

TECHNICAL REVIEW OF CAM PLANS

Sources that are subject to the CAM Rule (40 CFR Part 64) are required to submit a monitoring plan that will provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations for pollutant-specific emission units. The purpose of this document is to provide guidance to AQD staff for review of the monitoring (CAM) plans. Where the rule is cited it appears as, e.g. 40 CFR 64.4(a).

Submittal of CAM Plans

In general, emission units are subject to the CAM Rule if they satisfy all of the following:

- are at a source required to obtain an ROP;
- are subject to a federally enforceable emission limitation or standard for a major regulated pollutant (VOC, HAP, PM-2.5, PM-10 (PM is a surrogate for PM-2.5 and PM-10), SO_x, NO_x, CO, Lead, and Ozone);
- use a control device to achieve compliance with the emission limitation or standard;
- potential pre-control emissions are over 100% of the major source amount;
- emission limitations or standards do not meet a CAM exemption.

Some exemptions apply. For an explanation of these, the rule should be consulted 40 CFR 64.2(b)). A document entitled “Technical Guidance Document: Compliance Assurance Monitoring” contains detailed information about the rule, the exemptions, and CAM Plan review. The [CAM Fact Sheet](#) also contains useful information. All are available at the [AQD CAM website](#).

The CAM Rule divides emission units into two types. Those with potential post-control emissions over 100 tons are termed **large pollutant-specific emission units**. Those with potential post-control emissions below 100 tons are termed **other pollutant-specific emission units**. For CAM Plan submittal deadlines please see Table I below.

The CAM Plan will generally be submitted with an ROP application using the AI-001 form. AQD staff will review the plans to ensure that they contain the information required in the CAM Rule. Separate CAM Plans 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 (40 CFR 64.4(f)) or if multiple control devices of similar design and operation share the same emission unit (40 CFR 64.4(g)). The general outline of a CAM Plan is:

- I. Background (required)
- II. Monitoring approach (required)
 - A. Indicators
 - B. Indicator range
- III. Performance criteria (required)
- IV. Justification (required)

Checklist 1 has been developed to aid staff in the review of these plans. The “NO” means that the item has not been provided; a “YES” indicates that it has been provided and is sufficient; and “DF” indicates that the item has been provided but is deficient or additional information is needed.

Once approved, the required CAM permit conditions are incorporated into the appropriate ROP emission unit tables. Two documents are available to aid staff: the ROP-CAM Example Table available at the AQD CAM website (see above); and Attachment 5 of the ROP Shell Instructions in the ROP Manual.

If the submitted plan is inadequate, an additional information letter (see “ROP App Additional Info Letter”) should be sent to the permittee. A compliance plan may also be put into the ROP regarding submittal of the CAM plan (40 CFR 64.6(d)). If any questions arise concerning CAM, please contact the AQD CAM Specialist.

TABLE I

WHEN ARE CAM PLANS DUE?

POLLUTANT SPECIFIC EMISSION UNIT (PSEU) SIZE	<u>TYPE OF ROP APPLICATION</u>		
	CAM PLAN DUE AS PART OF INITIAL ROP APP.?	ROP NOT ISSUED, CAM PLAN DUE IF APPLICATION MODIFIED SUCH AS NEW EMISSION UNIT (EU)?	ROP ISSUED, CAM PLAN DUE IF MODIFICATION REQUEST IS SUBMITTED SUCH AS NEW EU?
LARGE	YES	YES, IF MODIFICATION EQUIVALENT TO SIG. MOD. 216(3)) APPLIES TO PSEU	YES, IF SIGNIFICANT MODIFICATION (216(3)) APPLIES TO PSEU
OTHER	NO, BUT DUE WITH RENEWAL APP.	NO	NO

CHECKLIST FOR CAM PLANS		YES	DF	NO
A.	Verify that the emission unit is subject to CAM.			
B.	Has background section been included?			
	1. Description of emission unit included?			
	2. Applicable regulations, emission limits, and monitoring requirements included?			
	3. Control technology description included?			
C.	Monitoring Approach. Has this section been included? (40 CFR 64.3(a))			
	1. Have the control device parameters to be measured been included, including the capture system? (40 CFR 64.3(a)(1), 40 CFR 64.4(a)(1))			
	2. Have the appropriate ranges or conditions been included for the parameters, including the capture system? (40 CFR 64.3(a)(2), (3); 40 CFR 64.4(a)(2))			
	3. Have indicators been included to detect any bypass of the control device, if appropriate? (40 CFR 64.3(a)(2))			
D.	Performance Criteria. Has this section been included? (40 CFR 64.3(b))			
	1. If a CEM (continuous emission monitor) is used for monitoring, see D.2 through D.6 below. Otherwise go to D.7.			
	2. If a CEM is present, is it used to satisfy CAM requirements? (40 CFR 64.3(d)(1), 40 CFR 64.4(a)(4))			
	3. Is the CEM required by an NSPS, MACT, Acid Rain, state rule or by 40 CFR Part 266 (hazardous waste facility)? If so, compliance with these regulations will satisfy the general design and performance criteria of CAM, except that indicator ranges may need to be set for a continuous opacity monitor (COM). (40 CFR 64.3(d)(2))			
	4. If an applicable requirement does not require compliance with the requirements in D.3 above, then are comparable specifications included? (40 CFR 64.3(d)(vi))			
	5. Is the CEM designed for the reporting of exceedances (or excursions for a COM used to assure compliance with a particulate matter standard)? (40 CFR 64.3(d)(3)(i))			
	6. For a COM used to assure compliance with a particulate matter standard, is an indicator range established? If the COM is used for an opacity standard, the limit may be the appropriate indicator range as long as it provides a reasonable assurance of compliance. (40 CFR 64.3(d)(3)(ii))			
	Performance Criteria, cont. (This section below is also for emission units with a CEM)			
	7. Does proposed monitoring provide for obtaining data that are representative of the emissions or parameters being monitored? (40 CFR 64.3(b)(1))			
	8. If the monitoring equipment is new or modified, does the permittee provide verification of the operational status of the equipment? (40 CFR 64.3(b)(2))			

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CHECKLIST FOR CAM PLANS, CONT.	
9.	Are quality assurance and control practices provided? (40 CFR 64.3(b)(3))
10.	Are specifications for the frequency of conducting the monitoring as well as the data collection procedures that will be used been provided? (40 CFR 64.3(b)(4))
11.	If appropriate, has the period over which data will be averaged to determine whether an excursion or exceedance has occurred been provided? Has an excursion level been provided? (40 CFR 64.3(b)(4)(i))
12.	If this is a "large pollutant-specific emission unit", are a minimum of four data points spaced over each hour and averaged over the applicable averaging period collected? (40 CFR 64.3(b)(4)(ii))
13.	If this is "an other pollutant-specific emission unit", does the monitoring include at a minimum some data collection at least once in a 24-hour period? (40 CFR 64.3(b)(4)(iii))
14.	Does the permittee take into account site-specific factors for the design of the monitoring? (40 CFR 64.3(c))
E.	Justification. Has this section been included? (40 CFR 64.4(b))
1.	Has the permittee provided a justification for the proposed monitoring (why indicators and indicator ranges were chosen)? This should include data supporting the justification as well as existing applicable requirements that support the monitoring. (40 CFR 64.4(b))
2.	If the monitoring differs from the manufacturer's recommendations, have reasons for the differences been included? (40 CFR 64.4(b))
3.	Is presumptively acceptable monitoring identified (no other justification is necessary for this monitoring)? Presumptively acceptable monitoring includes monitoring required by a state rule, monitoring identified in D.3 above, and monitoring identified as such in the <u>Technical Guidance Document: Compliance Assurance Monitoring</u> . See Page 1 for CAM FACT Sheet. (40 CFR 64.4(b)(1), (2), (3), (4), (5))
4.	Has the permittee provided performance test data, if applicable? (40 CFR 64.4(c)(1))
5.	If so, has the permittee documented that no changes to the control system have occurred since the test that may change control system performance? (40 CFR 64.4(c)(2))
6.	If performance test data is not available, has the permittee submitted a test plan and schedule? (40 CFR 64.4(d)(1)) (Test plan may need to be reviewed by a Lab Scientist.)
7.	Alternatively, the permittee may submit data that demonstrates that performance testing is not necessary. Has this been included? (40 CFR 64.4(d)(2))
8.	Has an implementation plan been provided if monitoring submitted by the permittee requires installation, testing, or other activities prior to implementation? (40 CFR 64.4(e), 40 CFR 64.6(d))

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