

CAM
(Compliance Assurance Monitoring)
Major Source Monitoring For Dummies

Presentation Topics

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Definition

- Compliance Assurance Monitoring (CAM).
- A monitoring approach that has evolved from the 1990 CAA Amendments
 - Enhanced Monitoring (engineers).
 - Credible Evidence (lawyers).
- Provides reasonable assurance of compliance for large sources.

Definition

- **CAM** is essentially a requirement for Title V sources to submit a monitoring plan that must be approved by the permitting authority and incorporated into the facility's Title V permit. In addition to identifying what parameters will be monitored and how data will be collected and verified, this plan must specify measures that will assure return to compliance in the event of excursions or exceedances.

Supporting Definitions

- **Exceedance** – condition detected by monitoring (in units of pollutant emissions) that emissions are beyond limit.
- **Excursion** – departure from indicator range established in accordance with Part 64.
- **Pollutant-Specific Emissions Unit (PSEU)** – controlled source of a regulated pollutant subject to CAM requirements.
- **Quality Improvement Plan (QIP)** – a written plan that will be used by the facility to evaluate problems that affect the performance of the control equipment.

Applicability

- CAM is required for facilities where all the following apply:
 - Required to obtain a Title V permit,
 - Have controlled emissions units (PSEU),
 - Emit compounds subject to an applicable rule, **and**
 - Have uncontrolled emissions greater than major source threshold.

Applicability

- Generally, CAM will apply to:
 - Combustion sources with dust collectors (opacity monitors don't measure particulate emissions).
 - Some VOC sources.
- Most HAP sources are exempted by new MACT rules.
- Most Ohio permits typically require monitoring even though CAM may not apply.

Applicability

- Where applicable, CAM plans must be prepared for each affected PSEU.
 - A given emissions unit may require multiple CAM plans if it constitutes several PSEUs (if the unit emits major quantities of multiple pollutants or if multiple rules apply to the units).
 - Paradoxically, several emissions units may be combined into one CAM plan if the combined units constitute a single PSEU (a facility-wide CAM plan may be sufficient for sources subject to SIP requirements).

Timing

- CAM must be included in permits for Title V applications received after April 22, 1998.
 - Major modifications
 - New permits
 - Renewals
- Other monitoring sufficient to assure compliance must be specified in the interim.

Review of Available Guidance

- All are available on
<L:\Reference\Reference Guides\CAM>
- Federal Register notices:
 - Final Rules (40 CFR Part 64, Parts 70 and 71).
 - Preambles (40 CFR Parts 51, 52, 60, and 61; Parts 64, 70, and 71; and Parts 70 and 71 – Supplement).
- *Periodic Monitoring Guidance.*
- *Technical Guidance Document* and supplements.
- *Technical Reference Document* and supplements.

Necessary Components of CAM Plans

Indicator	What will be monitored?
Measurement approach	How will monitoring be conducted?
Indicator range	What constitutes an excursion or exceedance?
Data representativeness	How/where will monitoring data be obtained?
QA/QC	What are performance criteria?
Monitoring frequency	How often will monitoring be conducted?
Data collection procedures	How will monitoring data be managed?
Averaging period	How will monitoring data be reduced/presented?
QIP threshold	How many excursions/exceedances will be allowed before Quality Improvement Plan will be initiated?

Examples of CAM Plans

Indicator	Combustion T°
Measurement approach	Thermocouple
Indicator range	Excursion: < 1500°F
Data representativeness	Installed in incinerator chamber
QA/QC	Redundant thermocouple
Monitoring frequency	Measure continuously (± 30 °F) (10 sec)
Data collection procedures	Record continuously on chart recorder
Averaging period	None
QIP threshold	No more than six excursions

Examples of CAM Plans

Indicator	Outlet CO concentration
Measurement approach	CO CEMS
Indicator range	Excursion: >50 ppmv
Data representativeness	PS 4, 40 CFR 60, Appendix B
QA/QC	Span gas
Monitoring frequency	Daily zero Measure continuously
Data collection procedures	Record 1-minute averages by DAS (electronic)
Averaging period	1-hr average
QIP threshold	No more than 10 excursions

- ### Permitting Issues
- No direction from Ohio EPA on format of CAM plans for Title V permits.
 - Field offices will be charged with the initial review and finding of acceptability for CAM plans submitted by permittees – no guidance has yet been issued by CO regarding how these plans will be evaluated.
 - “New” Title V permits as well as renewed Title V permits must include CAM plan with application submittal.

- ### Enforcement Issues
- USEPA guidance and reference documents are opposed by some industry groups (“regulation by guidance”).
 - Regulatory approval of CAM plans is untested.

Acronym Quiz

BATNEEC

Acronym Quiz

Best Available Technology Not Entailing Excessive Costs

(BATNEEC)

Acronym Quiz
(Part 2)

CATNIP

Acronym Quiz
(Part 2)

Cheapest Available Technology Not
Incurring Prosecution

(CATNIP)

Acronym Quiz
(Part 3)

BANANA

Acronym Quiz
(Part 3)

Build Absolutely Nothing Anywhere Near
Anyone

(BANANA)
