

Compliance Assurance Monitoring (CAM) Fact Sheet

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GENERAL INFORMATION

The CAM Rule (40 CFR Part 64) and Renewable Operating Permits (ROPs)

The stationary sources that are required to obtain a ROP may also be required to submit a CAM Plan with either their initial or renewal ROP application. Stationary sources may be subject to the CAM Rule if they are required to obtain a ROP and have an emission unit for which all of the following conditions are met:

- The emission unit uses a control device to achieve compliance with an emission limitation or standard for the applicable pollutant ;
- The emission unit has potential pre-control emissions which are over 100 percent of the major source threshold amount (at a level considered to be major under the ROP Program) for the applicable pollutant.

A CAM Plan is due with an initial ROP application for large pollutant-specific emission units (see Table 1 for definition). For other pollutant-specific emission units, the CAM Plan is due with the renewal application (see Table 1). If a significant modification [Rule 216(3)] request is submitted for an ROP, a CAM plan may be required with the modification request (see Table 1)

The CAM Plan will generally be submitted with an ROP-PASS application on the AI-001 form (a CAM check box is on the EU-003 form). If monitoring/recordkeeping, testing/sampling, or reporting requirements are being proposed, these will need to be recorded on the AR-002 form. In addition, the appropriate MS form (MS-001, MS-002, or MS-003) will need to be included. In the ROP renewal application a CAM plan will be included as referenced in E3 for existing emission units and F4 for emission units with a new PTI. One CAM Plan should be submitted for each pollutant-specific emission unit that is subject to the Rule. However, only one plan is needed if multiple emission units share the same control device or if multiple control devices of similar design and operation share the same emission unit.

The general outline of a CAM Plan is:

- I. Background
- II. Monitoring approach
 - A. Indicators
 - B. Indicator Range
- III. Performance criteria
- IV. Justification

Additional information on CAM exemptions and CAM Plan preparation may be obtained from a document prepared by the Environmental Protection Agency entitled **Technical Guidance Document: Compliance Assurance Monitoring (CAM Guidance Document)**. This is available at the website www.epa.gov/ttn/emc/cam.html. Also see the CAM Rule (40 CFR Part 64) available at the above website.

This "CAM Fact Sheet" is available on the Air Quality Division Web Page. Also the CAM Guidance Document is available there. To get to the web page go to the DEQ main page (<http://www.michigan.gov/deg>). Then click on the following in progression: "AIR"; "AIR PERMITS"; "RENEWABLE OPERATING PERMITS"; "BACKGROUND AND SUPPORT DOCUMENTS"; then "COMPLIANCE ASSURANCE MONITORING". Questions concerning the CAM Rule may be directed to the attention of Dennis Dunlap, at (269) 567-3553 or e-mail dunlapd@michigan.gov

Table 1: When Are CAM Plans Due?

		Type of ROP Application		
		CAM Plan due as part of initial ROP application?	ROP not issued, CAM Plan due if application modified such as addition of emission unit (eu)?	ROP issued, CAM Plan due if modification request is submitted such as addition of eu?
Pollutant-Specific Emission Unit Size	Large¹	YES	Yes, if modification equivalent to a significant modification [Rule 216(3)] applies to pollutant-specific emission unit	Yes, if a significant modification [Rule 216(3)] applies to pollutant-specific emission unit
	Other²	No, but due with ROP renewal application	NO	NO

¹ A large pollutant-specific emission unit has post-control emissions over 100 percent of the major source thresholds.

² An other pollutant-specific unit has post-control emissions under 100 percent of the major source thresholds.

REQUIREMENTS FOR CAM PLAN SUBMITTALS

A CAM Plan should be submitted with a Renewable Permit Application on AI-001 forms (see EU-003 form). If monitoring/recordkeeping, testing/sampling, or reporting requirements are being proposed, these will need to be recorded on the AR-002 form. In addition, the appropriate MS form (MS-001, MS-002, or MS-003) will need to be included. In the ROP renewal application a CAM plan will be included as referenced in E3 for existing emission units and F4 for emission units with a new PTI. One CAM Plan should be submitted for each CAM-subject emission unit. Below is a summary of the information needed for a CAM Plan. This document should be used in conjunction with the CAM Rule (40 CFR Part 64) and the EPA CAM Technical Guidance Document (both documents available at www.epa.gov/ttn/emc/cam.html) The CAM Rule is cited below where appropriate e.g. 64.4(a). Please note that this is a summary of the CAM Rule requirements and does not necessarily include all CAM Rule requirements.

The CAM Plan should include the following information in the format as follows:

I. Background

- A. Describe the emission unit (metal office furniture coating line with carbon adsorber; particle board cutting, sanding and routing operation with bag house, etc.)
- B. List permits, applicable regulations, emission limits, and existing monitoring requirements.
- C. Describe the control device (include efficiency, type, flow rate, uncontrolled emission rate, controlled emission rate).
- D. Briefly describe why the emission unit is subject to the CAM Rule.

II. Monitoring Approach

- A. Include the control device parameters to be measured that are indicators of performance for the control system, including the capture system (pressure drop, opacity, voltage, VOC removal efficiency, scrubber liquid pH, etc). **(64.3(a)(1), 64.3(a)(1))**
- B. Include the appropriate ranges or conditions that have been chosen for the above parameters that reflect the proper operation and maintenance of the control system, including the capture system (no visible emissions, 1-3 inches H₂O, exhaust temp. above 150 degrees for 6 minutes, voltage less than 30 kV for more than 5 min., etc) **(64.3(a)(2),(3), 64.4(a)(2))**
- C. Unless directed otherwise by an applicable requirement, include a means to detect any bypass of the control system or capture system to the atmosphere if such bypass can occur. **(64.3(a)(2))**

III. Performance Criteria

- A. If a continuous emission monitor system (CEMS) is required for monitoring, describe the monitor and associated applicable requirements (if the CEMS was installed because of a State Implementation Plan or federal regulation e.g. new source performance standard, MACT standard, acid rain requirements, or 40 CFR Part 266- hazardous waste facility, then compliance with the regulation satisfies this Performance Criteria section. However, indicator ranges may need to be set for a continuous opacity monitor system (COMS)). **(64.3(d), 64.4(a)(4))**
 1. For CEMS that satisfy this section, list the method used to determine exceedances, or excursions for a COMS used to assure compliance with a particulate matter standard. **(64.3(d)(3)(i))**
 2. Provide the indicator range for a COMS used to assure compliance with a particulate matter standard. **(64.3(d)(3)(ii))**
- B. For other monitoring systems or CEMS that do not satisfy Performance Criteria in (A.) above, describe the specifications of the monitoring system that ensure that the data obtained are representative of the emissions or parameters being monitored (detector or measurement location, installation specifications, etc.). **(64.3(b)(1))**

- C. If the monitoring equipment is new or modified, provide verification procedures to confirm the operational status of the equipment (consider the manufacturer's recommendations or requirements for installation, calibration, and start-up operation). **(64.3(b)(2))**
- D. Provide quality assurance and control practices for the monitoring equipment. **(64.3(b)(3))**
- E. Provide specifications for the frequency of conducting the monitoring as well as the data collection procedures that will be used. **(64.3(b)(4))**
 - 1. Provide data averaging procedures. **(64.3(b)(4)(i))**
 - 2. Provide the means by which exceedances or excursions are determined, if applicable. **(64.3(b)(4))**
 - 3. For large pollutant-specific emission units, four or more data values equally spaced over each hour shall be collected¹. **(64.3(b)(4)(ii))**
 - 4. For other pollutant-specific emission units², data collection shall be at least once per 24 hour period. **(64.3(b)(4)(iii))**
- F. Quality Improvement Plan (QIP) threshold. As an option, a threshold may be proposed for requiring the submittal of a QIP (for example, 5 visible emission exceedances per quarter, 5 exhaust gas temperature exceedances per month, etc.)

IV. Justification

- A. Provide a justification for the proposed monitoring (why indicators and indicator ranges were chosen). This may include data or the appropriateness of existing applicable requirements that establish the monitoring. **(64.4(b))**
- B. If the monitoring differs from the manufacturer's recommendations, provide reasons for the differences. **(64.4(b))**
- C. If a presumptively acceptable CAM approach is proposed that satisfies 40 CFR 64.4(b), identify whether it is from a (1) State Implementation Plan requirement; (2) a required CEMS; (3) acid rain monitoring; (4) monitoring included for standards exempt from CAM; (5) or monitoring identified in Section 3.4 of the CAM Guidance Document. **(64.4(b)(1),(2),(3),(4),(5))**
- D. Provide performance test data if available. In addition, if changes to the system have occurred since the last test, provide information that these changes have not affected control system performance. **(64.4(c)(1), (2))**
- E. If performance test data is not available, provide a test plan and schedule. Alternatively, provide data that demonstrates that performance testing is not necessary. **(64.4(d)(1),(2))**
- F. If the proposed monitoring requires testing, installation, or other activities prior to CAM Plan implementation, provide an implementation plan for installation and/or testing. **(64.4(e), 64.6(d))**

¹ A large pollutant-specific emission unit has post-control emissions over 100% of the major source thresholds.

² An other pollutant-specific unit has post-control emissions under 100% of the major source thresholds.

EXAMPLE (CAM) PLAN

Fabric Filter for Particulate Matter Control - Camco Industries, Cameron, MI. This is an office furniture manufacturer major for VOCs and has included this CAM Plan with the renewal ROP application. The VOCs are uncontrolled.

I. BACKGROUND

A. Emission Unit

Description: Particleboard sanders, routers and saws on Line 1

Identification: EU-WOOD

Facility: Camco Industries
1215 Goodcam Rd.
Cameron, MI 49111

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit No.: 1600-85W

Emission Limits:

Particulate Matter: 0.01 lbs. per 1,000 lbs of exhaust gases, Rule 331(1)(a)
7 tons per year, Rule 331(1)(c)

Opacity: 20%, Rule 301

Monitoring requirements: Visible emissions, baghouse pressure drop.

C. Control Technology

Pulse-jet Western Pneumatic baghouse operated under negative pressure which filters approximately 35,000 cubic feet/min of air. Pre-control potential emissions of PM more than 100 tons annually. Efficiency rated at 99.95%. Uncontrolled emissions 40 pounds per hour.

II. MONITORING APPROACH

	Visible emissions	Pressure Drop
A. Indicator	Visible emissions (VE) from the baghouse exhaust will be monitored daily during routine maximum operating conditions using a 6 minute VE-no VE check.	Pressure drop across the baghouse is measured with a differential pressure gauge. It is continuously recorded and manually recorded daily.
B. Indicator Range	An excursion is defined as the presence of visible emissions. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure drop greater than 5 in. H2O. Excursions trigger an inspection. Corrective action and a reporting requirement. Readings less than 1 in. H2O require a system inspection.
C. QIP Threshold	Five excursions in a 6-month reporting period.	None selected

III. PERFORMANCE CRITERIA

	Visible emissions	Pressure Drop
A. Data Representativeness	Measurements are made at the baghouse exhaust.	Pressure taps are located at the baghouse inlet and outlet. The gauge has a minimum accuracy of 0.25 in. H ₂ O.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices and Criteria	The observer will be familiar with baghouse operations and visible emissions.	The pressure gauge is calibrated quarterly. Pressure taps are checked for plugging daily.
D. Monitoring Frequency	A 6-minute VE observation is performed daily	Pressure drop is monitored continuously.
E. Data Collection Procedure	The VE observation is documented by the observer and recorded daily.	Pressure drop is manually recorded daily. Datum points at 15 min. intervals (4 per hour) are permanently recorded in the computer.
Averaging Period	NA	Hourly

IV. Justification

A. Rationale for Selection of Performance Indicators

Visible emissions were selected as a performance indicator because it is indicative of good operation and maintenance of the baghouse. 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.

In general, baghouses are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming inefficient, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

B. Rationale for Selection of Indicator Ranges

The selected indicator range is the presence of 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.

The selected QIP threshold for baghouse visible emissions is five excursions in a 6-month reporting period. This level is 3% of the total visible emissions observations. If the QIP

threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented. (Note: Proposing a QIP threshold in the CAM submittal is not required.)

The indicator range chosen for the baghouse pressure drop is less than 5 in. H₂O. An excursion triggers an inspection, corrective action, and a reporting requirement. The pressure drop is recorded daily. As the pressure drop approaches 5 in. H₂O, the bags are scheduled for replacement. The bags are typically changed yearly. This indicator is also used to monitor for bypass of the control device. If the pressure drop falls below 1 in. H₂O during normal process operation, the possibility of bypass is investigated. No QIP threshold has been selected for this indicator.

C. Performance test.

In August, 2000, a performance test was performed on the baghouse. This testing was performed under conditions of maximum emissions potential under anticipated operating conditions. The calculated emissions were 0.008 lb of particulate per 1,000 lbs of exhaust gases. This is well within the permit limit. A copy of the performance test is attached.

During the performance test Method 9 visible emissions observations were recorded. The baghouse pressure drop was also recorded. This testing confirmed that the chosen indicator range for the pressure drop correlates with compliance with the particulate limit. No visible emissions were observed.

No changes have taken place to the wood working line or equipment that would affect dust capture since the performance test was conducted. In addition, there have been no significant changes to the baghouse.

CAM RULE EXEMPTIONS

In general, an emission unit is subject to the Compliance Assurance Monitoring Rule (40 CFR Part 64) if all of the following are satisfied. The emission unit:

- is at a source required to obtain a Renewable Operating Permit (ROP);
- is subject to an emission limitation or standard for a major regulated pollutant (VOCs, HAPs, PM, PM-10, SO_x, NO_x, CO, NMOC);
- uses a control device to achieve compliance with the emission limitation or standard for the particular pollutant;
- has potential pre-control emissions over 100% of the major source amount (at a level considered to be major under the ROP Program) for the particular pollutant;
- is not exempted by the rule, or have emission limitations or standards not exempted by the rule.

The CAM Rule exempts certain emission limitations or standards or emission units in 64.2(b). The CAM definition of *emission limitation or standard* is given at the end of this document. Additional information on the exemptions is available in Chapter 1.2 of the *Technical Guidance Document: Compliance Assurance Monitoring*. This document is available through the Air Quality Division (AQD) district library and at the website: www.epa.gov/ttn/emc/cam.html. The exemptions are listed below:

Exempted Emission Limitations or Standards

- Post -11/15/90 NSPS (40 CFR Part 60) or NESHAP (40 CFR Part 63);
- Stratospheric ozone protection requirements (Title VI of Clean Air Act);
- Acid Rain Program requirements (40 CFR Parts 72-75);
- Requirements under an approved emission trading program;
- Emissions cap that meet the requirements of 40 CFR Part 70.4(b)(12);
- Emission limitations or standards for which a ROP requires a continuous compliance determination method that does not use an assumed control factor. In most cases this may be a regulation that requires the installation of a Continuous Emission Monitor System (CEMS).

Exempted Emission Units

Backup utility power emission units may be exempt from CAM. These are ones that are municipally-owned, and the owner or operator provides documentation in a ROP application that they;

- Are exempt from all Acid Rain monitoring requirements (Part 75);
- Are operated only during periods of peak electrical demand or emergency situations;
- Have actual emissions based on the average annual emissions over the last three calendar years of operation less than 50% of the amount in tons per year of major source thresholds and are expected to remain so.

The exemptions concerning emission limitations or standards are summarized below. For these exemptions it is important to note that it is only the emission limitation or standard that is exempted. If other nonexempt emission limitations or standards still apply to the pollutant-specific emission unit, then the unit is not exempt from CAM. For questions concerning this document, please contact Dennis Dunlap at (269) 567-3553 or e-mail at dunlapd@mich.gov.

Post-11/15/90 NSPS or NESHAP

This includes New Source Performance Standards (NSPS; 40 CFR Part 60) and National Emission Standards for Hazardous Air Pollutants (NESHAP or MACT Standards; 40 CFR Part 63) proposed after November 15, 1990. Note that this does not include 40 CFR Part 61 NESHAP. The latter were proposed before November 15, 1990.

For NSPS this includes Subparts Cc, Cb, Eb, Ec, Ce, X, DDD, RRR, UUU, WWW, YYY, AAAA, BBBB, CCCC, DDDD, EEEE, FFFF, HHHH, IIII, JJJJ, and KKKK .

For NESHAP (Part 63, referred to as MACT Standards) this includes completed rules Subparts M, F, G, H, I, GG, N, L, O, T, R, X, Hazardous Waste Combustion (Parts 63, 261 and 270), Q, EE, EEEE, EEEEE, EEEEE, Y, DD, CC, U, W, JJ, KK, KKKK, KKKKK, X, II, JJ, XXX, III, IIII, IIIII, YY, YYYY, YYYYY, YYYYYY, DDD, DDDD, DDDDD, DDDDDD, HH, MMM, MMMM, GGG, AA, BB, BBBB, BBBB, BBBB, PPP, PPPP, PPPPP, PPPPP, OOO, OOOO, OOOOO, LLL, LL, LLLL, LLLLL, LLLLL, TTT, VVV, S, RRR, RRRR, RRRRR, RRRRR, CCC, F, NNN, VVVV, MM, CCCC, HHH, GGGG, GGGGG, GGGGG, LLLLL, CCCCC, CCCCC, MMMMM, MMMMM, QQQQ, QQQQQ, QQQQQ, YY (2nd part), NNNNN, NNNNN, FFFF, FFFF, FFFFF, NNNN, TTTT, TTTT, SSSS, SSSS, SSSS, AAAA, AAAAA, JJJJ, U, UU, UUU, UUUU, UUUUU, J, JJJJ, QQQ, WWW, WWW, WWW, XXXX, XXXXX, ZZZZ, ZZZZ, HHHH, HHHH, and HHHHH.

The following example demonstrates how a NESHAP would apply to emission limitations and standards: A ROP-subject wood furniture manufacturing facility is subject to Subpart JJ. A surface coating line controlled by a carbon adsorption system at the facility is subject to CAM (due to annual pre-control emissions of VOC over 100 tons). This line is subject to the following emission limits: 0.8 lb VHAP/per pound of solids as applied from JJ; 30 lbs of VOC/hr, 60 tons VOC/yr and 0.5 lbs VOC/lb coating solids as applied. These limits are from an NSR permit. The surface coating line is exempt from CAM for the JJ emission limits. However, CAM still applies to the non-exempt VOC limits.

Emission standards amended after November 15, 1990 would need to be evaluated to determine if they include monitoring requirements that satisfy CAM. Only one amended emission standard has been identified that meets the requirements of CAM. This is amended 40 CFR Part 61 Subpart L, published in the Federal Register on September 19, 1991. Emission limitations or standards subject to the amended part of this rule are exempt from CAM.

Stratospheric Ozone Protection Requirements

The types of requirements that apply under this program are covered under Title VI of the Clean Air Act and 40 CFR Part 82. These requirements are different than typical emission limitations or standards and monitoring is covered under the above regulations.

Acid Rain Program Requirements

This regulation has requirements for monitoring SO₂, NO_x, CO₂, and opacity. However, to be exempt the emission limitation or standard must be in the units specified. For example, NO_x is required to be reported in units of ppm and lb/mmBtu in the Acid Rain regulations. If a CAM-subject emission unit also has other NO_x emission limits such as lb/hr, tons per year, or ppm corrected to 15% O₂, these would still be subject to CAM. In this example, to be subject to CAM, the emission unit would need to have a control device for NO_x, and pre-control NO_x emissions would need to be over 100 tons per year.

Emissions Trading

Currently this does not apply since Michigan does not have an emissions trading program.

Emissions Cap

The emissions cap must meet the requirements of 40 CFR 70.4(b)(12). The AQD has adopted this requirement in R 336.1213(9)(a). In the ROP this rule is to be cited in the appropriate requirement table (see ROP Shell document, Optional Requirements).

CAM would not apply to emission limits or standards that were established in the ROP as an emissions cap.

Emission Limitations or Standards for Which an ROP Specifies a Continuous Compliance Determination Method That Does Not Use an Assumed Control Factor

This exemption would apply to a situation where a regulation requires that the ROP include monitoring as a continuous compliance determination method (ccdm). The appropriate emission limit in the ROP would then be exempt from CAM. In most cases there would be a CEMS, although recordkeeping required by a regulation that meets the definition of ccdm may also qualify. The CAM definition of ccdm must be met, which is: ccdm means a method specified by the applicable standard or an applicable permit condition, which: (1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and (2) Provides data either in units of the standard or correlated directly with the compliance limit.

In addition, an assumed control device emission reduction factor should not be used in the calculation of emissions. This is the case, for instance, where it is assumed that a thermal oxidizer destroys 98% of VOC. If 100 pounds of VOC are used in coatings, then it is assumed that 2 pounds of VOC are emitted.

The CAM Technical Guidance identifies several examples where ccdm would be met. These include: NOX and SO2 CEMS specified in 40 CFR Part 60 subparts Da and Db; SO2 CEMS specified in 40 CFR Part 60 subpart Dc; NOX, SO2, and CO CEMS specified in 40 CFR Part 60 subpart Ea; SO2 CEMS specified in 40 CFR Part 60 subpart J.

An example where a CEMS is not part of the recordkeeping is found in 40 CFR Subpart EE (metal furniture coating) for control devices in which the VOC is recovered and measured such as a carbon adsorption system.

The following two examples attempt to illustrate this:

Example One

The Nexus 6 Company is ROP-subject and manufactures metal furniture. One of the coating lines at the facility has annual pre-control emissions of VOC over 100 tons. VOC emissions are controlled by a carbon adsorption system (CA), thus this emission unit may be subject to CAM. The coating line is subject to the NSPS 40 CFR Subpart EE (this is a pre-1990 NSPS

and would not qualify for a CAM exemption as mentioned above), thus, is subject to an emission limit of 0.90 kilogram of VOC per liter of coating solids applied. The company keeps coating records according to the NSPS and uses the equation in the NSPS to calculate the monthly overall reduction efficiency of the CA. This equation is based on mass of VOC recovered each month from the CA. These recordkeeping calculations satisfy the definition of ccdm, thus the emission limit is exempt from CAM. However, if the emission unit is subject to other VOC emission limits such as pounds per hour not addressed by the recordkeeping in the NSPS, then the emission unit is still subject to CAM.

Example Two

The situation is the same as in Example One, only a thermal oxidizer is used as the control device. In this case the NSPS allows an initial performance test to determine the reduction efficiency of the incinerator. Once the test is completed the company can use these results each month to determine compliance with the NSPS. The company determined that the destruction efficiency of VOC is 98%. Thus each month the 98% is used as an assumed control device emission reduction factor, and thus this method does not meet the exemption.

The difference in the two methods is that in Example One the company is actually determining each month the VOC reduction efficiency by measuring recovered VOC, while in Example Two the company is using previous data.

An example for this exemption in which a CEMS is used is given below:

1. A facility has a 120 mmbtu/hr oil-fired boiler with water injection to control nitrogen oxides. The boiler is subject to CAM and is another pollutant-specific emission unit (post-control emissions of nitrogen oxides are less than 100 tons/yr). The facility had a complete initial ROP application in by April 20, 1998. The boiler is subject to 40 CFR 60 Subpart Db. In the initial ROP a CEMS to monitor nitrogen oxides (to express emissions in units of lb NO₂/mmbtu) was specified to meet the requirements of Db. In the renewal ROP this emission limit is exempt from CAM. However, if the ROP has other nitrogen oxide emission limits in which the monitoring does not meet the ccdm definition, then these are not exempt from CAM.

For more examples see Table 1-4 of Chapter 1 of the *Technical Guidance Document: Compliance Assurance Monitoring*.

CAM Definition of Emission Limitation or Standard

Any applicable requirement that constitutes an emission limitation, emission standard, standard of performance, or means of emission limitation as defined under the Act (Clean Air Act). An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate, or concentration of emissions (e.g. pounds of SO₂ per hour, pounds of SO₂ per million British thermal units of fuel input, kilograms of VOC per liter of applied coating solids, or parts per million by volume of SO₂) or as the relationship of uncontrolled to controlled emissions (e.g. percentage capture and destruction efficiency of VOC or percentage reduction of SO₂).

An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement. For purposes of this part, an emission limitation or standard shall not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, to operate and maintain sources in accordance with good air pollution control practices, to develop and maintain a malfunction abatement plan, to keep records, submit reports, or conduct monitoring.

