

Title V Periodic Monitoring



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What we're not going to talk about

- Excess emissions (2D .0535), deviations and reporting thereof
- Continuous emissions or opacity monitors (CEMS/COMS)
- Compliance Assurance Monitoring (CAM)
- Deemed in noncompliance (except once)
- VOC Work Practices (2D .0958)
- NO_x trading: Acid Rain, NO_x SIP call
- Exclusionary Rules in 2Q .0800

Why Periodic Monitoring?

- 40 CFR §70.6(a)(3) *Monitoring and related recordkeeping and reporting requirements*
- (i) Each permit shall contain the following requirements with respect to monitoring:
 - (B) Where the applicable requirement does not require periodic testing or ... monitoring ..., periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit....
 - Such monitoring requirements shall assure use of terms, test methods, units, averaging periods, and other statistical conventions consistent with the applicable requirement.

... *Recordkeeping?*

- 40 CFR §70.6(a)(3)(ii) With respect to recordkeeping, the permit shall incorporate all applicable recordkeeping requirements and require, where applicable, the following:
 - (A) Records of required monitoring information that include the following:
 - (1) The date, place as defined in the permit, and time of sampling or measurements;
 - (2) The date(s) analyses were performed;
 - (3) The company or entity that performed the analyses;
 - (4) The analytical techniques or methods used;
 - (5) The results of such analyses; and

... Recordkeeping?

- 40 CFR §70.6(a)(3)(ii) (B) Retention of records of all required monitoring data and ... for a period of at least 5 years Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

... Reporting?

- 40 CFR §70.6(a)(3)(iii) With respect to reporting, the permit shall incorporate all applicable reporting requirements and require the following:
 - (A) Submittal of reports of any required monitoring at least every 6 months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with §70.5(d) of this part.
 - (B) Prompt reporting of deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. The permitting authority shall define “prompt” in relation to the degree and type of deviation likely to occur and the applicable requirements.

2D .0503 Particulates from Fuel Burning Indirect Heat Exchangers

- Applies to combustion of fuels other than wood
- Potential lb/million Btu emissions from NG and fuel oils below standard
- No monitoring required

2D .0504 Particulates from Wood Burning Indirect Heat Exchangers

- Applies to combustion of wood or wood mixed with other fuels
- Uncontrolled lb/million Btu emissions from may be above or below standard depending on boiler type
- Most wood-fired boilers have PM control for PM and/or visible emissions
- Monitor control device parameters and/or I&M

2D .0515 Particulates from Miscellaneous Industrial Processes

- Uncontrolled lb/hr (variable based on production rate) emissions from may be above or below standard
- Uncontrolled processes with potential emissions below the standard typically require no monitoring
- Controlled processes monitor control device parameters and/or I&M
- Similar monitoring for other .0500 process standards
- i.e. Incinerators, Fertilizer Manufacturing, Pulp and Paper, Lightweight Aggregate, etc.

2D .0516 Sulfur Dioxide Emissions from Combustion Sources

- Potential lb/million Btu emissions from NG, wood and most fuel oils below standard
- No monitoring required for NG, wood and most fuel oils
- No. 6 fuel oil limited to 2.1% sulfur
- Monitoring for No. 6 fuel oil based on fuel supplier certification
- Additional monitoring for recycled fuel oils for sulfur, halogens, metals

2D .0521 Control of Visible Emissions

- No monitoring required for combustion of NG and distillate fuel oils in traditional combustion sources (boilers, heaters, ovens)
- Daily, weekly, monthly “normal” VE observations for combustion of residual oils and some other combustion processes
- Frequency can be increased as needed by request of the Regional Office

2D .0524 New Source Performance Standards

2D .1100 Maximum Achievable Control Technology

- Monitoring specific to Part 60 or Part 63 standard
- Add deemed in noncompliance for pre-1990 standards

2D .0530 Prevention of Significant Deterioration

2D .0531 Sources in Nonattainment Area

- Monitoring specific to process, controls (BACT/LAER), fuels, raw materials, pollutant
- May contain any of the previously discussed elements and/or others

2D .0900 Volatile Organic Compounds

2D .0903 Recordkeeping: Reporting: Monitoring

- (a) The owner or operator of any volatile organic compound emission source or control equipment shall:
 - (1) install, operate, and maintain process and control equipment monitoring instruments or procedures as necessary to comply with the requirements of this Section; and
 - (2) maintain, in writing, data and reports relating to monitoring instruments or procedures which will, upon review, document the compliance status of the volatile organic compound emission source or control equipment; such data and reports shall, as a minimum, be maintained daily.

2D .1100 Control of Toxic Air Pollutants

2Q .0711 Emission Rates Requiring a Permit

- Monitoring to ensure compliance with modeled emission limits (2D .1100) or TPERs (2Q .0711)
- May contain any of the previously discussed elements and/or others such as volatile TAP content of raw materials or coatings

2Q .0317 Avoidance Conditions

- Used to avoid applicability of PSD/NAA NSR, MACT, CAM?
- (b) The Director may require the monitoring, recordkeeping, and reporting necessary to assure compliance with the terms and conditions placed in the permit to remove the applicability of a rule.
- May contain any of the previously discussed elements and/or others

Recordkeeping and Reporting

- Relatively straightforward
 - Keep records of all monitoring
 - Records may be manual or electronic
 - Submit semiannual summary of recordkeeping
 - See 2D .0600 for additional details regarding SSM, Appendix P, large boilers (> 250 million Btu/hr)
 - Stack testing is always an option

Examples (Quiz)



- Boilers
 - Fuel oil
 - Wood
- Processes
 - Particulate
 - VOC

Non NSPS-affected Boiler

- NG, No. 2, No. 6 fuel oil-fired boiler
- No emission controls
- 2D .0503 - Particulate
 - No monitoring
- 2D .0516 - Sulfur Dioxide
 - Fuel certification for 2.1% No. 6
- 2D .0521 – Visible Emissions
 - Daily VE when burning No. 6

Non NSPS-affected Boiler

- Wood-fired boiler
- Multicyclone/bagfilter controls
- 2D .0504 - Particulate
 - Control device I&M
- 2D .0516 - Sulfur Dioxide
 - No monitoring
- 2D .0521 – Visible Emissions
 - Daily VE

Particulate Generating Process



- Wet Scrubber Control
- 2D .0515 - Particulate
 - Pressure drop and flow rate
 - Control device I&M
- 2D .0521 – Visible Emissions
 - Daily VE

VOC Emitting Process



- PSD Avoidance 40 tpy
- Combustion Control
- 2D .0958 Work Practice
 - Per rule
- 2Q .0317 – PSD Avoidance
 - Material usage and VOC content
 - Combustion temperature
 - Control device I&M

Questions?

