

# Facts about Compliance Assurance Monitoring

## Which source does Compliance Assurance Monitoring apply to?

In general, the Compliance Assurance Monitoring (CAM) rule applies to certain emissions units at facilities required to obtain a Part 70 permit which meet the following criteria:

1. The emissions unit is subject to an emission limit or standard (including New Source Performance Standards, National Emission Standards for Hazardous Air Pollutants, limits and standards in Minnesota Rules contained in the State Implementation Plan, etc.) for an air pollutant regulated by Part 70, other than the exemptions provided below.
2. An add-on control device is used to meet the emission limit or standard.
3. The emissions unit has pre-controlled potential emissions of the applicable regulated air pollutant equal to or greater than the Part 70 major source level for that pollutant (in tons per year), as listed in Table 1 below.

## What are the exemptions?

The CAM rule does not apply to:

1. Federal regulations issued after November 15, 1990.
2. Stratospheric ozone protection requirements under Title VI of the Clean Air Act.
3. Acid Rain Program requirements under sections 404, 405, 406, 407(a), 407(b) or 410 of the Clean Air Act.
4. Emission limitations or standards that apply solely under an emissions trading program.
5. An emissions cap that meets the requirements in 40 CFR § 70.4(b)(12).
6. Situations where continuous compliance monitoring is already specified in an operating permit. This exemption does not apply if the compliance method includes an assumed pollution control efficiency that could be affected by actual operation and maintenance of the control device (e.g. a surface coating line that is controlled by an incinerator for which compliance is determined through material use recordkeeping and an assumed volatile organic compound destruction efficiency based on an initial performance test).
7. Municipally-owned utility peak-shaving units where:
  - The unit is exempt from all Acid Rain Program monitoring requirements under 40 CFR pt. 75.
  - The unit operates for the sole purpose of providing electricity during periods of peak electrical demand or emergency situations and will be operated consistent that purpose throughout the operating permit term.
  - The average annual emissions from the unit over a three-year period are less than half of the Part 70 major source levels listed in Table 1 below (e.g. three-year average SO<sub>2</sub> emissions ≤ 50 ton/yr).

## Does CAM still apply if the unit is monitored by a CEMS, COMS, or PEMS?

The use of a continuous emissions monitoring system (CEMS), continuous opacity monitoring system (COMS), or predictive emissions monitoring system (PEMS) does not qualify as an exemption under the CAM rule; however the use of these monitoring systems often meets the requirements of CAM.

## When must I determine if CAM applies?

For each pollutant-specific emissions unit (PSEU), this determination must be made:

1. When applying for a first-time Part 70 operating permit (for each PSEU at the facility with pre-controlled emissions greater than the Part 70 major source level).
2. When applying for a major amendment to an existing Part 70 operating permit (for each PSEU affected by the permit amendment with pre-controlled emissions greater than the Part 70 major source level, for which CAM applicability has not yet been determined).
3. When applying for a reissuance of an existing Part 70 operating permit (for each PSEU at the facility with pre-controlled emissions greater than the Part 70 major source level, for which CAM applicability has not yet been determined).

## What is a pollutant-specific emissions unit?

Evaluate CAM applicability individually for each pollutant regulated by Part 70. Pollutant-specific emissions unit (PSEU) is the term given to the emissions unit which exhausts an individual pollutant to an add-on control device (e.g. emissions of sulfur dioxide from a boiler). In the case where multiple emissions units vent to a single add-on control device (e.g. multiple grain handling conveyors venting to a single fabric filter), the combination of those emissions units is considered the PSEU; use the combined potential emissions from all the units when evaluating CAM applicability and when determining if the resulting PSEU is “large” or “other”, as described below. For PSEUs subject to the CAM rule, different monitoring requirements apply depending on the potential controlled emissions for each regulated air pollutant.

A “large” PSEU is a PSEU with potential controlled emissions equal to or greater than the Part 70 major source level for a given pollutant. The CAM rule requires collection of monitoring data at least once every 15 minutes for large PSEUs.

An “other” PSEU is a PSEU with potential controlled emissions less than the Part 70 major source level for a given pollutant. The CAM rule requires collection of monitoring data at least once every 24 hours for other PSEUs.

Table 1 below lists the potential controlled emissions thresholds for large and other PSEUs.

**Table 1. Major Source Levels for Air Pollutants Regulated by Part 70 (may differ in current or future nonattainment areas)**

Pollutant	Part 70 Major Source Level (ton/year)	Large PSEU Potential Controlled Emissions (ton/year)	Other PSEU Potential Controlled Emissions (ton/year)
Particulate matter < 10 micron (PM <sub>10</sub> )	100	≥ 100	< 100
Particulate matter < 2.5 micron (PM <sub>2.5</sub> )	100	≥ 100	< 100
Sulfur dioxide (SO <sub>2</sub> )	100	≥ 100	< 100
Nitrogen oxides (NO <sub>x</sub> )	100	≥ 100	< 100
Carbon monoxide (CO)	100	≥ 100	< 100
Volatile organic compounds (VOC)	100	≥ 100	< 100
Lead (Pb)	100	≥ 100	< 100
Any individual hazardous air pollutant (HAP)	10	≥ 10	< 10
All HAPs combined	25	≥ 25	< 25
Carbon dioxide equivalent emissions (CO <sub>2e</sub> )	100,000	≥ 100,000	< 100,000

## What do I need to do if CAM applies?

You must prepare a CAM submittal for each unit that you determined is subject to CAM at this time, and submit it with the permit or amendment application. The CAM submittal (also referred to as a CAM plan or monitoring approach submittal) should include:

- Information on indicators (gauges, meters, or other monitoring devices used to monitor operating parameters of control equipment).
- Indicator ranges, or the process used to establish indicator ranges.
- Performance criteria.
- Justification of the proposed monitoring.
- Control device operating data recorded during a performance test with supporting justification (engineering assessments, manufacturer's recommendations, etc.).
- A test plan and schedule for obtaining data if performance test data are not available.
- An implementation plan, if monitoring requires installation, testing, or other activities prior to implementation.

## What happens next?

MPCA will review the CAM submittal during review of the permit or amendment application. If additional information or corrections are required, MPCA will notify you that the CAM submittal must be revised or supplemented. If the CAM submittal is determined to be complete and acceptable, MPCA will establish permit terms for the affected emissions unit.

After approval and incorporation of the CAM requirements into the permit, owners and operators of the affected units must implement the monitoring upon issuance of the permit, unless otherwise specified in the permit.

## Example - CAM applicability determination:

A boiler is subject to emission limits (which are not exempt from CAM) for both NO<sub>x</sub> and SO<sub>2</sub>. The pre-controlled potential emissions for both of these pollutants are greater than 100 tons per year. The boiler uses low-NO<sub>x</sub> burners to meet the NO<sub>x</sub> emission limit, and uses a lime injection system to meet the SO<sub>2</sub> emission limit. Since the low-NO<sub>x</sub> burners are not an add-on control device, but the lime injection system is an add-on control device, the boiler would be subject to CAM for SO<sub>2</sub> but not for NO<sub>x</sub>.

## Resources

- The CAM rule (40 CFR pt. 64) may be found in the electronic code of federal regulations (e-CFR) at the following web address: <https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=a52b81df6a4424cbb01af10624022ec2&mc=true&n=pt40.17.64&r=PART&ty=HTML>
- The United States Environmental Protection Agency (US EPA) Compliance Assurance Monitoring Technical Guidance Document (including sample CAM plans) may be found at the following web address: <https://www.epa.gov/air-emissions-monitoring-knowledge-base/compliance-assurance-monitoring-technical-guidance-document>
- MPCA air permitting forms may be found at the following web address: <https://www.pca.state.mn.us/air/air-permit-forms-and-online-submittals>