

Frequently Asked Questions (FAQs) Concerning the Compliance Assurance Monitoring (CAM) Rule

The following questions and responses concerning implementation of the Compliance Assurance Monitoring (CAM) Rule are arranged in three groups. The first group contains general background information about the CAM package. The second group contains specific information related to the CAM rule, and the third group contains information related to the changes in operating permit program rules brought about by the CAM rule.

General Background Information

Question 1. When will the rule take effect?

Response 1. The rule is effective November 21, 1997, which is thirty days after the Federal Register publication date of October 22, 1997. This means that the changes to parts 70 and 71 are effective on November 21, 1997. See 62 FR 54900. Even though the effective date has occurred, **most owners and operators will not need to submit CAM plans until renewal of their initial permits.** However, owners or operators of existing or new large pollutant specific emission units (PSEUs) - those whose post-control emissions exceed or are equivalent to the major source threshold - that do not have complete permit applications by April 20, 1998 - which is 180 days after publication of the rule in the Federal Register - will need to include CAM plans as part of their permit applications. See section 64.5(a) and (b).

Chart I shown below contains the CAM plan due dates. Note that the term “other unit” means a unit whose post-control emissions are less than the major source threshold.

Chart I. CAM Plan Due Dates

Pollutant Specific Emission Unit (PSEU) Size	CAM Plan Due as Part of the Operating Permit INITIAL Application	CAM Plan Due as Part of the Operating Permit REVISION Application	CAM Plan Due as Part of the Operating Permit RENEWAL Application
Large	If permit application is not complete by 4/20/98 OR if PSEU part of a greenfield permit application after 4/20/98	If a significant permit revision at an existing title V source	If application is complete before 4/20/98
Other	Never	Never	Always

Question 2. How many pollutant specific emission units will be covered?

Response 2. The CAM rule will affect about 27,000 PSEUs (about 3,000 large PSEUs and 24,000 other PSEUs) at about 9,000 sources. See 62 FR 54905. Preparation of CAM plans for about forty percent of these units should be easier, since these units already use monitoring acceptable for CAM purposes. See Table IV-27, Regulatory Impact Analysis.

CAM Rule Information

Question 3. What kind of equipment is affected by the CAM rule?

Response 3. The CAM rule applies to each PSEU that meets a three-part test. The PSEU must:

- a. be subject to an emission limitation or standard, and
- b. use a control device to achieve compliance, and
- c. have pre-control emissions that exceed or are equivalent to the major source threshold.

Note that the term “control device” means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The term “control device” does not include passive methods such as lids or seals or inherent process equipment provided for safety or material recovery. See section 64.2(a).

Question 4. What kinds of equipment were excluded from the CAM rule? Why were exclusions granted?

Response 4. The exemptions in part 64 are related to rules or emissions limitations and not to specific equipment. The exemptions are granted on the basis of monitoring requirements in those rules or emissions limitations being inherently sufficient to provide assurance of compliance without the additional burden of part 64 requirements. For those reasons, the specific exemptions in part 64 apply as follows:

- a. those subject to 111 or 112 standards promulgated after 11/15/90, since those standards have been and will be designed with monitoring that provides a reasonable assurance of compliance;
- b. those subject to the acid rain program, emissions trading programs such as the acid rain program, emissions caps like those provided in the Intel P4 permit, or continuous compliance determination methods, i.e., where a regulatory requirement specifies a monitoring method for compliance, because CAM is believed to be redundant for these units [note that permitting authorities should ensure that these units have or get monitoring sufficient for trading emission credits in the proper currency]
- c. certain municipally-owned utility units, as defined in 40 CFR 72.2, that produce electricity during periods of peak electrical demand or emergency situations since

these periods or situations are infrequent.

To the extent that the pollutant-specific emissions units subject to these exempted rules or emissions limitations (or are municipally-owned peaking units) are subject to other rules or emissions limitations even for the same pollutant (e.g., post-1990 40 CFR part 60 NSPS for PM and a SIP limit for PM), the source owner must address the part 64, CAM, requirements for assuring compliance with the non-exempt rules or emissions limitations. That monitoring may be based on the monitoring required for the exempted rule but the permit submittal must include justification that the selected monitoring will be sufficient to satisfy part 64 and provide a reasonable assurance of compliance with the non-exempt rule or emissions limitation.

See section 64.2(b).

Question 5. What does the CAM rule require of owners and operators?

Response 5. The CAM rule aims to have owners and operators maintain their control devices at the levels that assure compliance. The rule allows owners and operators to design CAM plans on current requirements and operating practices, to select representative parameters upon which compliance can be assured, to establish indicator ranges - or procedures for setting the indicator ranges - for the parameters, to use performance testing and other information to verify the parameters and ranges, and to correct control device performance problems as expeditiously as practicable. See sections 64.3 and 64.7.

Question 6. What are the elements of a CAM plan?

Response 6. A CAM plan must:

- a. Describe the indicators to be monitored;
- b. Describe the ranges or the process to set indicator ranges;
- c. Describe the performance criteria for the monitoring, including
 - specifications for obtaining representative data
 - verification procedures to confirm the monitoring's operational status
 - quality assurance and control procedures
 - monitoring frequency
 - 4 times per hour (minimum) if post control emissions are equal to or exceed the major source threshold
 - 1 time per day (minimum) if post control emissions are less than the major source threshold
 - data averaging period;
- d. Provide a justification for the use of parameters, ranges, and monitoring approach;
- e. Provide emissions test data; and, if necessary,
- f. Provide an implementation plan for installing, testing, and operating the monitoring.

See section 64.4.

Note that permits are required to have the following items:

- a. The approved monitoring approach, including the indicators - or the means to measure the indicators - to be monitored;
- b. A definition of exceedences or excursions;
- c. The duty to conduct monitoring;
- d. Minimum data availability and averaging period requirements; and
- e. Milestones for testing, installation, or final verification.

See section 64.6(c).

Question 7. What guidance / outreach is planned for this rule?

Response 7. The OAQPS has released a draft CAM Technical Guidance Document that describes the rule implementation process, includes example control device monitoring illustrations, and has case studies from actual situations. The Technical Guidance Document can be found on the Technology Transfer Network at “<http://134.67.104.12/html/emtic/cam.htm>”.

The illustrations show a way of meeting the CAM requirements by identifying a control method and monitoring approach for a specific pollutant. Additional CAM illustrations are under consideration, including wet scrubbers for sulfur dioxide, carbon adsorbers for volatile organic compounds, selective catalytic reduction for nitrogen oxides, flares for carbon monoxide, and electrostatic precipitators for particulate matter. In addition, the Emission Measurement Center and AWMA plan on sponsoring a number of workshops beginning in January. A series of satellite broadcasts is also planned to aid permitting authorities in reviewing permit applications.

An example CAM illustration for particulate matter control using a fabric filter is shown in Chart II.

Chart II. Example CAM Illustration

EXAMPLE COMPLIANCE ASSURANCE MONITORING PLAN: FABRIC FILTER FOR PM CONTROL	
I.	<u>Background</u>
A.	<u>Emissions Unit</u> Description: Line 3 Particleboard Sander Identification: M2 Facility: One Facility in Anytown, USA
B.	<u>Applicable Regulation, Emission Limit, and Monitoring Requirements</u> Regulation No.: OAR 340-21, permit Emission limits: Particulate matter: 0.1 gr/dscf, 3 hr avg. Monitoring requirements: Visible emissions, periodic monitoring (M22)
C.	<u>Control Technology</u> Pulse-jet baghouse operated under negative pressure.

**EXAMPLE COMPLIANCE ASSURANCE MONITORING PLAN:
FABRIC FILTER FOR PM CONTROL**

II. Monitoring Approach

The key elements of the monitoring approach are presented below:

A. Indicator

Visible emissions will be used as an indicator.

B. Measurement Approach

Visible emissions from the baghouse exhaust will be monitored daily using EPA Reference Method 22-like procedures.

C. Indicator Range

The indicator level is no visible emissions.

D. QIP Threshold

The QIP threshold is five excursions in a six month reporting period.

E. Performance Criteria

Data Representativeness: Measurements are being made at the emission point.

Verification of Operational Status: Not applicable.

QA / QC Practices and Criteria: The observer will be a Method 22 trained observer and follow Method 22-like procedures.

Monitoring Frequency and Data Collection Procedure: A six-minute Method 22-like observation will be performed daily.

Chart II (continued). Example CAM Illustration

**EXAMPLE COMPLIANCE ASSURANCE MONITORING PLAN:
FABRIC FILTER FOR PM CONTROL**

III. Justification

A. Background

This facility manufactures particleboard. The pollutant-specific emission unit is the Line No. Sander, which is used to sand the particleboard to the customer's desired thickness. It is controlled by a Western Pneumatic pulse-jet baghouse with 542 bags, which filters approximately 50,000 ft³ of air from the sander.

B. Rationale for Selection of Performance Indicator

Visible emissions was selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate emission standard. When the baghouse is operating properly, there will not be any visible emissions from the exhaust. Any increase in visible emissions indicates reduced performance of a particulate control device, therefore, the presence of visible emissions is used as a performance indicator.

C. Rationale for Selection of Indicator Level

The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. An indicator range of no visible emissions was selected because: (1) an increase in visible emissions is indicative of an increase in particulate emissions; and (2) a monitoring technique which does not require a Method 9 certified observer is desired. Although RM 22 applies to fugitive sources, the visible/no visible emissions observation technique of RM-22 can be applied to ducted emissions; i.e., Method 22-like observations.

The selected QIP threshold for baghouse visible emissions is 5 excursions in a 6-month reporting period. This level is 3 percent of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

See the Technical Guidance Document on the EMTIC bulletin board on the TTN website at "<http://134.67.104.12/html/emtic/cam.htm>".

Question 8. How are CAM plans revised?

Response 8. CAM plans are to be revised in accordance with the permit modification processes given in parts 70 and 71. See section 8.2.1 of the Response to Comments document and section 64.7(e). Note that revisions to indicator ranges can occur without using the part 70 permits revision process, provided that the permittee has submitted and the permitting authority approved as part of the CAM plan an indicator or indicator range setting process. See section 64.4(a)(2).

Changes to the Operating Permit Programs Brought About by the CAM Rule

Question 9. What changes occur in parts 70.6 and 71.6 of the operating permit programs regulations?

Response 9. In order to better integrate the CAM rule with the operating permit programs regulations, the following changes were made to the permit content sections (70.6 and 71.6) of the operating permits program regulations:

- a. Streamlining for monitoring and testing requirements is now contained in the regulation. Prior to this change, streamlining was allowed by policy via White Paper Number 2. See Chart III.
- b. The revised language clarifies part 71's definition of deviation and states that a deviation is not always a violation. See Chart IV.
- c. The revised language in sections 70.6(c) and 71.6(c) requires owners and operators to identify whether the data collection methods used to make the compliance certifications were continuous or intermittent, to identify the compliance status and to identify as possible exceptions to compliance any deviations, exceedences, or excursions. The former language required owners and operators to identify the compliance status and whether compliance was continuous or intermittent. The Agency believes these revisions provide permitting authorities and the public with more specific information concerning a source's compliance. See Chart V.

Chart III. Streamlining Language

Former language	Revised language
<p>70.6(a)(3)(I)(A) - All emissions monitoring and analysis procedures or test methods required under the applicable requirements, including any procedures and methods promulgated pursuant to sections 114(a)(3) or 504(b) of the Act;</p>	<p>70.6(a)(3)(I)(A) - All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including part 64 of this chapter and any other procedures and methods that may be promulgated pursuant to sections 114(a)(3) or 504(b) of the Act. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining;</p>
<p>71.6(a)(3)(I)(A) - All emissions monitoring and analysis procedures or test methods required under the applicable requirements, including any procedures and methods promulgated pursuant to sections 114(a)(3) or 504(b) of the Act;</p>	<p>71.6(a)(3)(I)(A) - All monitoring and analysis procedures or test methods required under applicable monitoring and testing requirements, including part 64 of this chapter and any other procedures and methods that may be promulgated pursuant to sections 114(a)(3) or 504(b) of the Act. If more than one monitoring or testing requirement applies, the permit may specify a streamlined set of monitoring or testing provisions provided the specified monitoring or testing is adequate to assure compliance at least to the same extent as the monitoring or testing applicable requirements that are not included in the permit as a result of such streamlining;</p>

Chart IV. Definition of Deviation

Former language	Revised language
<p>71.6(a)(3)(iii)(C) - For purposes of paragraph (a)(3)(iii)(B) of this section, deviation means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit that can be used to determine compliance, that identifies that an emission unit subject a part 71 permit term or condition has failed to meet an applicable emission limitation or standard or that a work practice was not complied with or completed. For a condition lasting more than 24 hours which constitutes a deviation, each 24 hour period is considered a separate deviation. Included in the meaning of deviation are any of the following: (1) A condition where emissions exceed an emission limitation or standard; (2) A condition where process or control device parameter values demonstrate that an emission limitation or standard has not been met; (3) Any other condition in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice standard or operating condition required by the permit.</p>	<p>71.6(a)(3)(iii)(C) - For purposes of paragraph (a)(3)(iii)(B) of this section, deviation means any situation in which an emissions unit fails to meet a permit term or condition. A deviation is not always a violation. A deviation can be determined by observation or through review of data obtained from any testing, monitoring, or recordkeeping established in accordance with paragraphs (a)(3)(i) and (a)(3)(ii) of this section. For a situation lasting more than 24 hours which constitutes a deviation, each 24 hour period is considered a separate deviation. Included in the meaning of deviation are any of the following: (1) A situation where emissions exceed an emission limitation or standard; (2) A situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met; (3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; (4) A situation in which an exceedance or an excursion, as defined in part 64 of this chapter, occurs.</p>

Chart V. Compliance Certification Requirements

Former language	Revised language
<p>70.6(c)(5)(iii) - A requirement that the compliance certification include the following: (A) The identification of each term that is the basis of the certification; (B) The compliance status; (C) Whether compliance was continuous or intermittent; (D) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with paragraph (a)(3) of this section; and (E) Such other facts as the permitting authority may require to determine the compliance status of the source;</p>	<p>70.6(c)(5)(iii) - A requirement that the compliance certification include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable): (A) The identification of each term or condition of the permit that is the basis of the certification; (B) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required under paragraph (a)(3) of this section. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information; (C) The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in paragraph (c)(5)(iii)(B) of this section. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under part 64 of this chapter occurred; and (D) Such other facts as the permitting authority may require to determine the compliance status of the source.</p>

Chart V (continued). Compliance Certification Requirements

Former language	Revised language
<p>71.6(c)(5)(iii) - A requirement that the compliance certification include the following: (A) The identification of each term that is the basis of the certification; (B) The compliance status; (C) Whether compliance was continuous or intermittent; (D) The method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with paragraph (a)(3) of this section; and (E) Such other facts as the permitting authority may require to determine the compliance status of the source;</p>	<p>71.6(c)(5)(iii) - A requirement that the compliance certification include all of the following (provided that the identification of applicable information may cross-reference the permit or previous reports, as applicable): (A) The identification of each term or condition of the permit that is the basis of the certification; (B) The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period, and whether such methods or other means provide continuous or intermittent data. Such methods and other means shall include, at a minimum, the methods and means required under paragraph (a)(3) of this section. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information; (C) The status of compliance with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in paragraph (c)(5)(iii)(B) of this section. The certification shall identify each deviation and take it into account in the compliance certification; and (D) Such other facts as the permitting authority may require to determine the compliance status of the source.</p>

Question 10. (reserved)

Question 11. Will existing title V permits have to be reopened?

Response 11. No, unless a proposed change to the permit would need to use the significant revision track or unless the permit is reopened for cause. However, only those units subject to the change or reopening would be required to apply for, and obtain approved, CAM plans. See sections 65.4(a)(2) and (c).

Question 12. Will existing permit applications have to be revised?

Response 12. No, unless the permit applications are not found or deemed complete by April 20, 1998. See section 64.5(a)(1). Based upon title V application statistical data compiled in August 1997, about 8,000 permit applications - or about thirty-six percent of the expected total - had not been submitted.

Question 13. Will permitting authorities have to adopt delegation of the CAM rule before their permits contain CAM?

Response 13. No. Existing programs should include provisions granting general authority to implement the CAM rule. In order to receive interim or full approval for their operating permit programs - and all programs have received either interim or full approval - permitting authorities were required to demonstrate that they had adequate legal authority to incorporate monitoring requirements, including requirements promulgated pursuant to sections 114(a)(3) or 504(b) of the Clean Air Act. Note that the CAM approach was developed to address these requirements of the Act. See sections 70.4(b)(3)(ii) and 70.6(a)(3)(i)(A) and 62 FR 54900. Moreover, the CAM rule provides a new set of applicable requirements, much like the requirements established by section 112(g)'s case-by-case MACT determinations. See Section 8.1.1 of the CAM Response to Comment Document.

Question 14. What would a permitting authority do if a "possible exception to compliance" is reported?

Response 14. If a possible exception to compliance is reported to a permitting authority, the permitting authority should investigate to determine whether a violation occurred and potentially use the information to bring an enforcement action for a violation. Permittees are to make every effort to minimize any periods that exceedences, excursions, or deviations occur. See section 64.7(d). Should the permitting authority determine that the permittee has not reacted appropriately, the permitting authority can require the permittee to implement a Quality Improvement Plan, or QIP. A QIP shall include the procedures for evaluating control performance problems as well as improved preventive maintenance practices, process operation changes, improvements to control methods, and / or more frequent or improved monitoring. See section 64.8.

Question 15. What happens to part 70 monitoring (this includes periodic monitoring) for units subject to the CAM rule?

Response 15. Part 70 monitoring is replaced by CAM for those units subject to the CAM rule. Until CAM is in place, part 70 monitoring (including periodic monitoring) remains in effect. See sections 64.5(d) and 64.6(e)(1).

Question 16. What responsibility does the permitting authority have to ensure CAM is applied?

Response 16. The CAM rule does not require a permitting authority to develop CAM plans if a permit applicant fails to provide an approvable CAM plan. However, the CAM rule requires a permitting authority to provide monitoring that satisfies part 70 requirements and a compliance schedule for providing an approvable CAM plan within 180 days. See section 64.6(e). Note that if the owner or operator fails to provide an approvable CAM plan within that 180 day compliance schedule, the owner or operator is not in compliance with part 64. See section 64.6(e)(3).