testing (quarterly compliance testing, Hg LEE demonstration testing)
 - Develop (and submit if requested) at least 60 days prior to first performance test (compliance test)
- ◆ May Be Supplemented By Test Protocol

Site-Specific Performance Test Plan

- ◆ Blind Audit Sample Program (June 16, 2013)
 - Required by Sections 60.8(g) and 63.7(c)(2)(iii)
 - Blind audits must be used for MATS HCl testing
 - Allow at least 30 days for delivery of sample
 - <http://www.epa.gov/ttn/emc/email.html#audit>
 - <http://www.nelac-institute.org/ssas/calctool.php>

Notifications

◆ Notification of Performance Tests

- Section 63.10030(d) – “at least 30 days before the performance test is scheduled”
- Sections 63.7(b), 63.8(e)(2) & 63.9(e) – “at least 60 calendar days before the performance test”
- Section 63.9(j) – submit notification of performance test schedule change “within 15 calendar days after the change”

Quality Assurance Plan

- ◆ Revise To Include Hg, HCl and PM CEMS QA/QC Requirements, as applicable
- ◆ Recommend Incorporating Into Existing Part 75 QA Plan
- ◆ Linearity check required for SO₂ analyzers used for MATS compliance with span values ≤ 30 ppm
 - Different from Subpart Da cylinder gas audit requirement

Quality Assurance Plan

◆ Hg CEMS

- Subpart UUUUU, Appendix A
- QA test frequency based on “unit QA operating quarters”
- Linearity check & RATA grace period provisions
- No grace period for weekly system integrity check
- Conditionally valid data procedures
- Recommend including Hg generator QA requirements to maintain NIST-traceability

Quality Assurance Plan

- ◆ Hg Sorbent Trap Monitoring Systems
 - Subpart UUUUU, Appendix A and Performance Specification 12B
 - Dry gas meter, mass flow meter, temperature & barometric pressure sensor QA tests conducted “quarterly” per PS-12B
 - RATA frequency based on “unit QA operating quarters”
 - RATA grace period provisions
 - No conditionally valid data periods

Quality Assurance Plan

◆ PM CEMS

- Procedure 2, Appendix F, 40 CFR 60
- Not required to be online for daily calibrations
- QA tests conducted on a calendar quarter basis
- Quarterly tests separated by at least 2 months (versus 30 days for Part 75 linearity checks)
- Relative Response Audit (RRA) at least once annually
- Relative Correlation Audit (RCA) at least once every three years
- No grace period provisions & no conditionally valid data procedures

Quality Assurance Plan

◆ HCI CEMS

- Subpart UUUUU, Appendix B and Procedure 6, Appendix F, 40 CFR 60
- QA test frequency based on “unit QA operating quarters”
- Grace period provisions
- Conditionally valid data procedures

Boiler Tune-ups

◆ Boiler Performance Tune-ups

- Use of prior tune-ups - §63.10005(f)
 - » Existing units without neural network - 42 months
 - » Existing units with neural network – 54 months
- Ongoing boiler performance tune-ups - §63.100021(e)
 - » Existing units without neural network - 36 months
 - » Existing units with neural network – 48 months

Boiler Tune-ups

- ◆ Boiler Performance Tune-ups - §63.10021(e)
 - Inspect burners & combustion controls
 - » Repairs that affect NO_x & CO – Within 3 months
 - » Other repairs on schedule determined by operator
 - » Don't forget these!
 - Inspect & adjust flame pattern
 - Observe damper operations
 - Evaluate windbox pressures & air proportions
 - Inspect air-to-fuel ratio system

Boiler Tune-ups

◆ Boiler Performance Tune-ups

- Pre- and post-adjustment NO_x, CO and O₂ emissions data
 - » Plant CEMS data (e.g., stack, process CO, inlet/outlet CEMS)
 - » Portable monitors may be used
- §63.10005(e)(8) – Maintain onsite, and submit if requested, boiler tune-up report
- Boiler tune-up documentation is critical

Performance Test Reports

- ◆ Performance Evaluation and/or Test Reports
 - Sections 63.10031(f), 63.7 and 63.8(e)
 - No later sixty (60) days after completing performance tests or CEMS performance evaluation tests
 - Example tests include Hg & SO₂ CEMS RATAs, quarterly performance tests, Hg LEE tests, PM CEMS RRAs and RCAs
 - Submitted as a .pdf file via ECMPS

Performance Evaluation Reports

- ◆ Hg and HCl CEMS Performance Evaluation (Initial Certification) Results
 - Submitted electronically via ECMPS
 - RATA report also submitted as .pdf via ECMPS
 - Recommend developing a hardcopy report similar to Part 75 certification application
- ◆ PM CEMS Initial Certification (PS-11) Results Not Submitted To EPA
- ◆ Require Test Contractor To Prepare Distinct MATS Reports

Notification of Compliance Status

- ◆ Notification of Compliance Status
 - Sections 63.10030(e) and 63.9(h)
 - No later than the close of business following the 60th day after completing relevant compliance demonstration (May require separate submittals)
 - Identify input or output emission limits for compliance
 - Identify use of Startup Definition 1 or 2
 - Signed and certified by “responsible official”
 - Submitted via ECMPS “MATS PDF SUBMIT”

Quarterly Reports

- ◆ Quarterly Reports - Hg, SO₂ and HCl CEMS
 - Monitoring Plan, QA tests and emissions data submitted via ECMPS Client Tool
 - No later than 30 days after the end of each calendar quarter
 - EPA has published recent draft revisions to the ECMPS Reporting Instructions

Quarterly Reports

- ◆ Quarterly Reports – PM CEMS and PM CPMS
 - Submitted via ECMPS “MATS PDF SUBMIT”
 - No later than 60 days after the end of the reporting period ending on March 31, June 30, September 30 & December 31
 - Report includes all 30-boiler operating day rolling averages

Semi-Annual Compliance Reports

◆ Semi-Annual Compliance Reports

- Sections 63.10031(b) & 63.10(e) (See Table 8)
- Initial report for existing units due no later than January 31, 2016 (1st date that occurs 180 days after applicable compliance date)
 - » Unique report
- Future reports postmarked or submitted electronically no later than July 31 and January 31 of each calendar year
- Submit via ECMPS “MATS PDF SUBMIT”

Semi-Annual Compliance Reports

- ◆ Semi-Annual Compliance Report continued
 - Summary report content required by §63.10(e)(3)(vi)
 - Total fuel usage
 - Notification of new fuel(s) combusted
 - Date of most recent boiler performance tune-up
 - Deviations from any emission limit, operating limit or work practice requirement
 - Excess emissions - §63.10031(d)

Semi-Annual Compliance Reports

- ◆ Semi-Annual Compliance Report continued
 - Excess emissions - §§63.10031(d) & 63.10(e)(3)
 - » Submit with the Semi-Annual Compliance Report
 - » Excess Emission Summary Report required if (1) the excess emissions are less than 1% of the total operating time for the reporting period and (2) the CEMS downtime is less than 5% of the total operating time for the reporting period [§63.10(e)(3)(vii)]
 - » If these criteria are exceeded, then submit detailed Excess Emission Report

Semi-Annual Compliance Reports

- ◆ Semi-Annual Compliance Report Contents If Using Startup Definition 2
 - Maximum clean fuel storage capacity & maximum hourly heat input for each clean fuel
 - For each startup
 - » Date & time of clean fuels combusted
 - » Electrical load for each hour of startup
 - » Date & time that non-clean fuel combustion begins
 - » Date & time clean fuel combustion ends

Semi-Annual Compliance Reports

- ◆ Semi-Annual Compliance Report Contents, If Using Startup Definition 2
 - For each shutdown
 - » Date & time of clean fuels combustion begins
 - » Electrical load for each hour of startup
 - » Date & time that non-clean fuel combustion ends
 - » Date & time clean fuel combustion ends