

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

Summary and Discussion of the Draft CAM Rulemaking
(40 CFR Parts 64, 70, and 71)

Introduction

This document provides a summary and discussion of the current draft compliance assurance monitoring (CAM) rulemaking. A copy of the draft rule is attached to the end of this document. The CAM rulemaking is intended to finalize the requirement for rulemaking on enhanced monitoring and compliance certification under section 114(a)(3) of the Clean Air Act. The Agency originally proposed an enhanced monitoring rule in 1993 (see 58 FR 54648, October 22, 1993) and made available a revised version of that proposal in September 1995. The Agency has prepared this document to allow the public an opportunity to comment on the possible changes to the revised proposed rule that are being considered by the EPA. Comments on this document should be sent by September 30, 1996, to Mr. Peter Westlin, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, MD-19, Research Triangle Park, North Carolina 27711. Comments may be sent through the Internet by E-mail to westlin.peter@epamail.epa.gov. For further information, contact Mr. Westlin at (919) 541-1058. Copies of the comments sent to Mr. Westlin will be added to the docket for this rulemaking (A-91-52), and commenters also may send copies directly to the docket at the following address: EPA Air Docket (LE-131), Attention Docket A-91-52, Room M-1500, Waterside Mall, 401 M Street S.W., Washington, D.C. 20460. The docket is available for public inspection and copying between 8:00 a.m. and 5:30 p.m. Monday

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

through Friday, excluding government holidays. A reasonable fee may be charged for copying.

The outline of this document is as follows:

- I. Background and Summary of the Rulemaking
 - A. Statutory Authority
 - B. Rulemaking History
 - C. Overview of the CAM Approach
 - D. The Relationship of CAM to Credible Evidence and Enforcement Issues
- II. Detailed Discussion of Regulatory Provisions
 - A. Section 64.1 - Definitions
 - B. Section 64.2 - Applicability
 - C. Section 64.3 - Implementation Provisions
 - D. Section 64.4 - Reporting and Recordkeeping Provisions
 - E. Section 64.5 - Savings Provisions
 - F. Section 64.6 - CAM Plan Design Requirements
 - G. Section 64.7 - CAM Plans
 - H. Section 64.8 - Documentation Requirements
 - I. Subpart C (Section 64.9) - General Monitoring Requirements for Major Sources
 - J. Subpart D (Sections 64.10 and .11) - Quality Improvement Plan (QIP) Requirements
 - K. Revisions to 40 CFR Parts 70 and 71
- I. Background and Summary of the Rulemaking
 - A. Statutory Authority

The CAM regulations respond to the statutory mandate in the Clean

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

Air Act Amendments of 1990. The 1990 Amendments contain several provisions directing the Agency to require owners or operators to conduct monitoring and to make compliance certifications. These provisions are set forth in both title V (operating permits provisions) and title VII (enforcement provisions) of the 1990 Amendments.

Title V directs the Agency to implement monitoring and compliance certification requirements through the operating permits program. Section 503(b)(2) requires at least annual certifications of compliance with permit requirements and prompt reporting of deviations from permit requirements. Section 504(a) mandates that owners or operators submit to the permitting authority the results of any required monitoring at least every six months. This section also requires permits to include "such other conditions as are necessary to assure compliance with applicable requirements" of the Act. Section 504(b) of the Act also allows the Agency to prescribe, by rule, methods and procedures for determining compliance, and states that continuous emission monitoring systems need not be required if other methods or procedures provide sufficiently reliable and timely information for determining compliance. Under section 504(c), each operating permit must "set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions."

Title VII of the 1990 Amendments added a new section 114(a)(3) that requires the EPA to promulgate rules on enhanced monitoring and compliance certifications. This paragraph provides, in part:

The Administrator shall in the case of any person which is the owner or operator of a major stationary source, and may, in the case of any other person, require enhanced monitoring and submission of compliance certifications. Compliance certifications shall include (A)

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

identification of the applicable requirement that is the basis of the certification, (B) the method used for determining the compliance status of the source, (C) the compliance status, (D) whether compliance is continuous or intermittent, (E) such other facts as the Administrator may require....

The 1990 Amendments also revised section 114(a)(1) of the Act to provide additional authority concerning monitoring, reporting, and recordkeeping requirements. As amended, that section provides the Administrator with the authority to require any owner or operator of a source:

- on a one-time, periodic or continuous basis to -
- (A) establish and maintain such records;
- (B) make such reports;
- (C) install, use, and maintain such monitoring equipment ...
- (D) sample such emissions (in accordance with such procedures or methods, at such locations, at such intervals, during such periods and in such manner as the Administrator shall prescribe);
- (E) keep records on control equipment parameters, production variables, or other indirect data when direct monitoring of emissions is impractical;
- (F) submit compliance certifications in accordance with section 114(a)(3); and
- (G) provide such other information as the Administrator may reasonably require....

Taken together, these statutory provisions prescribe a set of measures, including monitoring and compliance certification, that owners or operators must follow in order to provide an assurance of ongoing compliance with the Act.

B. Rulemaking History

The EPA has acted to implement the statutory provisions discussed above in two separate ways. First, the Part 70 operating permits program includes basic monitoring and compliance certification requirements.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

Section 70.6(a)(3)(i) requires that permits include all existing monitoring and testing requirements set forth in applicable requirements. If particular applicable requirements do not include periodic testing or monitoring, then § 70.6(a)(3)(i)(B) requires the permit to include "periodic monitoring" to fill that gap. Section 70.6(c)(5)(iii) requires the submittal of annual compliance certifications, and generally incorporates the statutory language in section 114(a)(3) of the Act.

To implement the statutory requirement for enhanced monitoring, the EPA also is developing through this rulemaking a general monitoring rule in part 64 of 40 CFR to be implemented through the part 70 operating permits program. The Agency first provided notice in the Federal Register of an opportunity for public review and comment on this concept in August 1991 (see 56 FR 37700-01). A public information document was made available, a public meeting was held, and written comments were received after the meeting. A subsequent public meeting was held in August 1993, and a proposed rule was published on October 22, 1993 (58 FR 54648).

The Agency received approximately 2000 comment letters during the public comment period. These letters contained several thousand individual comments on more than 500 major and minor issue topics. Because of some of the complex and difficult issues raised, the Agency held a series of stakeholder meetings in the fall of 1994, released draft sections of a possible final rule, and then officially reopened the public comment period on specific issues on December 28, 1994 (59 FR 66844). An additional stakeholder meeting was held near the close of that reopened comment period, and more than 200 additional comment letters were received.

The Agency then decided to redesign the part 64 rulemaking in April 1995 in response to the public comments on the October 1993 proposal and

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the series of stakeholder meetings. The Agency issued a press release in early April 1995 that indicated the EPA's intent to hold a public meeting to discuss the potential redesign of the enhanced monitoring rule, and then contacted various stakeholder groups so that they would have the opportunity to participate. A formal notice of the meeting was also published in the Federal Register on May 26, 1995 (60 FR 27943). Approximately 200 people attended the meeting on May 31, 1995, and many additional people attended the follow-up meetings held in June 1995 in Washington, D.C., Cincinnati, Dallas, and Portland, Oregon. The Agency then drafted a CAM preamble and rule for public discussion and comment and held another public meeting in September 1995. (See 60 FR 48679, September 20, 1995, for the formal Federal Register notice of that meeting and request for comment.) Approximately 150 people attended that meeting, and the EPA received more than 60 written comment letters on the draft rule package as well. The Agency also has held numerous informal stakeholder discussions with interested parties to discuss the CAM approach, and received additional written comments during the period since April 1995. (See the items in sections VI-D and VI-E of Docket A-91-52 for a complete record of written comments submitted by stakeholders, and discussions between EPA and interested parties concerning the rulemaking.)

C. Overview of the CAM Approach

1. General Approach. The CAM approach is intended to address the requirement in title VII of the Act that the EPA promulgate enhanced monitoring and compliance certification requirements for major sources, and the related requirement in title V that operating permits include monitoring, compliance certification, reporting and recordkeeping provisions to assure compliance. The EPA has long recognized that the key to assuring ongoing

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

compliance is a two-step process. First, the Agency must assure that properly designed control measures -- including, as applicable, control devices, process modifications, operating limitations or other control measures -- are installed or otherwise employed, and that those control measures are proven to be capable of achieving applicable requirements. In the past, this step has been addressed through new source review permitting, initial stack testing, compliance inspections and similar mechanisms. The title V permit application and review process, including the applicant's initial compliance certification and compliance plan obligations, will add another tool for assuring that sources have adopted the proper control measures for achieving compliance. The second step is to assure that those control measures, once installed or otherwise employed, are properly operated and maintained so that they do not deteriorate to the point where the owner or operator fails to remain in compliance with applicable requirements. The Agency believes that monitoring, reporting, recordkeeping and annual compliance certification requirements under titles V and VII should be designed so that owners or operators carry out this second step in assuring ongoing compliance.

There are two basic methods of assuring that control measures taken by the owner or operator to achieve compliance are properly operated and maintained so that the owner or operator continues to achieve applicable requirements. One method is to establish monitoring as a method for directly determining continuous compliance with applicable requirements. The Agency has adopted this approach in some rulemakings and, as discussed below, is committed to following this approach as appropriate in future rulemakings. Another approach is to establish monitoring for the purpose of: (1) documenting continued operation of the control measures

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

within ranges of specified indicators of performance (such as emissions, control device parameters and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that excursions are corrected. The draft CAM rule adopts this second approach as an appropriate approach to enhancing monitoring in the context of title V permitting.

The rule creates two basic categories of CAM. The first category, in subpart B of part 64, applies to emissions units that use control devices to achieve compliance. The rule defines "control devices" to mean equipment that removes or destroys emissions (see § 64.1), as opposed to other control measures, such as process modifications, material substitution, and other control options. This document generally refers to "active control devices" to distinguish between the types of equipment that are defined as "control devices" in draft part 64 and these other types of control measures.

For significant units that use active control devices to achieve compliance, the owner or operator will have to develop and propose through the part 70 permit process a CAM plan that meets specified criteria for selecting appropriate indicators of control performance, establishing ranges for those indicators, and for responding to any excursions from those ranges. Subpart B also includes performance and operating criteria that must be achieved, as well as documentation requirements for the monitoring proposed by the owner or operator.

For units at major sources, subpart C of part 64 includes more general monitoring requirements. Subpart C requires that part 70 permits for all major sources include monitoring sufficient to provide a reasonable assurance of compliance over the anticipated range of operating conditions,

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

and then provides substantial latitude to the owner or operator and the permitting authority for agreeing upon appropriate monitoring to satisfy that basic criterion. For units that already are subject to monitoring, the owner or operator may propose in a permit application that the existing monitoring is adequate to provide a reasonable assurance of compliance, and the permitting authority will then review that existing monitoring to determine that it is sufficient to assure compliance. For units without existing monitoring, the owner or operator may propose that recordkeeping designed to serve as monitoring is sufficient to assure compliance, or may propose that no monitoring is necessary to assure compliance for such units if appropriate based on the type of unit and the applicable requirement involved. The permitting authority will have to determine whether the monitoring proposed by the owner or operator (or the proposal not to conduct monitoring) is sufficient to provide a reasonable assurance of compliance. In addition to having the authority to require additional monitoring as necessary to provide a reasonable assurance of compliance, subpart C directs the permitting authority to include permit requirements establishing appropriate indicator ranges, performance and operating requirements, and similar provisions as appropriate for the monitoring involved. These subpart C monitoring requirements generally are consistent with the existing part 70 monitoring requirements and EPA guidance interpreting those provisions. They have been removed from part 70 and expanded upon in part 64 so that the EPA can clarify the part 70 requirements and so that all of the monitoring requirements can be located in a single rule.

The final element of CAM that applies to monitoring under both subparts B and C is the concept of a quality improvement plan (QIP). A QIP

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

is required if the cumulative duration of excursions from indicator ranges (or exceedances of emission limits where direct monitoring is involved) meets or exceeds a threshold to be established in the part 70 permit. The threshold is to be set at a level where the cumulative duration of excursions (or exceedances) is unacceptable and improvements are necessary to assure ongoing compliance. The QIP includes both a "problem investigation" phase and a "corrective action" phase. The QIP requirements are included so that an owner or operator does not operate in a manner that involves excursions followed by ineffective actions to bring the monitored indicators back into the established acceptable ranges. Thus, the QIP is necessary to assure that the owner or operator pays attention to the data and, if necessary, improves performance to the point where ongoing compliance with applicable requirements is reasonably assured. See Section II.J. for further discussion of QIP issues.

2. Alternatives to Implementation through Permits. Some stakeholders have suggested alternative means of implementing CAM requirements. One alternative suggested by a State agency was to allow a State the option of implementing CAM through programmatic rule changes instead of implementing CAM through source-specific CAM plans. One potential method for allowing this option is to exempt from part 64 monitoring any emissions units for which a State has developed requirements specifically designed to satisfy CAM in a rule that has been submitted and approved as part of the SIP.

The draft CAM rulemaking does not include this option. However, even without this type of exemption, the EPA encourages States to consider adding monitoring requirements to existing and new rules that are consistent with the CAM approach. In this manner, the burdens associated with

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

source-specific CAM plan development could be reduced. To provide an incentive for this type of rule, the draft CAM rule includes a provision (see § 64.8(a)) that allows the owner or operator to rely upon this type of programmatic rule as the primary documentation of the appropriateness of its monitoring under subpart B. In addition, the subpart C requirements allow the owner or operator to propose that existing monitoring is adequate to satisfy subpart C. Thus, a permitting authority could promulgate new SIP monitoring requirements for units subject to subpart C with the intent of satisfying the subpart C requirements. This approach would limit the case-by-case reviews necessary to implement subpart C as well.

The implementation schedule for CAM under consideration by the EPA (see Section II.C.) will result in CAM plans not being required for many sources until renewal of initial part 70 permits. This schedule provides substantial time for States to adopt SIP regulations, as discussed above, that are consistent with the CAM approach where appropriate. The Agency solicits comment on how the Agency can further facilitate a programmatic option and any other alternative implementation approaches that should be considered.

3. Limited Purpose of CAM. The CAM approach is intended to provide a cost-effective means of filling gaps in existing regulatory provisions that are not consistent with the statutory requirements of titles V and VII of the 1990 Amendments to the Act. The EPA believes that the CAM approach is a reasonable approach commensurate with this gap-filling role. The CAM approach is not intended to represent an Agency position that existing monitoring requirements that are more rigorous than CAM should be reduced or that monitoring imposed in future regulatory actions necessarily should be guided by the CAM rule.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

If existing requirements are more rigorous than CAM, those requirements should continue to exist unaffected by CAM. This point is made explicitly in several instances in the draft CAM rule. In addition, the EPA is committed to developing new rules subsequent to the 1990 Amendments from a presumption of developing standards with methods specified for directly determining continuous compliance whenever possible, taking into account technical and economic feasibility, and other pertinent factors. In recognition of this EPA commitment, the draft rule exempts New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) rules that are proposed after the 1990 Amendments to the Act from CAM requirements. The Agency believes that States should approach their regulatory actions from the same perspective and thus the Agency does not believe that CAM will have a significant impact on requirements imposed subsequent to the 1990 Amendments.

4. Relationship to Periodic Monitoring. The Agency intends for the CAM rule to address both enhanced and periodic monitoring requirements for title V sources. The draft rule includes both the CAM requirements in part 64 and revisions to part 70 to coordinate CAM and part 70 periodic monitoring requirements. The revisions to § 70.6(a) in the draft CAM rule generally are consistent with the existing periodic monitoring requirements, with two important distinctions. First, the revisions are intended to allow for streamlining multiple monitoring requirements consistent with guidance set forth in the EPA's March 5, 1996 document entitled "White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program" (see docket item VI-I-2, hereafter referred to as "White Paper 2"). Second, the revisions to § 70.6(a) eliminate the periodic monitoring requirements in § 70.6(a)(3)(i)(B). That subsection of part 70 currently requires permits to

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

include some type of periodic monitoring or testing requirements where existing requirements fail to impose such requirements. That periodic monitoring requirement is removed from part 70 so that all requirements to add monitoring beyond existing applicable requirements will occur as a result of the CAM requirements in part 64.

The Agency notes that by replacing the current part 70 monitoring requirements with the part 64 requirements, the scope of the current obligation in part 70 to add gap-filling monitoring will be reduced. This reduced obligation occurs because part 64 does not require owners or operators to add monitoring or testing requirements for pollutant-specific emissions units subject to subpart C CAM where monitoring is not necessary to provide a reasonable assurance of compliance with a part 70 permit. The Agency also notes that for units subject to subpart C CAM, the part 64 provisions restate the current part 70 provision which indicates that recordkeeping may be considered periodic monitoring where appropriate. The part 64 provisions expand upon this existing part 70 provision by listing several situations for which the recordkeeping approach may be appropriate.

The part 64 requirements, however, also strengthen the existing part 70 monitoring requirements in certain circumstances. The current § 70.6(a)(3)(i) does not explicitly require improvements to monitoring at an emissions unit if some form of periodic monitoring (including recordkeeping designed to serve as monitoring) or periodic testing is already required. Part 64 will require sources to upgrade or replace existing monitoring if the existing monitoring requirements are inadequate to satisfy part 64.

Finally, the EPA notes that it does not believe that the CAM rule and part 70 revisions will be effective until at least mid-1997. In addition, the implementation schedule included in part 64 for achieving compliance with

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

these new CAM requirements means that not all permits will adopt CAM upon initial permit issuance. In the interim, the monitoring requirements adopted by States in response to the requirements in part 70 will apply as owners or operators submit permit applications and permitting authorities act on initial permits. The Agency expects that, to the extent practicable, owners or operators and permitting authorities will both act in a manner that will facilitate future implementation of CAM in these initial permits.

5. Relationship to Part 70 Compliance Certifications. In developing an implementation approach under the proposed Enhanced Monitoring Program (58 FR 54678, October 22, 1993), the EPA indicated that owners or operators must rely on methods for determining continuous compliance to submit a certification of whether compliance is continuous or intermittent. Many industry representatives and State and local agencies objected to the burdens associated with the Enhanced Monitoring Program. A large part of those burdens were a result of having to develop monitoring that could produce data of sufficient reliability to make determinations of continuous compliance with a degree of representativeness, accuracy, precision, and reliability equivalent to that provided by conducting the test method established for a particular requirement. In response to those concerns, the Agency opted to pursue the CAM approach which provides a reasonable assurance of compliance through monitoring of control operations and taking corrective action. The EPA believes that the CAM approach does enhance existing monitoring requirements and provides sufficient information for an owner or operator to reach a conclusion about the compliance status of the owner or operator's source that is adequate to satisfy the compliance certification obligations in the Act. It also provides sufficient data for the EPA, permitting authorities and the public to evaluate a source's compliance

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

and to take appropriate action where potential compliance problems are discovered.

The draft CAM rulemaking also clarifies the Agency's interpretation of the phrase "continuous or intermittent" as used in section 114(a)(3) of the Act. The original proposed Enhanced Monitoring Program in October 1993 interpreted the requirement that sources certify "whether compliance is continuous or intermittent" to require monitoring sufficient to determine if compliance was continuous. (58 FR 54654, 54658) Thus the term "continuous" was read as meaning that compliance was achieved during all averaging periods for a standard and "intermittent" was read generally as meaning that one or more unexcused deviations occurred during the certification period. (58 FR 54665). This interpretation is consistent with the Agency's position in the preamble to proposed part 70 as well (see 56 FR 21737, May 10, 1991 ("The compliance certification must document . . . whether compliance was continuous or intermittent (i.e., whether there were periods of noncompliance).").

The Agency reconsidered this interpretation in reopening the public comment period on the Enhanced Monitoring proposal and noted that "intermittent" could mean either that noncompliance had occurred or that the owner or operator had used an intermittent method for demonstrating compliance. (See 59 FR 66848, col. 2 ("nothing in section 114(a)(3) dictates that all sources must certify to being in either continuous compliance or else be considered in noncompliance; sources may also certify to being in compliance as demonstrated on an intermittent basis.")). The EPA believes that the statutory interpretation discussed in the preamble to the proposed Enhanced Monitoring Program and this alternative interpretation are both reasonable, and that the EPA has discretion to clarify

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the meaning of this statutory provision given the ambiguity in the legislation. As outlined below, the draft CAM rule (see the revisions to § 70.6(c)(5)) is derived from the interpretation contained in the December 1994 notice reopening the comment period.

The draft part 70 revisions in the CAM rulemaking require the owner or operator to indicate in the certification whether the methods used to determine compliance produce continuous or intermittent data, and to certify compliance based on the results from the methods identified. The owner or operator must identify as exceptions in the certification any deviations that occurred during the certification period as determined using the methods described in the certification. Deviations include exceedances documented by continuous emission monitoring or excursions from control performance indicators documented by CAM (the meaning of these terms is discussed in Section II.A., below). This approach implements the statutory phrase "continuous or intermittent" by requiring clear statements of both the existence of incidents that may involve noncompliance and the amount of data relied on to make the certification. This information will allow the person reviewing the certification to assess the potential for noncompliance in the context of the amount and nature of the data that were relied on by the owner or operator. The Agency emphasizes that not all deviations constitute violations of a permit. A deviation acts only to indicate potential problems that must be evaluated by the permitting authority or the EPA to determine whether a finding of violation is warranted on the basis of the facts involving the deviation that occurred.

6. Consistency with Regulatory Reinvention Efforts. The approach in this rule lays out broad principles and performance criteria for appropriate monitoring, but does not mandate the use of a particular technology. The

COMPLIANCE ASSURANCE MONITORING (CAM) RULE DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

proposal is intended to reflect the principles articulated in President Clinton's and Vice President Gore's March 16, 1995 report, "Reinventing Environmental Regulation." That report established as goals for environmental regulation building partnerships between EPA and State and local agencies, minimizing costs, providing flexibility in implementing programs, tailoring solutions to the problem, and shifting responsibilities to State and local agencies. The Agency believes that the draft CAM rule meets the goals of the report.

This approach also is consistent with President Clinton's regulatory reform initiatives and The EPA's Common Sense Initiative in that it focuses on steps to prevent pollution rather than to impose unnecessary command and control regulations on regulated sources. The approach is based on the assumption that pollution control is an integral part of doing business and that owners or operators should pay attention to their pollution control operations with the same care they do their product operations. The CAM approach emphasizes the role of the owner or operator in developing a plan to achieve this goal for specific circumstances.

D. The Relationship of CAM To Credible Evidence and Enforcement Issues

1. General CAM Enforcement Policy. As a general matter, the EPA expects that source owners or operators will be in compliance if they conform to the basic requirements of CAM; that is, the owner or operator ensures that properly designed control measures are installed or otherwise employed, demonstrates that those control measures are capable of achieving applicable requirements, and provides assurance that those control measures are properly operated and maintained so as not to deteriorate to the point of noncompliance with applicable requirements. However, this expectation will not prohibit the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

Agency from undertaking appropriate enforcement investigations where it obtains information that there is an imminent and substantial endangerment to public health or the environment, a pattern of noncompliance, or serious misconduct.

2. Regulatory Background and General Relationship. The October 22, 1993 proposed Enhanced Monitoring Program included revisions to 40 CFR parts 51, 52, 60 and 61. The Agency received full comment on those provisions during the initial and reopened public comment period on the Enhanced Monitoring Program. The Agency received additional comment on those proposed revisions during and after a public meeting held on April 2, 1996. The Agency is considering the promulgation of revisions similar to those originally proposed with minor changes.

The provisions that were proposed in 1993 would have amended 40 CFR parts 51, 52, 60 and 61 to allow data gathered using enhanced monitoring to be used as "presumptively credible evidence" in enforcement actions. The rule also would have modified parts 51, 52, 60 and 61 to specifically provide for the use of "credible evidence" (CE) other than compliance test method data to prove noncompliance in an enforcement action, and would have had the effect of eliminating any potential ambiguity regarding the use of data other than compliance or reference test method data as a basis for Title V compliance certifications. EPA is considering eliminating the "presumptively credible evidence" categories, but promulgating the remaining portions of the October 22, 1993 revisions separately from CAM.

The Agency is proceeding with the CE rulemaking separately from CAM because the two programs are different in scope. For this reason, the information that could constitute CE would not be limited to CAM data or information collected pursuant to a part 70 permit generally. Other types of CE could include information from monitoring that is not required by regulation (such as monitoring conducted pursuant to a consent agreement or a specific section 114 request) or

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

information from inspections by the permitting authority. Although CAM and other part 70 data likely will be the most significant source of potential CE data for sources with CAM requirements, these other types of information may also be important as well. Furthermore, given that excursions from CAM indicator ranges will not necessarily indicate noncompliance, the value of CAM data as potential CE will depend on specific circumstances.

Even though the CE and CAM rulemakings are distinct regulatory actions, there are complementary aspects to the two rules. As noted above, the CE rule will have the effect of eliminating any potential ambiguity regarding the use of non-compliance test data as a basis for Title V compliance certifications. Most importantly, the CE rulemaking affects the potential consequences of identifying deviations (including exceedances or excursions) in a compliance certification based on data such as CAM data other than data from the compliance or reference test method. The CE revisions clarify the authority to rely on these data to prove that a source is in compliance or that a violation has occurred.

3. Potential Enforcement Consequences Related to CAM and CE. As a general matter, EPA notes that it intends to apply its current enforcement policies in instances where the Agency believes, based on a review of CAM data, that a source has violated underlying emission limits. Accordingly, EPA will continue to focus its judicial enforcement resources on violations that: (1) may threaten or result in harm to public health or the environment, (2) are of significant duration or magnitude, (3) represent a pattern of noncompliance, (4) involve a refusal to provide specifically requested compliance information, (5) involve criminal conduct, or (6) allow a source to reap an economic windfall. Further, EPA generally will not bring a federal enforcement action where a state or local permitting authority has taken timely and appropriate action to resolve the violations. For minor violations, EPA generally uses tools such as notices of violation and administrative compliance and penalty orders to ensure a return to

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

compliance. Where appropriate, EPA also exercises its discretion to take no enforcement action at all. Finally, for any violations that EPA discovers based on CAM data, all other EPA enforcement policies, such as the May, 1996 Policy on Compliance Incentives for Small Businesses, would apply in accordance with their terms.

EPA also notes that in order to use CE to prove that a violation of the Act has occurred, EPA (or any other party that can take action in response to a violation of the Act) would bear the legal burden of proof that the CE to be used shows that a violation has occurred. Where the EPA has the burden of proof, the Agency would need to have adequate information to demonstrate, in accordance with applicable legal rules of procedure, that if a compliance test had been conducted during the same time period covered by the CE, the test would have shown a violation. Similarly, a source owner or operator could use CE to assert that an emission unit or source is in compliance so long as it could demonstrate that if a performance test had been conducted during the same time covered by the CE, the test would have shown compliance.

The following discussion presents an overview of EPA's general position concerning the appropriate enforcement response related to several circumstances that may arise after implementation of the CAM rule and the CE rule.

a. No CAM Excursions/Exceedances Detected. Given that excursions from CAM indicator ranges will not necessarily indicate noncompliance, the CAM rule cannot and does not replace a source's obligation to comply with otherwise applicable emission limits. Nonetheless, EPA expects that a unit that is operating within appropriately established indicator ranges as part of an approved CAM plan will, in fact, be in compliance with its applicable limits. For this reason, units operating within their CAM parameters will be presumed to be in compliance and will not be targets for enforcement proceedings; however, this presumption will not

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

prohibit the Agency from undertaking appropriate enforcement investigations where it obtains information that there is an imminent and substantial endangerment to public health or the environment, a pattern of noncompliance, or serious misconduct.

b. CAM Excursions Exist, But No QIP Required. Where there is no violation of an applicable emission limit and where the source takes prompt corrective action, a CAM excursion does not give rise to liability under the CAM rule or the Act (unless an excursion is specifically made an enforceable permit term). The EPA understands that many sources operate well within permitted limits over a range of process and pollution control device operating parameters. Depending on the nature of pollution control devices installed and the specific compliance strategy adopted by the source or the permitting authority, CAM indicator ranges may be established that generally represent emission levels significantly below the applicable underlying emission limit. For this reason, and because EPA anticipates a wide variance in CAM indicator range setting practices, the agency intends to draw no firm inferences as to whether excursions from CAM parameter levels warrant enforcement of underlying emission levels without further investigation into the particular circumstances at the source.

Because of the need to prioritize its resources effectively, the EPA does not intend to pursue formal enforcement actions against a source that may have minimal reported excursions based on CAM data, so long as an owner or operator acts promptly to minimize the air pollution impact of excursions. The Agency also notes that there will likely be different enforcement consequences depending on the nature of the relationship between excursions from CAM indicator ranges and actual emissions.

A few examples illustrate this point. First, consider a source with a CAM parameter indicator range set at a level that generally indicates emission levels that are 50 percent below its associated emission limit. Suppose this source had

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

numerous "excursions" from its indicator range level, but that none of these deviations likely represented emissions more than 80 percent of the associated emission limit. In this situation, the source might even be in a QIP (if the excursions exceeded 5 percent of the source's operating time) and still not be an EPA enforcement priority, because the unit apparently never exceeded its underlying emission standard. Conversely, suppose the unit grossly exceeded the indicator range and presumably the underlying emission limit for an entire week without appropriate corrective action. This excursion could constitute less than 5 percent of the source's operating time -- one week out of a 26 week reporting period would equal 4 percent duration. Even though this source would not yet be required to perform a QIP, it might well be an EPA enforcement priority.

To take an actual case, in Sierra Club v. Public Service Company, 894 F. Supp. 1455 (D.C. Col. 1995), the district court held that a power company generating station had committed over 19,000 violations of opacity emission standards over a period of five years. Among other things, the facility allegedly failed to repair an induced draft fan motor on an electrostatic precipitator used to control emissions on a fossil fuel-fired steam generator for over two weeks, but continued to operate the generator during this time. This caused nearly continuous violations of the unit's opacity limit during this period. The EPA subsequently issued a notice of violation to the facility for thousands of additional violations, and in May, 1996, the facility settled with the United States and the Sierra Club for injunctive relief valued at \$130 million, a \$2 million fine, and \$2 million for land conservation projects. The settlement will eliminate an estimate 20,000 tons of emissions annually from the plant and will help protect a nearby wilderness area. Although this was clearly an environmentally significant enforcement action, the 19,000 violations originally addressed in the Sierra Club lawsuit represented only 4 percent of the facility's total operating time.

c. CAM Excursions Trigger a QIP. The EPA does consider an emissions

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

unit exhibiting cumulative duration of excursions in excess of the amount that would necessitate implementing a QIP to be a higher priority enforcement target and deserving of additional enforcement attention. However, EPA understands that even those units in a QIP may have CAM indicator ranges significantly below applicable emission limits and will not, without more, presume that the unit is in violation of those limits. If the Agency determined that a unit's excursions represented underlying emission limit violations, the Agency may take appropriate action as outlined above. The Agency might perform additional on-site inspections, issue a notice of violation, or require additional performance testing to gauge the compliance status; in some situations, the appropriate response might include an administrative or judicial penalty action. In so doing, the Agency would take into consideration the fact that a source owner or operator, through implementation of a QIP would be taking steps to resolve any potential compliance problem. During the period of a first-time QIP, the Agency would prefer to provide appropriate technical assistance, if necessary, to ensure a return to compliance performance rather than initiate an enforcement investigation. This would be true where a first time QIP has been implemented and it quickly and effectively addresses the problems that necessitated the QIP.

II. Detailed Discussion of Regulatory Provisions

A. Section 64.1 -- Definitions

Section 64.1 of the draft rule includes various definitions important to implementation of part 64. Many of these definitions merely reference the same definitions in part 70 so that the two rules can be implemented in a coordinated fashion. Generally, important definitions are discussed elsewhere in this document in reference to particular substantive topics. The following discussion highlights certain other key definitions.

The definitions of "monitoring" and "data" are designed to encompass any form of instrumental or noninstrumental monitoring and types of

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

information. The use of these terms is not intended to show a preference toward instrumental monitoring as opposed to other forms of monitoring. In addition, the definition of "monitoring" includes the possible use of compliance test method procedures. The testing would have to be done at defined, routine intervals. The Agency notes that "monitoring" does not include requirements to conduct compliance tests either on a one-time basis (e.g., initial performance tests as required under many NSPS subparts) or at such times as may be required by a regulatory agency.

The definition of "emission limitation or standard" is based on the definitions of "emission limitation," "emission standard," "means of emission limitation," and "standard of performance" as defined in section 302 of the Act. The part 64 definition encompasses all forms of emission limits or other standards that are designed to limit emissions. These include numerical emission limits expressed in terms of total mass emissions, emission rates or concentrations, or control efficiency. These limits also include parameter limits such as sulfur in fuel requirements or minimum temperature requirements, as well as work practice, design and equipment standards.

The term does not include other applicable requirements such as monitoring, reporting, or recordkeeping requirements. It also does not include general requirements such as the requirement to obtain a permit, prepare a malfunction abatement plan, or operate and maintain a facility in a manner consistent with good air pollution control practices. These types of requirements generally apply to an entire facility and The EPA believes it is appropriate to exclude them so that otherwise unregulated emissions units are not inappropriately subject to CAM.

Finally, the definition also does not include requirements that act to exclude certain sources from compliance with emission limitations or

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

standards based on size, type of raw material, or other criteria. Some stakeholders previously have referred to these requirements as "negative reporting" requirements. To clarify what is meant by this type of "negative reporting" requirement, it is useful to consider some examples provided in comments on the proposed Enhanced Monitoring Program. Commenters cited particular provisions in the NSPS and NESHAP regulations, including subpart NNN of part 60 and subpart BB of part 61, as specific examples of regulations that include these types of situations. (See docket items IV-D-273 and 293.) Under the NESHAP subpart BB example, 40 CFR 61.300(b) specifically exempts certain benzene waste operations from the emission standards in subpart BB but requires compliance with the applicable reporting and recordkeeping provisions in subpart BB. In this example, subpart BB does not require compliance with the applicable emission limitations or standards in subpart BB for such operations, and the requirement in § 61.300(b) does not constitute an emission limitation or standard.

In the NSPS subpart NNN example, one commenter pointed to the exemption provided in § 60.660(c)(4) as an example of this type of requirement. It is true that this provision of subpart NNN is not an emission limitation or standard. It should be noted, however, that this section serves only to excuse the owner or operator of an affected facility that maintains a TRE index value of greater than 8.0 from particular monitoring requirements in one section of subpart NNN. The owner or operator still must comply with particular emission limitations or standards in subpart NNN, as well as certain testing, reporting and recordkeeping provisions.

Section 64.1 of the draft rule includes definitions for the terms "exceedance" or "excursion." The term exceedance means a condition in

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

which emissions (or opacity, if applicable) are detected at levels in excess of an applicable emission limitation or standard for a period over which data are collected and averaged. If a percent reduction standard applies, an exceedance would mean that the percent reduction achieved is less than the required percentage. This term is the same as the concept of "excess emissions" commonly used in some NSPS regulations for reporting of data from a continuous emission monitoring system (CEMS) or a continuous opacity monitoring system (COMS). For instance, 40 CFR 60.45(g)(2) establishes a 3-hour average for purposes of reporting SO₂ exceedances detected by a CEMS under subpart D of part 60. An "excursion" means the failure to stay within an indicator range established pursuant to part 64 (see §§ 64.7(a)(3), 64.9(a)(3) or 64.9(c)(2)(ii), as applicable). Again, the failure would have to occur for the period over which data are collected and averaged, if applicable. In the definitions of "exceedance" and "excursion," part 64 explicitly requires that any such incidents be reported as deviations in the context of a part 70 compliance certification.

B. Section 64.2 -- Applicability

1. Determining which CAM Requirements Apply

a. Overview. The primary purpose of § 64.2 is to guide the owner or operator in determining which requirements of part 64 apply to different types of pollutant-specific emissions units at a source. The Agency notes that the term "pollutant-specific emissions unit," defined in § 64.1, is used in part 64 to clarify that emissions units are evaluated with respect to each pollutant separately. For example, a coal-fired boiler emitting through a single stack could constitute several pollutant-specific emissions units, such as for PM-10, SO₂, NO_x, and CO. This term is used throughout the remainder of this document where appropriate. The Agency also notes that

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the requirements of part 64 apply only to sources subject to part 70 permit requirements. This point is stated in draft § 64.2(a)(1) and § 64.2(b)(1).

The applicability provisions distinguish between pollutant-specific emissions units that achieve compliance by means of an active control device and other units at part 70 major sources. The Agency recognizes that the type of monitoring that may be appropriate for active control devices is often unnecessary or not even appropriate for other types of control approaches. For instance, unlike most active control devices, controls that involve work practices, product changes and similar approaches to controlling emissions can often be documented through appropriate recordkeeping of standard operating procedures. In addition, the types of emission exceedance problems that can arise from poor operation and maintenance of an active control device can be severe and represent a significant compliance concern. Moreover, although units with active control devices represent a smaller percentage of the overall number of emissions units than other units, these controlled units represent a disproportionate share of the overall potential emissions from all emissions units. By concentrating the most detailed requirements of part 64 on these units with active control devices, the Agency has focused the rule on the units that represent a significant portion of the overall potential emissions regulated under the Act and that are generally most likely to raise compliance concerns.

Therefore, the applicability provisions direct the owner or operator to follow the detailed CAM requirements in subpart B of part 64 for significant emissions units with control devices and to follow the general CAM requirements in subpart C of part 64 for all other emissions units. The subpart B requirements include criteria for selecting appropriate monitoring,

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

adopting appropriate performance indicator ranges, and developing necessary performance and quality assurance requirements. Subpart C requirements are more general in nature and are analogous to the periodic monitoring requirements specified in § 70.6(a)(3)(i) currently in effect. These subpart B and subpart C requirements are discussed in detail in Sections II.F. through II.I., below.

b. Subpart B applicability requirements. Section 64.2(a) of the draft rule requires the owner or operator to follow the requirements in subpart B of part 64 (§§ 64.6-64.8) for significant pollutant-specific emissions units at sources subject to part 70 permit requirements that use active control devices to achieve compliance. For subpart B to apply, draft § 64.2(a)(1) states that a pollutant-specific emissions unit must meet the following three criteria: (1) the unit must be subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate of that pollutant); (2) the unit must use a control device to achieve compliance with an emission limitation or standard; and (3) the unit must have "potential pre-control device emissions" in the amount, in tons per year, required to classify the unit as a major source under part 70. In addition, subparagraph (a)(2) also applies subpart B requirements to any other pollutant-specific emissions unit specified by the permitting authority, either by rule or in a permit-specific decision.

For the first criterion, the Agency notes that CAM applies only if an applicable emission limitation or standard applies because the purpose of CAM is to provide a reasonable assurance of compliance with such requirements. The Agency also notes that the rule includes a "surrogate" of a regulated air pollutant to address situations in which the emission limitation or standard is expressed in terms of a pollutant (or other surrogate) that is

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

different from the regulated air pollutant that is being controlled. A common example would be emission limits expressed in terms of particulate matter and opacity rather than PM-10. Another example would be an emission limit expressed as a control device operating requirement rather than in terms of the applicable regulated air pollutant.

For the second criterion, draft § 64.1 provides a definition of "control device" that reflects the focus of subpart B of part 64 on those types of active control devices that are usually considered as "add-on controls." This definition does not encompass all conceivable control approaches but rather those types of active control devices that are prone to upset and malfunction and are most likely to benefit from monitoring of critical parameters to assure that they continue to function properly. The benefits of requiring monitoring are greatest for active control devices since generally they are not an inherent part of the source's process and may not be watched as closely as devices that have a direct bearing on the efficiency or productivity of the source.

A control device is defined as "equipment used to destroy or remove air pollutant(s) prior to discharge to the ambient air." The definition then provides a non-exclusive list of equipment types that will usually qualify as control devices. This definition is based on similar definitions of control devices in State regulations (see, e.g., North Carolina Administrative Code, title 15A, chapter 2, subchapter 2D, section .0101 (definition of "control device"); Texas Administrative Code, title 30, section 101.1 (definition of "control device"). The definition is in contrast to broader definitions of "control device," "air cleaning equipment," "control measure," or similar terms included in some States' regulations (see, e.g., Codes, Rules, and Regulations of the State of New York, title 6, chapter III, section 200.1

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(definition of "air cleaning device" or "control equipment").). These broader definitions often include any method, process or equipment which removes, reduces or renders less noxious air contaminants released to the ambient air. Those types of controls could include material substitution, process modification, operating restrictions and similar types of controls. The definition in CAM relies on the narrow interpretation of a control device that focuses on control equipment that actively removes or destroys air pollutants.

Certain NSPS and NESHAP regulations also have targeted definitions of "control device" or "add-on control device" that apply to the specific type of affected facility covered by the applicable NSPS or NESHAP subpart (see, e.g., 40 CFR 60.581, 60.670, 60.691, 60.731, 61.171, 61.241, 63.161, 63.561, and 63.702). The definition in the draft of part 64 generally is consistent with these prior Agency definitions, but without language targeted to a particular affected facility type.

Although not subject to CAM, the Agency notes that some recent NESHAP definitions exclude particular equipment that could in some contexts be considered "control devices." One example is § 63.111 in subpart G to 40 CFR part 63 (NESHAP requirements for Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater). That definition excludes both recovery devices used in conjunction with process vents and primary condensers used in conjunction with a steam stripper. The Agency believes that the broad nature of CAM applicability does not allow for this degree of detail in the part 64 definition. Rather, The EPA believes that these particular situations must be handled in a case-by-case situation.

The Agency recognizes that in some situations, equipment that in

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

some cases would be considered a control device is more akin to an inherent part of the process. The Agency has previously stated three criteria to be used to judge these distinctions:

- (1) Is the primary purpose of the equipment to control air pollution?
- (2) Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment?
- (3) Would the equipment be installed if no air quality regulations are in place?

(See letter from David Solomon, EPA, to Timothy J. Mohin, Intel Government Affairs, dated November 27, 1995. Included in the docket as Item VI-C-14.) As noted in the letter, these criteria require case-specific judgment. The Agency believes that the draft definition provides the permitting authority with the ability to exercise this type of judgment in the permit process to exclude or include equipment as appropriate. The EPA also will consider providing guidance on those types of situations in which it may be difficult to determine if a particular piece of equipment should be classified as a control device or as an inherent element of the process.

The Agency solicits comments on the appropriateness of the definition of control device and any additional clarifications that the Agency should make either in the regulation or by guidance. The Agency notes that The EPA's Aerometric Information Retrieval System (AIRS) contains a list of various air pollution control equipment codes that address a wide variety of possible control methods, processes and equipment; this list includes both active control devices and other types of controls. The Agency has placed in the docket (item VI-I-3) a document that reflects The EPA's position on which of those equipment codes refer to a "control device" as defined in

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

draft part 64 and which refer to other types of controls.

The Agency also notes that draft § 64.1 defines a "capture system" to be the "equipment (including but not limited to hoods, ducts, fans, and booths) used to contain, capture and transport a pollutant to a control device." The monitoring requirements for control devices extend to these capture systems as well because they are essential to assuring that the overall emission reduction goals associated with the control device are achieved. It is important to note that ductwork, ventilation fans and similar equipment are not considered to be a capture system if the equipment is used to vent emissions from a source to the ambient air without being processed through a control device. For instance, roof vents that remove air pollutants from inside a building but do not transport the pollutants to a control device to reduce or destroy emissions are not subject to the monitoring requirements established in subpart B.

Finally, for the third criterion for subpart B applicability, the term "potential pre-control device emissions" has the same meaning as the term "potential to emit," except that any emission reductions achieved by the control device are not taken into account, even if the owner or operator generally is allowed to do so under the regulatory definition of "potential to emit." This approach was suggested by State and local agencies during the development of the CAM rule (see docket items VI-D-42 and 49). The Agency agrees with this approach and believes that excluding the assumed efficiency of the control device from the calculation of potential to emit for purposes of CAM applicability provides an appropriate means of distinguishing between units based on environmental significance. It allows the Agency to distinguish between units based on their true size and based on the degree of control required to achieve compliance.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

For instance, consider a simplified example involving two hypothetical units with VOC emissions. Unit A has the potential to emit 10 tons of VOC per year. This unit uses an afterburner that reduces emissions by 75 percent. So, Unit A's potential pre-control device emissions would be 40 tons per year. Potential to emit for Unit B is also 10 tons of VOC per year, but this emission level is reached by using a high efficiency incinerator system that achieves a 90 percent reduction of VOC. This unit has potential pre-control device emissions of 100 tons per year. If each unit experienced a 15 percent annual loss of overall efficiency in its system, the increase in emissions from Unit A would be 6 tons while Unit B would show an increase of 15 tons. The Agency believes that this type of simplified, hypothetical example demonstrates the appropriateness of not considering control device efficiency in evaluating which units should be subject to CAM.

c. Subpart C applicability requirements. Section 64.2(b) of the draft rule requires owners or operators of all part 70 major sources to comply with subpart C of part 64, except in limited circumstances. As with subpart B applicability, one circumstance is if the major source is subject to no applicable requirements. A second circumstance is where the source is comprised solely of emissions units that are already subject to subpart B and/or exempt under draft § 64.2(c). In both of these circumstances, there is no need for the part 70 permit to include monitoring under subpart C because the source is either not subject to applicable requirements or the part 70 permit incorporates all necessary monitoring for the requirements applicable.

d. Level of detail necessary for applicability determinations. An issue owners or operators will face generally is the level of detail that will be required in permit applications to support a finding of applicability/non-

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

applicability of part 64. Section 70.5(c)(3) requires owners or operators to include emissions information in their part 70 permit applications so that permitting authorities will be able to determine which requirements apply to the source. In response to concerns about the burdens of part 70 permit applications, the Agency issued guidance in July 1995 to simplify the permit application process. (White Paper for Streamlined Development of Part 70 Applications, July 10, 1995, included as docket item VI-I-1. This guidance is cited as White Paper 1 throughout the remainder of this document.) The guidance discusses the purposes of requiring emissions estimates and states, "in general, where estimates of emissions are necessary, reasonably available information may be used." (White Paper 1, p. 17.) Consistent with the streamlining of the part 70 requirements, the Agency believes that detailed emissions information generally should not be necessary to determine whether a pollutant-specific emissions unit is subject to CAM. The Agency believes that in most cases owners or operators should be able to use the emissions estimate information that is already required generally for part 70 permit applications to determine CAM applicability.

The Agency notes, however, that there may be instances when the determination of CAM applicability may require the owner or operator to provide additional information on the emissions associated with a pollutant-specific emissions unit. Particularly, where a unit is close to the CAM applicability threshold and the owner proposes that CAM does not apply, the permitting authority may require additional information. For more specific information on the quality of information required, see pp. 17-18 of White Paper 1. The Agency also notes that owners or operators may stipulate to the applicability of certain requirements of part 64 and thereby reduce the burdens of documenting the applicability determination. In Section D. of

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

White Paper 2, The EPA discusses the possible uses and limitations for this approach.

3. Exemptions.

a. Exempt emission limits. Consistent with the CAM goal of requiring monitoring only where necessary to provide a reasonable assurance of compliance, draft § 64.2(c)(1) exempts owners or operators from part 64 with respect to certain emission limitations or standards for which the underlying requirements already establish adequate monitoring to satisfy the statutory requirements for CAM for the emission limits being monitored. The exempt emission limitations or standards are:

-- Emission limitations or standards under the NSPS and NESHAP programs that are proposed after November 15, 1990. Consistent with previous Agency statements, the monitoring requirements associated with these post-1990 Amendments emission limitations or standards will satisfy the monitoring requirements of titles V and VII of the 1990 Amendments (see preamble to 40 CFR Part 70, 57 FR 32278, July 21, 1992). As discussed above in Section I.C., The EPA intends to focus on including methods for directly determining continuous compliance in these new Federal rulemakings where such methods are technically feasible at a reasonable cost. Only where such approaches are not appropriate would the Agency consider using an approach similar to the CAM approach in such requirements.

-- Stratospheric ozone protection requirements under title VI of the Act. The type of requirements that apply under that program are significantly different than typical emission limitations or standards, and the appropriate monitoring for such requirements will be handled under regulations implementing those requirements.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

-- Acid Rain Program emission limits under title IV of the Act. The Acid Rain monitoring requirements under 40 CFR part 75 already establish all appropriate compliance assurance monitoring for such requirements.

-- Emission limits that apply solely under an emissions trading program approved or promulgated by The EPA and emission cap requirements that meet the requirements of § 70.4(b)(12). By their nature, these types of standards require methods to confirm trades or to calculate overall compliance with the cap, taking into account the contribution of emissions from all covered units. These types of emission limits also often cover all emissions units at a facility, including those with extremely low amounts of emissions and those that are not subject to other applicable requirements. Because of the need to consider the interrelationship among units covered by this type of requirement, the type of monitoring in part 64 would not be appropriate. Instead, the Agency believes that the existing requirements for monitoring compliance with such standards should be followed. For instance, the requirements for statutory economic incentive programs (40 CFR 51.490 - .494) specify the quantification methods that must be included as part of any SIP economic incentive program developed pursuant to sections 182(g)(3), 182(g)(5), 187(d)(3), or 187(g) of the Act. In addition, The EPA has proposed revisions to § 70.4(b)(12) to clarify that emission caps must include "replicable procedures and permit terms that ensure the emissions cap is enforceable and trades pursuant to it are quantifiable and enforceable." (59 FR 44460, August 29, 1994). Another example is the Agency's proposed Open Market Trading Rule (60 FR 39668, August 3, 1995). The Agency notes that it is considering issuing the elements of an open market trading program as guidance rather than as a final rule. This program, whether issued as a rule or as guidance, would provide the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

appropriate types of requirements that State rules would have to adopt for quantifying and verifying discrete emission reductions (DERs) used for trading purposes. All of these provisions highlight the need to include as part of any emission trading or cap requirement the appropriate methods for quantifying emissions and assuring that the trade or cap limitation is enforceable. The Agency believes that the imposition of CAM on these types of standards would not provide any additional benefit.

-- Emission limitations or standards for which a part 70 permit already includes monitoring that is used as a continuous compliance determination method. In these instances, there generally is no need to require any additional compliance assurance monitoring for that emission limitation or standard. There is one exception to using this exemption. In some instances a continuous compliance determination method may be contingent upon an assumed control factor. For example, a VOC coating source that includes add-on control equipment that destroys VOC emissions may use an assumed control factor for the control equipment together with coating records to calculate compliance with an NSPS requirement. In this example, a monthly calculation generally is made using coating records and an assumed destruction efficiency factor that is based on the last control system performance test. In this example, draft § 64.2(c)(1)(vi) does not allow the exemption from part 64 because the owner or operator must assure proper operation and maintenance of the control system destruction efficiency for the calculation to remain valid. The Agency notes that this position is consistent with the NSPS, which generally require monitoring of the control equipment in addition to the monthly compliance calculation in this type of example.

This exemption also raises a question about what constitutes a

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

"continuous compliance determination method." Section 64.1 of the draft rule defines this type of method as a means established in a part 70 permit for determining compliance on a continuous basis, consistent with the averaging period for the applicable requirement. The Agency is preparing a draft guidance document to help sources and permitting authorities identify requirements that fall within this category of monitoring. The guidance is based on a list of examples identified in Appendix A to the draft CAM rule released in September 1995 (see docket item VI-C-8). The guidance will list examples of such requirements that are included in the NSPS and NESHAP regulations at 40 CFR parts 60 and 61, as well as certain other examples from State requirements. The guidance is intended to describe examples of various types of continuous compliance determination methods, but is not an all-inclusive list. The Agency intends to maintain this list in guidance form as opposed to official regulatory language in order to enhance the ability of the Agency to add to or modify the list of examples based on suggestions received by the Agency over time. The Agency requests comment on this approach and solicits suggestions for any examples that should be provided. The Agency intends to make this document available via the Emission Measurement Technical Information Center Computer Bulletin Board of the EPA's Technology Transfer Network at (919) 541-5742, 24 hours a day, 7 days a week (except Monday, 8-12 a.m. EST). The Agency notes that comments on the draft guidance are not subject to the September 30th deadline for the reopened public comment period; comments on the guidance will be accepted after September 30th and should be sent to Peter Westlin at the address provided in the Introduction to this document.

The Agency notes that if emission limitations or standards other than

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the exempt emission limits described above apply to the same pollutant-specific emissions unit, the owner or operator would still be subject to part 64 for that pollutant-specific emissions unit and may have to upgrade the existing monitoring or add other types of monitoring. The Agency believes that for many situations in which both exempt and non-exempt emission limits apply to a particular pollutant-specific emissions unit, the monitoring for the exempt limit may be adequate to satisfy CAM for the other non-exempt emission limit(s). Section 64.8(a) of the draft rule recognizes this possibility and allows the owner or operator to meet the obligation to explain the appropriateness of its proposed CAM by stating that it is proposing monitoring for non-exempt limits that is based on the monitoring conducted for certain types of exempt emission limits. Examples of situations that may involve both exempt and non-exempt limits for the same pollutant-specific emissions unit include the following. Stakeholders have previously raised as one example a new source permit that contains, for a particular pollutant-specific emissions unit, both a fuel firing rate requirement and a carbon monoxide (CO) limit that is based on the firing rate and an emission factor. If compliance with the fuel firing rate is determined with a continuous compliance determination method, The EPA believes that the existing monitoring could be used to provide a reasonable assurance of compliance with the CO limit in this example. Another example would be a pollutant-specific emissions unit that is subject to both a particulate matter limit and enforceable conditions to operate a control device within certain parameters. In this example, if compliance with the parameter conditions is determined by a continuous compliance determination method, that monitoring could be used to provide a reasonable assurance of compliance with the particulate matter limit, provided that the monitoring included all

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

necessary parameters to satisfy draft § 64.6(a)(2). In contrast, a third example of multiple emission limitations or standards could be an emissions unit that is subject to a short term emission rate limit and an annual throughput limit that has a means for determining compliance with total annual throughput. In this example, demonstrating compliance with the annual throughput is unlikely to assure that the control methods used to comply with the short term limit continue to perform properly, and the owner or operator may have to use different or supplemental monitoring to satisfy part 64 with respect to the short term limit.

As noted above, emission limits established under the Acid Rain Program are exempt from CAM. The Agency expects that the part 75 monitoring required for Acid Rain sources likely will generate the data necessary to comply with part 64. However, because CAM requires that CEMS data be reported in terms of the applicable emission limit, the owner or operator may face some additional requirements in order to generate the data in terms of the other non-Acid Rain emission limits that apply (such as a lb/mmBtu SO₂ standard).

b. Small municipal utility unit exemption. In addition to exempting certain emission limitations or standards, draft § 64.2(c)(2) also exempts small (under 25 megawatts) existing municipal utility emissions units that are exempt from the Acid Rain Program and that supply power for sale only in peak demand or emergency situations. These units have historically low usage rates, but, because of their nature, owners or operators cannot accept enforceable restrictions on the operation of these units for any particular year without violating their contractual obligations. Thus, these units usually have extremely high potential to emit values in comparison to actual emissions. In addition, the Agency notes that these units often are owned

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

and operated by small municipal authorities and that the actual emissions from these units are minimal in many cases. The Agency therefore believes that a limited exemption for these units is appropriate.

To qualify for the exemption, the owners or operators of these units must include in their part 70 permit applications documentation showing that the unit is exempt from all of the monitoring requirements in 40 CFR part 75, and showing that the emissions unit is operated only to provide electricity during peaking hours and emergencies. This documentation should consist of historical operating data and contractual information.

The owner or operator must also demonstrate that the emissions unit has low annual average emissions. The rule requires the owner or operator to document that average annual emissions over the last 3 calendar years of operation are less than 50 percent of the amount required to classify the unit as a major source. If less than 3 years of historical data are available, the owner or operator can use such shorter time period that is available as the appropriate look back period.

The Agency chose the 3-year period to be consistent with the time frame used under the Acid Rain Program to define a peaking unit (see § 72.2). The 3-year period used under the CAM approach recognizes the similar circumstances presented by these small municipal power sources. The use of a 50 percent threshold is consistent with The EPA's January 1995 potential to emit guidance that allows sources that have actual emissions well below title V applicability thresholds to avoid title V permitting by documenting those low actual emissions (see docket item No. VI-I-5 for a copy of this guidance). If actual emissions exceed that 50 percent value, then the guidance requires a source to accept some type of enforceable restriction to reduce its potential to emit below the title V

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

applicability threshold. The Agency believes that the principle behind that guidance is equally applicable for CAM.

Based on the information supplied in previous comments submitted by the affected municipal utility companies, The EPA believes that the vast majority of the emissions units under 25 megawatts operated at these sources will qualify for this exemption under the conditions in the draft rule. On the other hand, the Agency is seeking comment on the necessity of this exemption considering that the CAM rule requirements for monitoring under subpart C are to a great extent less arduous than described in the September 13, 1995 draft of the CAM rule. Specifically, the Agency seeks comment on whether it is necessary to exempt any major emission units from CAM monitoring if minimal recordkeeping of process hours of operation or other ordinarily recorded operational activity will satisfy CAM data collection requirements under subpart C.

C. Section 64.3 -- Implementation Provisions

1. Timing considerations. The monitoring requirements in part 64 are applicable requirements under the Act. Section 70.7(f)(1)(i) requires that a permit be reopened to address an applicable requirement that becomes applicable during the permit term if the permit has a remaining term of 3 or more years. One option for implementing CAM would be to rely on this part 70 provision so that, after the effective date of CAM, any permit with 3 or more years remaining will have to be reopened to address CAM. If this option was selected, The EPA would make the effective date of CAM six months after promulgation to provide time for sources to develop proposed monitoring to include in applications or supplemental applications. This approach would ensure that CAM is implemented as quickly as possible. The Agency considers this a viable approach and solicits comment on this

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

option.

In response to the original Enhanced Monitoring Program and during public input on the CAM approach, many permitting authorities and industry representatives expressed significant concern about the burdens of implementing CAM through the permit process, especially in the first round of permits. The Agency believes that the streamlined applicability and substantive requirements in the draft CAM rule may have addressed many of these concerns. However, because those concerns may still exist, the draft rule includes for discussion purposes an option for phasing in the implementation of CAM that would supersede the language in § 70.7(f)(1)(i). One additional option would be to use the option described below for subpart C only, and use the basic § 70.7(f)(1)(i) option for subpart B units. This approach minimizes the need to reopen permits to those units that are expected to be affected most significantly under part 64. The Agency solicits comment on the appropriateness of the schedule described below and any other options for CAM implementation that should be considered. The Agency notes that the draft approach in § 64.3(a) is not necessarily preferred over the option of relying on § 70.7(f)(1)(i). The language is included so that the final rule can include an implementation approach based on a full opportunity for comment.

Section 64.3(a) of the draft rule requires that if a permit application for a facility has not been submitted prior to 180 days after publication of the final rule in the Federal Register, the owner or operator must include the monitoring information required under subpart B or C as applicable in the next part 70 permit application for that facility. If the application has been submitted by that deadline, but the permitting authority has not yet determined that the application is complete, the owner or operator will have

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

to supplement the application with the relevant information required under part 64.

If the application has already been found complete, then generally the part 64 information will not have to be submitted until the next permit renewal application. There are two exceptions to this delay. If a permit is not due to be issued for more than 18 months after the date 180 days after promulgation of CAM, the owner or operator will have to supplement the initial application even if it has been found complete. This situation could arise if a permitting authority is implementing a three year phase-in for permit issuance under a transition plan as allowed under title V and part 70 (see § 70.4(b)(11)). The Agency believes in this situation that the part 64 requirements could be addressed in the initial permit with little or no impact on the orderly processing of permit applications.

The second exception is for permit modification requests initiated by an owner or operator. For any modification request submitted after 180 days after publication of the final rule in the Federal Register, the owner or operator is required to submit the appropriate CAM information for any pollutant-specific emissions unit(s) covered by the modification request. This requirement will assure that modifications affecting particular emissions units are not considered in a piecemeal fashion and that CAM is implemented as quickly as reasonably practicable.

2. Approval of monitoring. Section 64.3(b) of the draft rule addresses the requirements for permitting authority review and approval of part 64 monitoring in the permit issuance process. Based on the information submitted in a part 70 permit application, the permitting authority is required to approve or disapprove the monitoring proposed by the owner or operator as satisfying part 64. For monitoring under subpart B, the permitting

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

authority will act to approve or disapprove a proposed CAM plan as submitted by the source (see Section II.G., below, for details on what a CAM plan will include). If approved, the permit will have to include a permit term or condition for each element of the CAM plan required under § 64.7(a)(1)-(5). In addition, the permit will have to address the consequences of an excursion from a CAM plan indicator range. Generally, an excursion will only indicate the need to take corrective action, but in some situations the permit may establish that an excursion also constitutes a failure to comply with the permit. This issue is discussed in more detail in Section II.G., below. For subpart C monitoring, the permitting authority is required to develop appropriate permit conditions to reflect the monitoring required for units subject to subpart C. Finally, § 64.3(b)(4) states that the permit must include the thresholds for developing and implementing a quality improvement plan (QIP) if required pursuant to subpart D. That subsection also states that it shall be considered a failure to comply with the CAM rule and the permit condition establishing the QIP obligations if the owner or operator meets or exceeds the thresholds for implementing QIP more than once in any permit term. (See Section II.J., below for further discussion of QIP implementation and permit requirements).

The Agency understands that an owner or operator may in some cases be unwilling to proceed with installation, testing or other monitor verification activities associated with part 64 monitoring until after the owner or operator's proposed approach to complying with part 64 is approved. To allow for these activities to occur after approval of the monitoring, draft § 64.3(b)(6) allows the permitting authority to approve the monitoring and impose an enforceable schedule for completion of these activities as expeditiously as practicable after permit approval. The general

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

requirements in draft § 64.3(c) to operate the monitoring in accordance with part 64 will not apply until the final verification is complete.

The Agency notes that, after approval of part 64 monitoring in a permit, the permit shield provisions in part 70 may extend to the CAM approved in the permit. A significant area of comment on the proposed Enhanced Monitoring Program was that the general nature of the substantive monitoring requirements in proposed part 64 made it difficult to decide when monitoring is adequate. Some commenters argued that if monitoring originally developed in good faith is approved but later determined to be inadequate by the permitting authority or the owner or operator, there should be a process for correcting the monitoring without finding the owner or operator in violation of the general part 64 substantive requirements.

The EPA believes that, if a permitting authority extends the permit shield to the monitoring requirements included in the permit, the protection sought by these commenters on the proposed Enhanced Monitoring rule will be achieved. Provided the owner or operator conducts the monitoring in accordance with the permit, the owner or operator will be shielded from any retrospective action based on a claim that the monitoring approved in the permit fails to satisfy part 64 requirements. The shield will not prevent the permitting authority or The EPA from reopening the permit if, after approval, the permitting authority or The EPA finds cause to reopen the permit based on a deficiency in the approved monitoring.

On the other hand, the Agency believes that there must be a process for correcting problems expeditiously if the owner or operator discovers that the originally approved monitoring is in fact inadequate to satisfy part 64. Therefore, draft § 64.3(b)(5) requires the owner or operator to address monitoring deficiencies if: (1) the owner or operator detects a deviation

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

without detecting the deviation through CAM; or (2) a compliance test documents the need to modify approved indicator ranges. In either of these circumstances, the owner or operator must notify the permitting authority and then submit a permit modification request. The appropriate permit modification may include monitoring additional parameters, increasing monitoring frequency, reestablishing indicator ranges or other changes appropriate for the circumstances.

3. Operation of approved monitoring. Once the monitoring has been approved, the owner or operator will have to begin to conduct the monitoring in accordance with the permit. Section 64.3(c)(1) of the draft rule states that this obligation commences on the later of the issuance of the permit or the scheduled date for completion of installation, testing and final verification set forth in the permit. If the monitoring being used to comply with part 64 is also required under separate authority, this provision does not excuse the owner or operator from conducting the monitoring as required under that authority, but rather establishes a date certain for part 64 obligations to commence.

Sections 64.3(c)(2) and (3) of the draft rule clarify that the owner or operator must properly operate and maintain the monitoring to provide a reasonable assurance of compliance and conduct the monitoring whenever the emissions unit is operating unless the monitoring cannot be conducted because of a monitor breakdown, periods of invalid data, repairs, maintenance periods, and calibration checks and adjustments that require the monitoring to be inoperable. Data collected during such periods can not be used for purposes of part 64, including data averages or for satisfying a data availability requirement.

These provisions are consistent with the monitoring requirements in

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the general provisions to the NSPS program (see 40 CFR 60.13(e)) and new NESHAP program (see 40 CFR 63.8(c)(1) and (4)). The requirement to properly operate and maintain the monitoring includes the obligation to keep necessary parts for routine repairs readily available. This requirement is based on a similar requirement in § 63.8(c)(1). The requirement that CAM be operational during emissions unit operation except during monitor breakdowns and similar events is consistent with § 60.13(e) and § 63.8(c)(4). This provision does not excuse a failure to comply with a data availability requirement. This provision emphasizes that, even if a data availability requirement is met, the owner or operator must continue to operate the monitoring unless it is technically infeasible to do so.

4. Monitoring revisions. The Agency has proposed revisions to part 70 in order to streamline the existing permit modification procedures (see 59 FR 44460, August 29, 1994, and 60 FR 45530, August 23, 1995). The preamble to those proposed revisions discussed what types of permit revisions would be appropriate for different types of monitoring changes. The Agency's intent is that permit revisions involving CAM requirements will be made consistent with the streamlined permit revision procedures that The EPA promulgates based on these proposed part 70 revisions. As discussed above, the owner or operator would have to follow those procedures if the owner or operator finds deficiencies in monitoring approved under this part. In addition, the part 70 procedures will apply if the owner or operator wants to change aspects of its approved monitoring, or if the owner or operator intends to make certain types of emissions unit modifications that could trigger the need for a permit revision to address CAM requirements. For instance, if an owner or operator modifies an emissions unit in such a way that previously approved monitoring would fail to meet the requirements of

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

part 64, the owner or operator must submit a new or revised proposal for monitoring and obtain the appropriate permit modification or revision. As another example, if the owner or operator switched from a pollution prevention method of controlling emissions to a control device, that change may impose the subpart B monitoring requirements under CAM for that unit whereas before the change only subpart C requirements were applicable.

5. Existing monitoring. Section 64.3(d) of the draft rule clarifies that monitoring that is required under a separate applicable requirement can be revised only in accordance with the procedures specified in the separate applicable requirement. Thus, the owner or operator would be obligated to obtain approval of alternative monitoring under the existing requirements before using its CAM as an alternative to the existing monitoring. If the CAM is more stringent than existing monitoring, the ability to streamline multiple requirements in a part 70 permit may apply even if an alternative monitoring request has not yet been approved. See Section II.K., below, for further discussion.

D. Section 64.4 - Reporting and Recordkeeping Provisions

Part 64 generally relies on the requirements for semiannual reporting, annual compliance certification, and five-year recordkeeping already established in part 70. Beyond general compliance with the part 70 requirements, draft § 64.4(a) clarifies that part 70 semiannual reports must identify not only deviations from CAM requirements, but also summary data on excursions from CAM-established indicator ranges, including date and duration of each, corrective actions taken, QIP implementation activities and monitor downtime, as applicable. If a CEMS (or other system that provides data in terms of the applicable emission limitation or standard) is used to satisfy CAM, then the reports would have to include similar summary data

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

on exceedances instead of indicator range excursions.

The Agency believes that the additional information that is required to be reported under CAM is consistent with streamlined reporting requirements under other monitoring programs (such as NSPS reporting under 40 CFR 60.7(d)). The Agency also believes that this information is necessary to allow permitting authorities to use CAM data to track overall control performance and assure that sources are operating CAM appropriately and responding appropriately to excursions from established indicator ranges.

The final reporting requirement is to notify the permitting authority in the event a QIP is required under subpart D. The owner or operator must notify the permitting authority within 2 working days after a QIP is required. This provision provides the permitting authority with prompt notice of potential problems at a source and allows the permitting authority to follow up with the source as necessary.

The recordkeeping requirements clarify that the records to be maintained include not only the data that are recorded, but also information related to: corrective actions taken; QIP and QIP implementation activities; quality assurance activities; monitoring downtime incidents; data used to support the demonstration of monitoring adequacy; and similar information related to the monitoring being conducted. The Agency believes all of these records are already required to be maintained under the general part 70 provisions, but would include these specific types of records to clarify the general part 70 language.

The rule also clarifies that records may be kept in formats other than traditional hard copy paper records so long as the data are readily accessible for inspection and review. This approach is consistent with recent general

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

recordkeeping provisions, such as the NESHAP general provisions in 40 CFR 63.10(b). Finally, the rule allows for off-site storage with approval from the permitting authority.

E. Section 64.5 -- Savings Provisions

Because the CAM rule may overlap with many other applicable requirements, § 64.5 of the draft rule clarifies that nothing in part 64 is intended to excuse the owner or operator from applicable requirements under the Act (including emission limitations or standards as well as other monitoring requirements) or to restrict the authority of The EPA or the permitting authority to impose additional monitoring under the Act or applicable State law, as applicable. This section also clarifies that the CAM requirements may not be used to justify the imposition of less stringent monitoring under other programs than would otherwise be required under those programs. For instance, in acting on a new source review permit under title I of the Act, the CAM requirements may not be used to judge the adequacy of the monitoring in that permit; instead, the general procedures and practices under the title I permit program will be used.

The savings provisions also state that nothing in part 64 will interfere with the permitting authority's or EPA's ability to enforce against violations of applicable requirements under the Act or the authority of a citizen to enforce against violations pursuant to section 304.

F. Section 64.6 -- CAM Plan Design Requirements

1. Introduction. Sections 64.6 through 64.8 of the draft rule contain the substantive requirements for CAM plan monitoring under subpart B for units with active control devices. Section 64.6 provides the design standards that subpart B monitoring must achieve. Section 64.7 then details the minimum elements that must be included in a CAM plan. Finally, § 64.8

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

describes the supporting documentation that must be submitted with a CAM plan in a part 70 permit application.

2. General CAM Plan Design Criteria. Section 64.6(a) of the draft rule details the general design criteria to be followed in developing a proposed CAM plan in order to provide a reasonable assurance of compliance with applicable emission limitations or standards over the anticipated operating range of the emissions unit. A CAM plan will have to monitor one or more indicators of the performance of the control device (and associated capture system and, where necessary to assure compliance, the process) used to achieve compliance at a particular pollutant-specific emissions unit. Section 64.6(a)(1) makes clear that indicators of performance may include, alone or in combination, any of the following: direct or predictive emissions measurements; control device parameters; process parameters; and recorded findings of inspection and maintenance activities.

Section 64.6(a)(2) of the draft rule emphasizes the need to monitor a sufficient number of indicators to provide an assurance that the control device, associated capture system, and any processes significant to maintaining compliance are operated and maintained in accordance with good air pollution control practices that will minimize emissions at least to the levels required by applicable requirements. Assume, for example, an industrial boiler that uses a baghouse to control emissions of particulate matter. Using a continuous opacity monitor would provide by itself a sufficient indicator. However, using a pressure drop monitor would provide data that could detect possible bag blinding problems but would not necessarily detect bag breakthrough problems. In this case the use of periodic visible emission observations or an instrument capable of assessing

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

bag break problems (such as a triboelectric detector) would be necessary to assess control performance.

To provide a reasonable assurance of compliance with emission limitations or standards, the owner or operator must include appropriate ranges for the indicators that are being monitored. Section 64.6(a)(3) (monitoring design criteria) of the draft rule requires the owner or operator to establish the ranges so that the monitoring can assess whether the operation and maintenance of the control device, associated capture system, and any processes, as appropriate, are being conducted in accordance with good air pollution control practices that will minimize emissions at least to the levels required by all applicable requirements. Operation within the established ranges will provide a reasonable assurance that the emissions unit continues to comply with applicable emission limitations or standards. Excursions from the established ranges signal, at a minimum, that the owner or operator must take corrective action to return operations within the established ranges. In addition, such excursions may indicate a potential for noncompliance with an emission limitation or standard, and therefore must be identified as a deviation for compliance certification purposes. See Section II.G., below, for a full discussion of the consequences of an excursion from a CAM indicator range. This approach to establishing indicator ranges is intended to be consistent with the procedures for establishing similar ranges under the NSPS and NESHAP programs. As discussed below in Section II.H., the owner or operator will have to submit the results of baseline compliance testing, or other acceptable information, to document the appropriateness of the indicator ranges proposed in a CAM plan.

Section 64.6(a)(3)(i) clarifies that an indicator "range" can be

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

expressed as a single maximum or minimum value if appropriate. In addition, § 64.6(a)(3)(ii) allows a range to be expressed as a function of certain process variables instead of a specific numerical value. For instance, a batch processing unit that processes various compounds may be controlled by a condenser and the appropriate condenser temperature would be a function of the compound being processed. In this example, an indicator range of "x degrees below the condensation temperature of the compound being processed" may be appropriate, provided that the monitoring is adequate to indicate which compound is being processed and documentation regarding the applicable condensation temperatures would be available to the operator. Subsection 64.6(a)(3)(iii) also clarifies that a "range" may be expressed as maintaining a parameter in a particular operational status. For instance, the appropriate parameter for a flare may be to monitor for the presence of a flame when flow to the flare occurs. The "range" in that circumstance is the continued presence of the flame.

Under § 64.6(a)(3)(iv), the owner or operator also may establish interdependent relationships between monitored indicators. A change in one indicator without a change in another indicator may not signify a control performance issue. (See, e.g., Richards, J., Periodic Monitoring Based on Air Pollution Control System Parameters and Emission Tests, paper presented at Carolina Air Pollution Control Association meeting, October 27, 1994, included in the docket as VI-I-6). In other instances, the appropriate operating range may vary depending on operating conditions (such as low versus high load). Although the establishment of these interrelationships may complicate the monitoring development process in some situations, it also ensures that the owner or operator understands the factors necessary to control emissions and the monitoring indicates control performance

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

problems only when appropriate.

Finally, § 64.6(a)(4) of the draft rule requires that the CAM plan include monitoring that is able to identify any bypass of the control device, if applicable. Without this type of monitoring, there would be potential for significant emission problems that may not be detected by the other elements of the CAM plan.

A significant issue that will arise given these general criteria in § 64.6(a) is how to address situations where some monitoring is already required for a pollutant-specific emissions unit. Any such existing monitoring requirement will serve as a starting point for determining what monitoring methods will be needed to comply with part 64. In some instances, the existing monitoring may completely satisfy CAM. Even if this is not the case, the existing monitoring method in many cases may be adequate for data collection; however, the requirements in draft § 64.6 to establish indicator ranges and to adopt performance and operating requirements will still apply. The owner or operator may have to take some additional actions to come into compliance with these aspects of subpart B.

In other circumstances, the monitoring method prescribed by an applicable requirement may be inadequate or even inappropriate. For instance, the existing requirement may be inadequate because it covers insufficient parameters. Use of insufficient parameters could create either excursions from normal operating ranges that result in "false positives" (i.e., the monitoring points out a potential problem when no potential problem exists) or result in a failure to detect control performance problems. A second example that demonstrates inappropriate monitoring is where an applicable requirement specifies monitoring of parameters applicable to a commonly used control device for a particular type of emissions unit, but the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

owner or operator uses a different type of control device. If the existing monitoring is inadequate or inappropriate, CAM requires additional or different monitoring methods to be used.

3. Performance and Operating Design Criteria. Subsection 64.6(b) of the draft rule provides generally applicable monitoring performance and operating design criteria. The requirements assure that the data generated by the CAM plan present valid and sufficient information on the actual conditions being monitored. These general performance criteria are based on the general monitoring requirements included in other Federal monitoring requirements, such as the NSPS general provisions in 40 CFR part 60 and the NESHAP general provisions in 40 CFR part 63.

The first criterion is to provide location and installation specifications for the monitoring so that representative data are obtained. The second criterion is to include appropriate verification procedures to confirm the initial operational status of the monitoring. These verification procedures generally could include requirements or recommendations of the manufacturer or supplier of the monitoring elements included in the CAM plan. The owner or operator may propose changes to the manufacturer's procedures as appropriate to respond to site-specific considerations. In those cases, documentation supporting the changes will have to be submitted.

The third criterion is to adopt quality assurance and control practices to ensure ongoing proper operation of the monitoring. The required level of quality assurance should not be confused with certain existing quality assurance procedures such as Appendix F of 40 CFR part 60 for a CEMS. With respect to a CEMS, the general requirements for assuring ongoing data quality that are contained in 40 CFR 60.13 and the performance

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

specifications in Appendix B of part 60 (such as zero and span checks) provide adequate quality control checks for the purpose of using the CEMS to indicate control performance. This approach to requiring only limited quality assurance is followed under the NSPS where a CEMS is not being used for direct continuous compliance monitoring. For types of monitoring other than CEMS, ongoing quality control measures must be adequate to ensure that the monitoring remains operational and can provide suitable readings for the purpose of measuring changes in control performance. Again, the owner or operator should consider the manufacturer's requirements and recommendations and note any differences between the practices proposed by the owner or operator and the manufacturer's practices.

Section 64.6(b)(4) of the draft rule establishes the general criteria for monitoring frequency, data collection procedures (such as manual log entry, strip chart, or computerized collection procedures), and data averaging periods, if applicable to the proposed monitoring. The rule requires that these elements of the proposed monitoring be sufficient to yield reliable data commensurate with the time period over which an excursion is likely to be observed based on the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). In many situations for units with active control devices, this requirement could result in frequent, near continuous collection of parametric data that are subsequently averaged over an appropriate period of time. For instance, many NSPS subparts require continuous parametric control device data, which are then averaged over an appropriate interval (often consistent with the required minimum time for conducting a compliance test). Recent NESHAP have required control device parameter

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

monitoring for direct compliance purposes. In these instances, a daily average of continuous data (*i.e.*, data recorded at least every 15 minutes) is often used (see, *e.g.*, § 63.152(b)(2)). For some control devices, the intervals between data collection points may be increased. The Agency is in the process of developing guidance for CAM implementation, including example CAM plans. The examples will indicate how the frequency of monitoring, recording data, and averaging data points can change based on the type of emissions unit/control device involved.

Section 64.6(b)(5) of the draft rule contains requirements for establishing minimum data availability. This subsection requires the owner or operator to comply with an existing data availability requirement established for monitoring associated with a particular emission limitation or standard. If no such requirement exists, the owner or operator must propose a data availability requirement that reflects the degree of data availability that is obtainable when operating and maintaining the monitoring in accordance with good air pollution control practices to provide a reasonable assurance of compliance pursuant to § 64.3(c)(2). As stated in § 64.3(c)(2), those practices include maintaining adequate spare parts and supplies to conduct routine repairs.

The Agency believes that CAM often should be able to achieve a relatively high degree of data availability because of the basic nature of much of the control performance indicator monitoring that likely will be used as CAM. In light of these circumstances, and the recent promulgation of a 90 percent data availability requirement for both CEMS and control device parameter monitoring in 40 CFR subpart Eb (see §§ 60.58b(e)(7) and (i)(10)), the rule establishes a presumption that the minimum data availability should account for at least 90 percent of all periods during a semiannual reporting

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

period over which data are averaged to determine if an excursion or exceedance has occurred. The permitting authority must include this or a higher degree of data availability as appropriate to satisfy draft § 64.6(b)(5), except that the owner or operator can present information to document that the 90 percent availability presumption is inappropriate for the owner or operator's circumstances. In those circumstances, the permitting authority has the discretion to approve a requirement less than 90 percent. Criteria for approving such alternatives may include documentation that data collection availability that high is not practicable or feasible. The Agency requests comment on any existing State data availability requirements so that The EPA can compile an inventory of such requirements in CAM guidance materials.

4. Special Considerations for CEMS, COMS and PEMS. One method of assessing control performance is to calculate emission (or opacity) rates directly in order to track trends in emissions (or opacity) that document decreased control effectiveness. This type of monitoring could include a continuous emission or opacity monitoring system (CEMS or COMS) or a predictive emission monitoring system (PEMS) in which various process and control parameters are evaluated to predict emissions.

The EPA believes that these types of monitoring are preferable from a technical and policy perspective as a means of assuring compliance with applicable requirements because they can provide data directly in terms of the applicable emission limitation or standard. Therefore, where such systems are already required, draft § 64.6(c)(1) mandates that the design of the monitoring under CAM incorporate such systems. In addition, the use of any of these types of systems in accordance with general The EPA monitoring requirements and performance specifications (or comparable

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

permitting authority requirements if there are no The EPA requirements specified for a particular system) will be sufficient for a CEMS, COMS or PEMS to satisfy generally the CAM design criteria in draft § 64.6(a) and (b).

One exception to this general rule is that if a COMS is used as a control performance indicator, and both a particulate matter and opacity standard apply, the CAM plan will have to include an indicator range satisfying draft § 64.6(a)(3). A CEMS or PEMS will provide data in terms of the applicable pollutant and therefore the process of identifying and reporting exceedances serves the same purpose as an indicator range. For assuring compliance with an opacity standard, a COMS also achieves this objective. However, opacity standards are often established at a level which represents a likely significant exceedance of the particulate matter standard, and an opacity level below a required opacity standard will be more appropriate as an indicator of good air pollution control practices for many processes. Therefore, the use of a COMS will require an appropriate indicator range to be established. The appropriate range in no event should be higher than the applicable opacity standard.

Section 64.6(c) of the draft rule includes three additional conditions for a CEMS, COMS or PEMS. First, the applicable system must be designed to achieve a data availability requirement, consistent with the criteria established generally for CAM, discussed in the preceding section of this document. In some cases existing Federal or State requirements establish a minimum data availability requirement (see, e.g., 40 CFR 60.58a(e)(8) and Pennsylvania Code, 139.101(12)). In those cases, the system must be designed to achieve the existing requirement. If no such requirement exists, the owner or operator will have to design the system to achieve a data availability requirement in the same manner as for any proposed CAM.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

The second design element that the owner or operator will have to incorporate for a CEMS, COMS or PEMS is the ability to provide data in terms of the emission limitations or standards that apply (to the extent such limitations or standards are expressed in terms of the applicable pollutant, including opacity in the case of a COMS). For instance, under § 64.6(c)(1), the owner or operator of a title IV affected unit will use an SO₂ CEMS required under 40 CFR part 75 as its CAM for other emission limitations that may apply. If the unit is subject to SO₂ standards in subpart D of 40 CFR part 60 (which contains a limit expressed in lb/mmBtu) or a similar SIP limit, then the owner or operator must design the CEMS for use under CAM to provide data expressed in lb/mmBtu.

The final special design criterion for a CEMS, COMS or PEMS is to design the system to allow for reporting of exceedances. Again, in many cases, the reporting requirements for exceedances (or excess emissions) will already be established in existing requirements. However, in some cases the owner or operator, prior to implementing CAM, will not have continuous monitoring associated with an applicable emission limit, and the underlying regulation may not specify an appropriate time period for averaging data to report excess emissions. For example, this situation could arise in the example provided above for a part 75 Acid Rain CEMS being used to monitor compliance with a SIP limit. In this circumstance, the owner or operator will have to design the system to include an appropriate period for defining exceedances consistent with the emission limitation or standard.

G. Section 64.7 - CAM Plans

Section 64.7 of the draft rule specifies the minimum elements for a CAM plan. The Agency notes that this section requires a CAM plan for each control device (including any associated capture system and processes

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

significant for achieving compliance) that is used to reduce emissions at a pollutant-specific emissions unit subject to subpart B. Where an emissions unit includes several individual points of emission that share a common control device, the owner or operator is required to include only one CAM plan. In addition, where multiple emission limitations or standards for the same pollutant apply but only one control device is used, only a single CAM plan is required. There may also be instances in which a single emissions unit involves multiple control devices. So long as each of the control devices is required to achieve compliance with the applicable emission limitations or standards, a separate CAM plan is required for each control device. Where the same CAM is used for multiple control devices (for instance, visible emission observation for multiple baghouses from a single or multiple units), then the owner or operator may develop a single CAM plan and state for which control devices (and units if more than one unit is involved) that plan will be used.

The Agency has limited the CAM elements that will have to be incorporated in a part 70 permit in order to promote operational flexibility and reduce the potential need to obtain permit revisions for small adjustments in the monitoring used by the owner or operator. The first element of a CAM plan will be to detail the basic approach to be used. The basic approach is comprised of several individual components. The Agency believes that each of these components is critical to assuring that the permit clearly states what basic monitoring is required and how it will be verified. The following discussion provides a list of the various components of the basic monitoring approach that need to be incorporated in the permit. To provide a practical example of what the "basic monitoring approach" entails, the discussion also includes a parenthetical example for each element of the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

basic monitoring approach. The example is based on the use of incineration to control TRS emissions from certain affected facilities at kraft pulp mills (see 40 CFR 60.280 et seq.). The example is intended to indicate the level of detail required, and not necessarily the appropriateness of the example monitoring for satisfying CAM.

First, the owner or operator will have to specify the basic technique(s) to be used (e.g., a statement that the owner or operator will monitor the combustion temperature at the point of incineration of the effluent gases using a continuous temperature measurement device). Second, the frequency of the monitoring must be specified (e.g., continuous recording of temperature), as well as the data acquisition procedures (e.g., strip chart or computerized system, which is implied in subpart BB given that continuous "recording" is required), and the period for averaging data to determine an excursion (e.g., 5 minute averages). Third, the performance criteria used to judge data validity (e.g., device must be accurate to within 1 percent of the temperature being measured). Fourth, the minimum procedures that will be used to verify data validity (e.g., daily checks to confirm operational status and an annual check for accuracy). Other than the checks of operational status or accuracy, the example provided above mirrors the basic information required under subpart BB of part 60 for the example monitoring.

Another example of how these components could be listed is a permit condition which: (1) states that the owner or operator will install, operate, maintain and reduce data from a CEMS in accordance with both the general provisions in 40 CFR 60.13 and the applicable performance specifications in Appendix B to 40 CFR part 60; and (2) specifies the appropriate period for averaging data to determine if an exceedance occurs. That type of permit condition would address the components of the basic monitoring approach

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

identified above.

The second element of a CAM plan is a data availability percentage, consistent with the design criteria in draft § 64.6(b)(5) or (c)(3), as applicable. The third element of a CAM plan will be the ranges for the control performance indicators being monitored. As discussed above, this element does not apply to a CEMS or PEMS. For those systems, the CAM plan must identify what constitutes a period of exceedances for purposes of reporting under draft § 64.4(a). For a COMS, an indicator range consistent with the design criteria in draft § 64.6(a)(4) is required. If the only emission limitation or standard that applies is an opacity standard, the Agency believes that the opacity standard should serve as the default indicator range. As discussed above in Section F.3., however, if other standards apply, the CAM plan will have to include an indicator range associated with operating and maintaining the control device to achieve those additional emission standards, which may result in an indicator range that is below the applicable opacity standard.

Section 64.7(a)(4) of the draft rule requires that the CAM plan include an obligation that, upon an excursion or exceedance, the owner or operator will take corrective action to bring operations back within the appropriate ranges (or below the emission limit) as expeditiously as practicable. Corrective action includes both the initial inspection and any appropriate follow up activities to return the monitored indicators to within accepted ranges. The Agency considered requiring the CAM plan to specify maximum periods for conducting various types of corrective action, but stakeholders raised concerns that it would be extremely difficult to establish the appropriate time frames for every possible contingency (see, e.g., docket items VI-D-45, p. 12; VI-E-9, p. 5-6). The Agency agrees that it may be

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

difficult to establish appropriate time frames for all corrective action scenarios and therefore has adopted the approach taken in the draft rule. The Agency believes that as situations develop at a particular facility it may be possible in subsequent rounds of permitting to provide specific timetables for certain high priority concerns if a permitting authority desires to make this requirement more specific. In addition, if an existing site-specific plan, such as a malfunction abatement plan, already establishes required time frames for certain types of excursions, the owner or operator or the permitting authority should ordinarily incorporate those specific time frames into a CAM plan and the permit.

So long as the owner or operator fulfills the general obligation to correct excursions as expeditiously as practicable, an excursion from an indicator range generally will not be considered a failure to comply with the permit term or condition that establishes the indicator range. However, § 64.3(b)(2) of the draft rule provides that the permit may specify that an excursion could be considered a failure to satisfy the applicable permit term or condition in various situations. First, if existing requirements already require the owner or operator to comply with the indicator ranges, the permit must include the ranges as enforceable requirements. Second, the owner or operator could propose this approach. Finally, if consistent with the existing authority, the permitting authority may specify in the permit that excursions from the indicator ranges will be considered enforceable permit deviations. In comments submitted during the development of the rule, State and local agency organizations stated their support for including control device performance indicator ranges as enforceable permit requirements even if such indicator ranges are not used directly to determine compliance or noncompliance with applicable emission limitations or

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

standards. (See docket item VI-D-49). The Agency believes that the rule should provide for this option if consistent with existing State authority.

If the permitting authority establishes in the permit that an excursion from an indicator range is an enforceable permit deviation, the rule allows for the permitting authority to incorporate excused periods when excursions from the indicator ranges will not be considered a failure to comply with the requirement in the permit not to exceed the indicator range. The Agency believes that excused periods in indicator ranges may be warranted for those circumstances in which an excursion from the generally applicable ranges is consistent with minimizing emissions at least to the levels required by all applicable requirements, such as where the underlying emission limit excuses excess emissions during startup or shutdown. Such excused conditions still have to be reported as excursions from the established indicator range pursuant to draft § 64.4(a) but will not be considered a violation of the applicable permit term or condition. In addition, such excused excursions will not count toward the total duration of excursions for a reporting period. That total duration will be used to determine whether the owner or operator is required to implement a quality improvement plan (QIP) as discussed in Section II.J., below.

H. Section 64.8 - Documentation Requirements

The CAM rule places the primary responsibility on the owner or operator to develop appropriate procedures to fulfill the objectives and requirements of part 64. To ensure that the owner or operator properly fulfills the requirements of part 64, § 64.8 of the draft rule requires that the owner or operator submit documentation of the adequacy of the proposed monitoring with a part 70 permit application.

The owner or operator first will have to document the adequacy of the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

basic proposed approach. This type of documentation could include generally available information (such as air pollution engineering manuals, control device operation and maintenance manuals and applicable State and The EPA guidance) as well as site-specific data (such as historical data comparing control performance indicators and emission rates). In addition, if a permitting authority establishes presumptively acceptable or required monitoring approaches for particular types of pollutant-specific emissions units, the documentation could rely on those requirements. This provision seeks to foster the development of State programmatic approaches to implementing CAM (see Section I.C., above). In addition, the owner or operator can fulfill the documentation requirements by stating that the CAM will consist of: a CEMS, COMS or PEMS that achieve The EPA general requirements and performance specifications (or comparable State requirements); monitoring certified under 40 CFR part 75; or monitoring conducted under a NSPS or NESHAP emission limitation or standard proposed after November 15, 1990 (assuming that the monitoring under that NSPS/NESHAP applies to the performance of the control device for the applicable CAM plan).

If the CAM plan includes indicator ranges, the documentation also will have to show the ability of the proposed ranges to satisfy the design criteria in draft § 64.6(a)(3). The rule requires that the documentation include site-specific compliance method test data if available. If such data are not available, the owner or operator is required to submit a test plan and schedule for conducting such testing to support its proposed monitoring, or could consider relying solely on other information. Test results must be no more than 5 years old to be considered "available" for purposes of draft § 64.8.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

If the owner or operator proposes to rely on other than site-specific compliance test data, § 64.8(c)(2) of the draft rule requires a detailed explanation justifying this approach. The owner or operator is required to document that site-specific testing is unnecessary based on factors specific to the situation. Relevant factors could include: the ability to establish appropriate ranges based on engineering considerations; well established indicator/emission relationships that do not require site-specific baselines to be established; and conservative assumptions built into the indicator ranges and monitoring selected. For instance, if daily visible emissions observations are planned to monitor a fabric filter, also subject to a 20 opacity limitation, and the owner or operator establishes "any visible emissions" as the appropriate excursion level, site-specific testing would not likely provide any additional value in justifying this type of conservative approach.

Although the rule provides leeway for the owner or operator to document the adequacy of the proposed monitoring based on various types of information, it also allows the permitting authority to require site-specific compliance testing as a condition of permit issuance if deemed appropriate for the particular situation. One factor for the permitting authority to consider in judging whether to require this type of testing is the degree to which the general appropriateness of the monitoring selected by the owner or operator has already been proven for similar sources and determined to be consistent across similar sources. Other factors include the compliance history of the source, the cost of conducting the testing, and other relevant factors.

The final documentation to be submitted with a CAM plan will be a proposed schedule for completion of installation, testing or other verification activities following approval of the proposed CAM plan in a part 70 permit.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

As discussed above in Section II.C., the owner or operator will be allowed a period of time after approval of proposed CAM requirements to complete activities necessary for operation of the monitoring. The documentation requirement in draft § 64.8(e) provides the permitting authority with the owner or operator's assessment of the time required to provide for operational status of CAM in accordance with the "as expeditiously as practicable" requirement in § 64.3(b)(4).

I. Subpart C (Section 64.9) - General CAM Requirements for All Major Sources

The CAM requirements in subpart C apply to all major sources required to obtain a part 70 permit. As noted in Section II.A., above, if a unit is already subject to subpart B, subpart C does not apply to that pollutant-specific emissions unit because the subpart B requirements are more rigorous than the requirements in subpart C. The basic criterion for subpart C monitoring is comparable to the current periodic monitoring requirements in § 70.6(a)(3)(i) -- all permits have to include sufficient monitoring to provide a reasonable assurance of compliance over the anticipated operating range of the source. Section 64.9(a) of the draft rule clarifies that the permitting authority must determine whether the monitoring proposed by the owner or operator satisfies this basic criterion. Section 64.9(a) also requires the permitting authority to require such additional monitoring as may be necessary, and to impose all appropriate permit conditions.

If existing applicable requirements already establish monitoring requirements for a pollutant-specific emissions unit subject to subpart C, the owner or operator may propose that those requirements satisfy subpart C. This language parallels the current language in § 70.6(a)(3)(i). Under draft

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

§ 64.9(a)(2), the permitting authority must determine whether that proposed monitoring is adequate to provide a reasonable assurance of compliance with the part 70 permit.

If applicable requirements do not specify monitoring requirements, § 64.9(c)(1) of the draft rule states that the owner or operator may propose recordkeeping designed to serve as monitoring may be considered sufficient to satisfy § 64.9(a)(1). Again, the language parallels the current language in § 70.6(a)(3)(i)(B). The permitting authority has the obligation under § 64.9(a)(2) to determine whether the proposed recordkeeping is sufficient to provide the reasonable assurance of compliance required under § 64.9(a)(1). Draft § 64.9(c)(1) provides certain examples of this type of recordkeeping. One example is where the recordkeeping verifies direct compliance with the applicable emission limitation or standard. These types of records include documentation of compliance with restrictions on the content or usage rate of fuels, raw materials or coatings; operating hour restrictions; fugitive dust control measures; or similar work practice requirements. A second example involves keeping records of customary process and facility information that verifies operation of the techniques used to control emissions in a manner consistent with good air pollution control practices that will minimize emissions at least to the levels required by all applicable requirements. These types of records include records of standard inspection, maintenance and repair activities, pollution prevention measures, or other process information that document proper operation of the control measure. If these types of records are maintained, the part 70 permit will have to specify appropriate ranges consistent with draft §§ 64.6(a)(3) and 64.7(a)(3). Failure to stay within these ranges will be considered excursions in the same manner as for CAM plans under subpart

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

B.

For units without existing monitoring, § 64.9(c)(2) of the draft rule also recognizes that, for less significant emission units, no monitoring may be necessary to assure compliance with specific terms and conditions of the permit. If an owner or operator proposes this approach, the permitting authority will have to determine whether the source owner or operator has documented that monitoring is not necessary to provide the reasonable assurance of compliance required by draft § 64.9(a)(1). This provision recognizes that monitoring may not be appropriate for every emissions unit or every term or condition in a part 70 permit. Provided that the requirements of draft § 64.9(a)(1) are met, this subsection provides substantial discretion to the permitting authority to avoid imposing monitoring on those units where there is no need for ongoing monitoring. The Agency notes, however, that draft § 64.9(c)(3) limits this discretion and requires that the monitoring requirements in paragraph (c)(1), at a minimum, be used for major emissions units that are not subject to any existing monitoring.

Draft §§ 64.9(c)(2)(i)-(iii) provide a non-exclusive list of examples of situations where this approach may be appropriate. Examples include: generic opacity standards that may apply to all emissions units, even those with negligible particulate matter emissions; design requirements such as an obligation to use a submerged fill pipe; or emissions units designated as insignificant activities under an applicable part 70 permits program. In addition, § 64.9(c)(2) is intended to be consistent with Section II.C. of White Paper 2, which provides further guidance on the discretion of permitting authorities to not require monitoring for insignificant emissions units. These units are generally small and often subject to generically applicable

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

requirements. The Agency requests comment on whether there are other examples that could be provided to clarify the intent of this provision.

Finally, § 64.9(d) of the draft rule clarifies that if State-only requirements (as opposed to applicable requirements under the Act) already establish monitoring requirements more stringent than the monitoring required under draft § 64.9(c), then that existing monitoring is the presumptively acceptable monitoring under subpart C. This provision acts to prohibit the owner or operator from relying on part 64 as a justification for including monitoring in a part 70 permit that is less stringent than the monitoring already being conducted.

J. Subpart D (Sections 64.10 and .11) - Quality Improvement Plans

The approach of establishing indicator ranges and then imposing an obligation to respond to excursions could potentially allow owners or operators to comply with the CAM rule even though they may be in a near constant state of correcting excursions. This potential would frustrate the compliance promotion and compliance assurance goals of CAM. To address this potential problem, draft § 64.10(a) requires the owner or operator to implement a quality improvement plan (QIP) if the duration of excursions that occur in any reporting period exceeds a set percentage of the operating time for the pollutant-specific emissions unit over that reporting period. A QIP also must be implemented if the number of excursions exceeds a set percentage of the monitored periods during the applicable reporting period over which data are averaged to determine if an excursion occurs. If the approved CAM involves the use of a CEMS or PEMS, then the appropriate trigger for a QIP will be exceedances instead of excursions.

The appropriate percentage will be set in the context of the permitting process pursuant to draft § 64.10(b). The permitting authority may take into

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

account all relevant factors, but the percentage of operating time may not exceed 5 percent as indicated in the draft rule. The Agency solicits comment on whether that is an appropriate percentage and information that could support another percentage limit. An exception is provided in the draft rule for circumstances in which specific applicable requirements establish a higher percentage. In accordance with draft § 64.3(b)(4), the permit must include a condition that in the event that either percent trigger is exceeded, the owner or operator shall develop and implement a QIP that meets the criteria in draft § 64.11.

A QIP has two basic parts as specified in draft § 64.11(a). The first part consists of evaluation procedures to determine the cause of the excessive number of excursions (or exceedances, if applicable). Based on that evaluation, the owner or operator develops the second part of the QIP. The second part details the steps the owner or operator will take to improve the quality of control performance, and the schedule for taking those steps. Depending on the nature of the problem, the appropriate steps can include improved preventive maintenance procedures, process operation changes, control system improvements or similar types of steps. In conjunction with those procedures, the QIP also may include improved monitoring procedures.

The Agency developed this requirement to assure that the monitoring conducted under part 64 will result in owners or operators taking the necessary steps to prevent pollution through reasonable optimization of control performance. Compliance with a QIP is not a substitute for compliance with underlying applicable requirements, including general duties to operate and maintain facilities in accordance with good air pollution control practices. Section 64.10(c) of the draft rule explicitly makes this point, and draft § 64.11(c)(1) requires the owner or operator to report as a

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

deviation any period during which a QIP is being implemented.

To discourage sources from performing repeated QIPs, the necessity to implement a second QIP for that same pollutant-specific emissions unit during the same permit term would constitute a specific permit term violation as described in draft § 64.3(b)(4) of this rule and the associated permit term condition. The Agency recognizes that an enforceable permit condition that places a limit on the number or duration of excursions following implementation and completion of a first QIP, such as specified in § 64.3(b)(4), may be perceived as an unnecessary restriction on the operation of highly efficient and well-operated control measures. That is, the high control efficiency capability of some pollution control measures may lead to excursions from tightly set CAM indicator ranges at relatively high frequencies that are not at all indicative of potential excess emissions but may put the owner or operator in jeopardy of violation of § 64.3(b)(4).

In light of the possibility that the owner or operator of such units may experience unreasonably frequent CAM-related excursions and, therefore, may be inadvertently encouraged to set unrepresentatively broad CAM indicator ranges to avoid such excursions, the Agency seeks comment on other means to encourage the setting of the CAM indicator ranges in a manner consistent with the best level of emissions control that can be achieved. One alternative may be that instead of the permit violation associated with the need to implement a second QIP in a reporting period (i.e., § 64.3(b)(4)), the CAM rule could instead require that the second QIP be implemented only through a permitting authority approval process and include an enforceable schedule with specific milestone and completion dates. Such a plan could also include restricted process operations until completion of the approved QIP. A second alternative may be to reduce the time period for limiting the owner or operator to one QIP from the 5-year permit term to 3 years or other appropriate period.

In addition, draft § 64.11(c)(1) requires the owner or operator to notify

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the permitting authority within 2 days after determining that a QIP is necessary, as discussed above in Section II.D. The QIP will not become part of the permit and would not require permitting authority approval. Under draft § 64.11(b), the QIP must be implemented as soon as practicable, and must be completed within 180 days from the date notice of the QIP was given to the permitting authority. Exceptions to the 180 day limit may be granted only after the owner or operator obtains a site-specific resolution and affirmative approval from the permitting authority or, if necessary, the EPA of a plan to complete the improvement activities. An approved extension could include an enforceable, site-specific schedule with milestones and completion dates.

Draft § 64.11(c)(2) requires the owner or operator to report on the activities taken in conjunction with a QIP. QIP activities must be summarized in the semiannual report covering the period in which the QIP began, and in any subsequent semiannual reports covering periods during which the QIP continued. In addition, draft § 64.11(c)(4) requires the owner or operator to maintain a copy of the QIP and records of QIP implementation activities for a period of five years in accordance with the recordkeeping provisions in draft § 64.4(b).

Finally, a QIP may lead to changes in previously approved monitoring or other changes at the source that require a permit revision. Therefore, draft § 64.11(d) requires the owner or operator to submit a proposed revision to the approved monitoring in these circumstances. Even if such changes do not require a permit revision, draft § 64.11(c)(3) requires a source that intends to retain the previously approved monitoring to reestablish the rationale that justifies the monitoring in accordance with the procedures in § 64.8(a).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

K. Revisions to 40 CFR Part 70 and Part 71

The draft CAM rulemaking includes revisions to parts 70 and 71 to clarify the relationship between part 64 and the operating permits program. These revisions are outlined below.

1. Definitions. The draft rule modifies the definition of "deviation" currently in § 71.6. The draft revised definition clarifies that a deviation is not always a violation and that the types of events that are considered deviations include exceedances and excursions as defined under part 64. The draft rule does not include a similar definition in part 70 because the Agency does not want to constrain permitting authorities in how they interpret the term "deviation." The Agency notes, however, that part 64 independently requires the owner or operator to treat certain incidents as a period of deviation in certifying compliance under part 70. These incidents include excursions, exceedances, and time periods during QIP implementation.

2. Monitoring Requirements. The monitoring provisions in part 64 are intended to merge with the periodic monitoring requirements currently in part 70. The draft revisions to § 70.6(a)(3)(i) accomplish this integration of part 64 with the current part 70 requirements by eliminating the current periodic monitoring language in § 70.6(a)(3)(i)(B). The Agency has stated that periodic monitoring under § 70.6(a)(3)(i)(B) is not necessary for insignificant emissions units or generically applicable requirements where there is no likelihood of noncompliance. (See White Paper 2, section C.2.d.) The draft revisions to § 70.6(a)(3)(i) build on that concept and do not require gap-filling for any emissions units that are not subject to CAM requirements. The Agency believes that the provisions in part 64 will provide for gap-filling in those situations where gap-filling is warranted.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

The revisions to part 70 also allow for streamlining multiple monitoring requirements if the streamlined monitoring is able to assure compliance at least to the same extent as the applicable requirements not included as a result of the streamlining. The Agency notes that the language in these revisions is designed to be consistent with a discussion in section A.5. of White Paper 2 concerning the possibility of streamlining applicable monitoring and testing requirements ("§ 70.6(a)(3) appears to restrict streamlining by requiring that all "applicable" monitoring . . . requirements be placed in the permit. . . . The EPA intends to revise part 70 to reflect this understanding in a future rulemaking."). The Agency would fulfill its intent to modify part 70 as discussed in White Paper 2 by including the appropriate revisions to § 70.6(a)(3)(i) as part of the CAM rulemaking.

3. Compliance certification requirements. As discussed in Section I.C.4. above, a significant component of the CAM rulemaking is a consideration by The EPA of its interpretation of the statutory requirements related to compliance certification and the appropriate information to include in the certification. To implement this effort, the draft rule revises § 70.6(c)(5)(iii) so that a compliance certification includes the following elements.

First, the permit conditions being certified must be identified. Second, the method(s) and other information used to determine compliance status of each term and condition must be identified. These method(s) will have to include at a minimum any testing and monitoring methods identified in § 70.6(a)(3) that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e., information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

information must be identified and addressed in the compliance certification. This requirement merely emphasizes the general prohibition in section 113(c)(2) of the Act on knowingly making a false certification or omitting material information; it does not impose a duty on the owner or operator to assess every possible piece of information that may have some undetermined bearing on compliance. The description of the methods relied on by the source also will have to indicate whether the methods provide continuous or intermittent data. Third, the owner or operator will have to certify compliance based on the results of the identified methods. The certification must state the compliance status with the part 70 permit, noting as exceptions all deviations. The owner or operator may include information in the certification to document that compliance was achieved during periods of deviation (such as information that an excursion or exceedance occurred during a period of startup or shutdown for which compliance with an emission limitation or standards was excused). As discussed above in Section I.C., these provisions implement the requirements in section 114(a)(3)(B) and (D) that the certification identify the methods used to determine the compliance status and whether compliance is continuous or intermittent.

The certification also will have to include any other facts required by the permitting authority. This requirement is already included in part 70 as promulgated. Finally, the Agency notes that the rule allows the owner or operator to cross-reference the permit or previous reports to identify the various information elements required in a certification. This provision allows the actual certification to be a short, concise compliance statement that is not burdened by restating detailed information that has already been provided.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

The goal of the CAM program is to provide improved compliance data for significant emissions units at part 70 sources. This improvement will in turn provide additional data for the owner or operator to rely on in certifying compliance. As discussed in Section I.C. above, The EPA believes that the CAM data will provide a reliable means for owners or operators to reach a conclusion about their compliance status. However, since the CAM data will not necessarily always provide unequivocal proof of compliance or noncompliance (as a compliance test method would), there will be deviations identified through CAM which raise questions about compliance status but may not confirm conclusively that a source is in noncompliance. The Agency emphasizes that a certification which includes exceptions for deviations is not an admission of noncompliance. The existence of deviations only indicates the need to review the compliance information provided in order to determine what, if any, compliance or enforcement actions may be warranted.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

PART 64 - COMPLIANCE ASSURANCE MONITORING

Sec.

Subpart A: General Provisions

64.1 Definitions

64.2 Applicability

64.3 Implementation provisions

64.4 Reporting and recordkeeping requirements

64.5 Savings provisions

Subpart B: Monitoring for Units with Control Devices

64.6 Monitoring design criteria

64.7 CAM plans

64.8 Documentation requirements

Subpart C: General CAM Requirements for Major Sources

64.9 General monitoring requirements

Subpart D: Quality Improvement Plans (QIPs)

64.10 Thresholds for requiring a QIP

64.11 QIP implementation requirements

Authority: 42 U.S.C. 7414 and 7661 through 7661f

§ 64.1 Definitions.

The following definitions apply to this part. Except as specifically provided in this section, terms used in this part retain the meaning accorded them under the applicable provisions of the Act.

Act means the Clean Air Act, as amended by Pub.L. 101-549, 42 U.S.C. 7401, et seq.

Applicable requirement shall have the same meaning as provided under part 70 of this chapter.

Capture system means the equipment (including but not limited to

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

hoods, ducts, fans, and booths) used to contain, capture and transport a pollutant to a control device.

Compliance assurance monitoring (CAM) plan means a plan that includes the monitoring requirements in § 64.7.

Continuous compliance determination method means a method 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.

Control device means equipment used to destroy or remove air pollutant(s) prior to discharge to the ambient air. The types of equipment that are commonly used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters).

Data means the results of any type of monitoring or method, including the results of instrumental or non-instrumental monitoring, emission calculations, manual sampling procedures, recordkeeping procedures, or any other form of information collection procedure used in connection with any type of monitoring or method.

Emission limitation or standard means any applicable requirement that

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the 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 (e.g., leak detection and repair programs for VOC or mercury emissions), process or control device parameter (e.g., incinerator temperature for VOC destruction efficiency), 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, or to record or report results of required monitoring.

Emissions unit shall have the same meaning as provided under part 70 of this chapter.

Exceedance shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement). An exceedance shall be considered a deviation in the annual compliance certification submitted in accordance

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

with § 70.6(c)(5)(iii) of this chapter.

Excursion shall mean a departure from an indicator range specified pursuant to § 64.7(a)(3), § 64.9(a)(3) or § 64.9(c)(1)(ii). An excursion shall be considered a deviation in the annual compliance certification submitted in accordance with § 70.6(c)(5)(iii) of this chapter.

Major source shall have the same meaning as provided under part 70 of this chapter.

Monitoring means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Recordkeeping may be considered monitoring where such records are used to determine or assess compliance with an emission limitation or standard (such as records of raw material content and usage, or records documenting compliance with work practice requirements). The conduct of compliance method tests, such as the procedures in appendix A to part 60 of this chapter, on a periodic basis may be considered monitoring (or as a supplement to other monitoring), provided that requirements to conduct such tests on a one-time basis or at such times as a regulatory authority may require on a non-regular basis are not considered monitoring requirements for purposes of this paragraph. Monitoring may include any of the following data collection techniques, where appropriate for a particular circumstance:

- (i) Continuous emission or opacity monitoring systems.
- (ii) Continuous process, capture system, control device or other relevant parameter monitoring systems or procedures, including a predictive emission monitoring system.
- (iii) Emission estimation and calculation procedures (e.g., mass balance or stoichiometric calculations).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(iv) Maintenance and analysis of records of fuel or raw materials usage.

(v) Recording results of a program or protocol to conduct specific operation and maintenance procedures, leak detection, fugitive dust control, or other work practices, or to verify compliance with design, equipment, or engineering requirements.

(vi) Verification of emissions, process parameters, capture system parameters, or control device parameters using portable or in situ measurement devices.

(vii) Visible emission observations.

(viii) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device parameters or other factors relevant to assessing compliance with emission limitations or standards.

Owner or operator means any person who owns, leases, operates, controls or supervises a stationary source subject to this part.

Part 70 permit shall have the same meaning as provided under part 70 of this chapter, provided that it shall also refer to a permit issued, renewed, amended, revised, or modified under any federal permit program promulgated under title V of the Act.

Part 70 permit application shall mean an application (including any supplement to a previously submitted application) that is submitted by the owner or operator in order to obtain a part 70 permit.

Permitting authority shall have the same meaning as provided under part 70 of this chapter.

Pollutant-specific emissions unit means an emissions unit considered separately with respect to each regulated air pollutant.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

Potential to emit shall have the same meaning as provided under part 70 of this chapter, provided that it shall be applied with respect to an "emissions unit" as defined under this part in addition to a "stationary source" as provided under part 70 of this chapter.

Predictive emission monitoring system (PEMS) means a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard.

Regulated air pollutant shall have the same meaning as provided under part 70 of this chapter.

§ 64.2 Applicability.

(a) Subpart B applicability. (1) Except for backup utility units that are exempt under paragraph (c)(2) of this section, the requirements of subpart B of this part shall apply to a pollutant-specific emissions unit at a source that is required to obtain a part 70 permit if the unit satisfies all of the following criteria:

(i) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (c)(1) of this section;

(ii) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(iii) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this paragraph, "potential pre-control device emissions" shall have the same meaning as "potential to emit," as

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

defined in § 64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.

(2) Subject to the exemptions provided in paragraph (c) of this section, subpart B shall apply to any other pollutant-specific emissions unit specified by the permitting authority, either by rule or permit-specific decision. The permitting authority shall specify under this paragraph (a)(2) any pollutant-specific emissions unit for which the permitting authority determines that the monitoring required under subpart B is necessary or appropriate to assure compliance with a part 70 permit. The permitting authority may consider size of an emissions unit, pollutant toxicity, attainment status, compliance history, likelihood of deviations and other appropriate factors in specifying pollutant-specific emissions units under this paragraph (a)(2).

(b) Subpart C applicability. The requirements of subpart C of this part shall apply to any major source required to obtain a part 70 permit, provided that:

(1) The source is subject to emission limitations or standards that are not exempt under paragraph (c)(1) of this section; and

(2) The source has pollutant-specific emissions units other than units that are subject to subpart B of this part or exempt under paragraph (c)(2) of this section.

(c) Exemptions.

(1) Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards:

(i) Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(ii) Stratospheric ozone protection requirements under title VI of the Act.

(iii) Acid Rain Program requirements pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the Act.

(iv) Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions within a source or between sources.

(v) An emissions cap that meets the requirements specified in § 70.4(b)(12) of this chapter (such as a plantwide applicability limit as defined in part 70 of this chapter).

(vi) Emission limitations or standards for which a part 70 permit specifies a continuous compliance determination method, as defined in § 64.1. The exemption provided in this paragraph (vi) shall not apply if the applicable compliance method includes an assumed control factor that could be affected by the actual operation and maintenance of the control technology (such as a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).

(2) Exemption for backup utility power emissions units. The requirements of this part shall not apply to a utility unit, as defined in § 72.2 of this chapter, that is municipally-owned if the owner or operator provides documentation in a part 70 permit application that:

(i) The utility unit is exempt from all monitoring requirements in part

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

75 (including the appendices thereto) of this chapter;

(ii) The utility unit is operated for the sole purpose of providing electricity for sale during periods of peak electrical demand or emergency situations and will be operated consistent with that purpose throughout the part 70 permit term. The owner or operator shall provide historical operating data and relevant contractual obligations to document that this criterion is satisfied; and

(iii) The actual emissions from the utility unit, based on the average annualized emissions over the last three calendar years of operation (or such shorter time period that is available for units with fewer than three years of operation) are less than 50 percent of the amount in tons per year required for a source to be classified as a major source and are expected to remain so.

§ 64.3 Implementation provisions.

(a) Deadlines for submittal of information.

(1) Subpart B requirements. For all pollutant-specific emissions units subject to subpart B of this part, the owner or operator shall develop and submit a CAM plan and supporting documentation required under subpart B of this part at the following times:

(i) On or after [insert date 180 days after publication of final rule in the Federal Register], the information shall be submitted as part of a part 70 permit application if, by such date, the initial part 70 permit application has:

(A) Not been filed;

(B) Not yet been determined to be complete by the permitting authority; or

(C) Has been filed and determined to be complete, but final action on such application is scheduled to occur more than 18 months after the

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

deadline for submittal of such application, in accordance with a transition plan adopted by the permitting authority pursuant to § 70.4(b)(11).

(ii) On or after [insert date 180 days after publication of final rule in the Federal Register], the information (if not previously submitted) shall be submitted with a request for a part 70 permit modification that is initiated by the owner or operator, but only with respect to those pollutant-specific emissions units for which the proposed modification is applicable.

(iii) In no event shall the information be submitted later than the next application for renewal of a part 70 permit.

(2) Subpart C requirements. For all major sources subject to subpart C of this part, the owner or operator shall submit a description of monitoring sufficient to satisfy subpart C of this part in accordance with the same procedures and deadlines specified in paragraph (a)(1) of this section.

(b) Approval of monitoring. (1) The permitting authority shall act to approve or disapprove the monitoring proposed by the owner or operator in acting to issue or deny a part 70 permit based on an application that includes the information submitted in accordance with paragraph (a) of this section.

(2) If the permitting authority approves a proposed CAM plan submitted by the owner or operator, the permitting authority shall establish a permit term or condition for each of the four elements of the plan required by § 64.7(a)(1)-(4) and for any additional elements required by the permitting authority under § 64.7(a)(5). The part 70 permit also shall specify whether an indicator range included in a CAM plan pursuant to § 64.7(a)(3) is applicable only for indicating the need for corrective action pursuant to § 64.7(a)(4) or also as an independent permit term or condition pursuant to paragraph (i) or (ii) of this paragraph (b)(2).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(i) The permit shall establish that an excursion from an applicable indicator range is considered a failure to comply with the part 70 permit term or condition establishing the indicator range if the owner or operator is required to comply with the applicable indicator range pursuant to a separate applicable requirement.

(ii) The permit may establish that an excursion from an applicable indicator range is considered a failure to comply with the part 70 permit term or condition establishing the indicator range if:

(A) The owner or operator proposes such a permit requirement through the permit application process and such proposal is approved by the permitting authority; or

(B) The permitting authority specifically requires the owner or operator to stay within the applicable indicator range in accordance with the existing authority of the permitting authority to establish terms and conditions in the part 70 permit. The permitting authority may allow for defined periods in which an excursion from the indicator range shall not be considered to be a failure to comply with the applicable permit term or condition, if appropriate, based on periods in which compliance with applicable emission limitations or standards is not required.

(3) If monitoring required under subpart C of this part is approved, the part 70 permit shall include conditions for such monitoring in accordance with § 70.6(a)(3)(i) of this chapter. Consistent with the preceding paragraph (2), for indicator ranges that are established as part of the monitoring required under subpart C, the part 70 permit shall specify whether the indicator range is applicable only for indicating the need for corrective action or also as an independent permit term or condition.

(4) As required by § 64.10(b), a part 70 permit shall include a term or

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

condition that establishes the appropriate thresholds for implementing a quality improvement plan for a pollutant-specific emissions unit. The applicable term or condition shall require that, if the threshold is reached or exceeded, the owner or operator shall implement a quality improvement plan consistent with subpart D of this part, and report the time period during which the owner or operator is implementing a quality improvement plan as a deviation pursuant to § 64.11(c)(1). It shall be considered a failure to comply with such term or condition if, for the same pollutant-specific emissions unit, the owner or operator meets or exceeds the threshold for implementing a quality improvement plan more than once in any permit term. Any quality improvement plan required subsequent to completion of an initial quality improvement plan must be reviewed and approved by the relevant permitting authority and may include an enforceable schedule of milestone and completion dates.

(5) After approval of monitoring under this part, if the owner or operator documents that deviations have occurred that were not detected by the monitoring under this part, or the results of compliance method testing document a need to modify the approved indicator ranges, the owner or operator shall promptly notify the permitting authority and submit a proposed modification to the part 70 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges in accordance with § 64.6(a)(3) of this part, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(6) If the monitoring proposed by the owner or operator requires installation, testing or final verification of operational status, the part 70 permit shall include an enforceable schedule with appropriate milestones for

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

completing such installation, testing, or final verification as expeditiously as practicable after issuance of the permit.

(c) Operation of the monitoring. (1) The owner or operator shall conduct the monitoring required under this part upon issuance of a part 70 permit that includes such monitoring, or by such later date specified in the permit pursuant to paragraph (b)(6) of this section.

(2) The owner or operator of an affected source shall maintain and operate the monitoring in a manner consistent with good air pollution control practices and providing a reasonable assurance of compliance, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(3) The owner or operator shall conduct the approved monitoring in accordance with the part 70 permit and the design of the monitoring during all emissions unit operating periods, except for, as applicable, monitoring breakdowns, periods in which the data fail to satisfy required performance criteria, monitor repairs, or other monitor maintenance and quality assurance activities requiring the monitoring to be idle. Any data recorded during such periods shall not be used for purposes of this part, including data averages and calculations, or fulfilling a data availability requirement.

(d) Existing monitoring requirements. The owner or operator shall not use monitoring under this part as an alternative to existing monitoring unless the requirement that establishes the existing monitoring allows for such modification and the owner or operator has obtained approval, if required, for the modification in accordance with the procedures applicable to the existing requirement. The authority to approve a streamlined set of monitoring requirements in a part 70 permit pursuant to § 70.6(a)(3)(i) of this chapter shall not be affected by this paragraph (d).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

§ 64.4 Reporting and recordkeeping requirements.

(a) Reporting requirements.

(1) On and after the date specified in § 64.3(c)(1) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with § 70.6(a)(3)(iii) of this chapter.

(2) A report for monitoring under this part shall include, at a minimum, the information required under § 70.6(a)(3)(iii) and the following information, as applicable:

(i) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(ii) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable);

(iii) A description of the actions taken to implement a quality improvement plan during the reporting period as specified in § 64.11(c).

(3) The owner or operator shall notify the permitting authority within 2 working days after a quality improvement plan is required, pursuant to § 64.10, for a pollutant-specific emissions unit. Upon receipt of the notification, the permitting authority shall specify any subsequent notification requirements for quality improvement plan activities as the permitting authority considers appropriate.

(b) Recordkeeping requirements. (1) The owner or operator shall comply with the recordkeeping requirements specified in § 70.6(a)(3)(ii) of this chapter. The records to be maintained under this part include records of

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

monitoring data, monitor performance data, corrective actions taken, the written quality improvement plan required pursuant to § 64.11 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(2) Instead of paper records, records may be maintained on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

(3) Off-site storage may be allowed upon approval by the permitting authority.

§ 64.5 Savings provisions.

(a) Nothing in this part shall:

(1) Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate authority under the Act, including monitoring in permits issued pursuant to title I of the Act. The purpose of this part is to require, as part of the issuance of a permit under title V of the Act, improved or new monitoring at those emissions units where monitoring requirements do not

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

exist or are inadequate to meet the requirements of this part.

(2) Restrict or abrogate the authority of the Administrator or the permitting authority to impose additional or more restrictive monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.

(3) Restrict or abrogate the authority of the Administrator or permitting authority to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.

Subpart B: CAM Plans for Units with Control Devices

§ 64.6 Monitoring design criteria.

(a) General criteria. To provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit, monitoring under this subpart B shall meet the following general criteria:

(1) The owner or operator shall monitor one or more indicators of the performance of the applicable control device, any associated capture system, and, where necessary to assure compliance, processes at a pollutant-specific emissions unit subject to this subpart B. Indicators of performance may include direct or predicted emissions (including visible emissions or opacity), process and control device parameters that affect control device (and capture system) efficiency or emission rates, and recorded findings of inspection and maintenance activities conducted by the owner or operator.

(2) The owner or operator shall monitor indicators that are necessary to demonstrate that the control device (and associated capture system), and

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

processes significant to achieving compliance, are operated and maintained in accordance with good air pollution control practices that will minimize emissions at least to the levels required by all applicable requirements.

(3) Except as provided in paragraph (c) of this section, the owner or operator shall include ranges for the indicators being monitored. The ranges shall be established so as to provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit. The reasonable assurance of compliance will be assessed by monitoring to ensure the operation and maintenance of the pollutant-specific emissions unit, including the control device, capture system and processes significant to achieving compliance, are conducted in accordance with good air pollution control practices that will minimize emissions at least to the levels required by all applicable requirements. The ranges may be:

(i) Established as a single maximum or minimum value if appropriate or at different levels that vary depending on alternative operating conditions (e.g., high versus low load levels).

(ii) Expressed as a function of process variables (e.g., a range could be expressed as maintaining condenser temperatures a certain number of degrees below the condensation temperature of the applicable compound being processed).

(iii) Expressed as maintaining the applicable parameter in a particular operational status (e.g., using the presence of a flame as the indicator range for a flare).

(iv) Established as interdependent between more than one indicator.

(4) The owner or operator shall conduct monitoring to detect any bypass of the control device (or capture system), if such bypass can occur

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

based on the design of the pollutant-specific emissions unit.

(b) Performance criteria. The monitoring shall be designed to provide reliable data for detecting an exceedance or excursion, as applicable. To assure that sufficient reliable data are obtained, the monitoring proposed by the owner or operator in a CAM plan shall satisfy the following criteria:

(1) Location and installation (if applicable) specifications that provide for obtaining data that are representative of the emissions or parameters being monitored.

(2) Verification procedures to confirm the operational status of the monitoring prior to the date by which the owner or operator must conduct monitoring under this subpart B as specified in § 64.3(c)(1). These procedures shall include manufacturer requirements or recommendations for installation, calibration and start-up operation, provided that the owner or operator may propose modifications to such requirements or recommendations to reflect site-specific operating requirements and conditions. Documentation of the rationale for such modifications shall be submitted in accordance with § 64.8.

(3) Quality assurance and control practices that are adequate to ensure the continuing validity of the data. The owner or operator shall consider manufacturer recommendations or requirements applicable to the monitoring in developing appropriate quality assurance and control practices. If applicable, the owner or operator shall indicate in the part 70 permit application, and explain the reasons for, the differences between the requirements proposed by the owner or operator and the manufacturer's recommendations or requirements.

(4) Specifications for the frequency of conducting the monitoring, the data collection procedures that will be used (e.g., computerized data

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

acquisition and handling or manual log entries based on gauge readings), and, if applicable, the period over which discrete data points will be averaged for the purpose of determining whether an excursion or exceedance has occurred. The frequency of conducting the monitoring, collecting the data, and (if applicable) the period over which data are averaged, shall be designed to obtain data at such intervals that are, at a minimum, commensurate with the time period over which an excursion is likely to be observed based on the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system).

(5) A percentage of data availability that is:

(i) Sufficient to satisfy a minimum data availability requirement that is applicable to the monitoring under a separate applicable requirement; or

(ii) If no such requirement applies, a level of data availability that is consistent with operating the monitoring pursuant to § 64.3(c)(2). The presumptive degree of data availability during a semiannual reporting period that satisfies this paragraph (ii) shall be at least 90 percent of all periods over which data are averaged (or, if no averaging is used, collected) to determine if an excursion or exceedance has occurred. The permitting authority shall require a higher degree of data availability if appropriate for satisfying this paragraph based on the type of monitoring involved, and may approve a reduced degree of data availability if appropriate based on information presented by the owner or operator concerning the use of the proposed monitoring at the particular pollutant-specific emissions unit.

(c) Special criteria for the use of continuous emission, opacity or predictive monitoring systems.

(1) If a continuous emission, opacity or predictive emission monitoring

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

system is required pursuant to other authority under the Act or state or local law, such system shall be used to satisfy the requirements of this part.

(2) The use of a continuous emission, opacity or predictive emission monitoring system that satisfies any of the following monitoring requirements shall be deemed to satisfy the general design criteria in paragraphs (a) and (b) of this section, provided that a continuous opacity monitoring system shall be subject to the criteria for establishing indicator ranges under paragraph (a)(3) of this section:

- (i) Section 51.214 and appendix P of part 51 of this chapter;
- (ii) Section 60.13 and appendix B of part 60 of this chapter;
- (iii) Section 63.8 and any applicable performance specifications required pursuant to the applicable subpart of part 63 of this chapter;
- (iv) Part 75 of this chapter;
- (v) Subpart H and appendix IX of part 266 of this chapter; or
- (vi) If an applicable requirement does not otherwise require compliance with the requirements listed in the preceding paragraphs (i)-(v), comparable requirements and specifications established by the permitting authority.

(3) Any monitoring system subject to this paragraph (c) shall be designed to:

- (i) Achieve a data availability percentage consistent with the criteria in paragraph (b)(5) of this section;
- (ii) Provide data in terms consistent with those applicable emission limitations or standards that apply to the pollutant-specific emissions unit that are expressed in terms of the applicable pollutant (including opacity, if applicable); and
- (iii) Allow for reporting of exceedances, consistent with § 64.4(a).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

§ 64.7 CAM plans.

(a) For each control device (including any associated capture system and processes significant to achieving compliance) that is used to reduce emissions from a pollutant-specific emissions unit subject to this subpart B, the CAM plan, which will be incorporated into the permit pursuant to § 64.3(b)(2), shall specify all of the following elements consistent with the design criteria in § 64.6:

(1) A monitoring approach that includes all of the following:

(i) The indicator(s) to be monitored (such as temperature, pressure drop, emissions or similar parameter);

(ii) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS);

(iii) The frequency of monitoring, the data collection procedures, and, if applicable, the period over which discrete data points are averaged to determine if an excursion or exceedance has occurred;

(iv) The performance criteria to be used to judge the validity of data from the monitoring (such as an accuracy specification); and

(v) The minimum procedures (and frequency for conducting such procedures) that will be used to verify data validity.

(2) A data availability percentage consistent with the design criteria in § 64.6(b)(5).

(3) Except for continuous emission and predictive emission monitoring systems specified in § 64.6(c), indicator ranges in accordance with the criteria in § 64.6(a)(3).

(4) Upon any excursion or exceedance, an obligation to take corrective action (including initial inspection and evaluation, and any necessary follow-up actions) and return operation to within the indicator

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

range or below the applicable emission limitation or standard, as applicable.

(5) Such other CAM plan elements as may be specified by the permitting authority.

§ 64.8 Documentation requirements.

(a) The owner or operator shall submit with a CAM plan, and any revision to a CAM plan, a rationale that describes how the proposed CAM plan (or revision) satisfies the requirements of this subpart B. The owner or operator also shall submit any data supporting the rationale, and may refer to generally available sources of information used to support the rationale (such as generally available air pollution engineering manuals, or The EPA or permitting authority publications on appropriate monitoring for various types of control devices or capture systems). The owner or operator may also rely on the following regulatory precedents to provide a rationale for the proposed monitoring:

(1) Presumptively acceptable or required monitoring approaches established by the permitting authority that are designed to achieve compliance with this subpart B for particular pollutant-specific emissions units;

(2) Continuous emission, opacity or predictive emission monitoring systems that satisfy applicable monitoring requirements and performance specifications as specified in § 64.6(c);

(3) Excepted or alternative monitoring methods allowed or approved pursuant to part 75 of this chapter; and

(4) Monitoring included for standards exempt from this part pursuant to § 64.2(c)(1)(i) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(b) (1) Except as provided in paragraph (c) of this section, the owner or operator shall establish the indicator ranges required under § 64.7(a)(3) consistent with the criteria in § 64.6(a) based on baseline data obtained during the conduct of the applicable compliance test method procedures at the pollutant-specific emissions unit, supplemented by engineering assessments and manufacturer's recommendations. Testing is not required to be conducted over the entire indicator range.

(2) To use data under paragraph (b)(1) of this section, the compliance method test procedures must have been conducted within the last five years, and no changes to the pollutant-specific emissions unit, including the control device and capture system, may have taken place that could result in a significant change in baseline rates for the indicators to be monitored.

(c) If the data from unit-specific compliance method testing specified in paragraph (b) of this section are not available, the owner or operator:

(1) Shall include in the CAM plan a test plan and schedule for obtaining such data in accordance with paragraph (e) of this section; or

(2) May propose to rely on engineering assessments and other data without conducting compliance method testing to establish the appropriate indicator ranges, provided that the owner or operator shall include documentation to demonstrate to the permitting authority's satisfaction that factors applicable to its particular circumstances make compliance method testing unnecessary.

(d) In approving a CAM plan under § 64.3, the permitting authority may condition the approval on the owner or operator collecting additional data on the indicators to be monitored for a pollutant-specific emissions unit, including required compliance method testing, to confirm the ability of the monitoring to provide data that are sufficient to satisfy the requirements of

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

this part and to confirm the appropriateness of an indicator range proposed to satisfy § 64.7(a)(3).

(e) If the monitoring included in the CAM plan submitted by the owner or operator with a part 70 permit application requires installation, testing, or other necessary activities prior to use of the monitoring for purposes of this subpart B, the owner or operator shall include an implementation plan and schedule for installing, testing and performing any other appropriate activities prior to use of the monitoring. The implementation plan and schedule shall provide for use of the monitoring as expeditiously as practicable after approval of the monitoring in the part 70 permit pursuant to § 64.3(b)(6).

Subpart C: General CAM Requirements for Major Sources

§ 64.9 General monitoring requirements.

(a) Minimum monitoring. (1) For any major source subject to this subpart C, the owner or operator shall conduct monitoring sufficient to provide a reasonable assurance of compliance with the terms and conditions of the part 70 permit applicable to the source over the anticipated range of operations at the source.

(2) The permitting authority shall determine if the monitoring proposed by the owner or operator under this section is sufficient to satisfy this paragraph (a). If the permitting authority determines that the monitoring proposed by the owner or operator fails to satisfy this paragraph (a), the permitting authority shall require such additional monitoring that is necessary to provide a reasonable assurance of compliance with the part 70 permit.

(3) The permitting authority shall include in a part 70 permit all necessary conditions related to the conduct of monitoring under this subpart C, including any elements of the monitoring approach listed in § 64.7(a)(1)(i)-

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(v), requirements for indicator ranges, frequency of conducting monitoring, data availability, similar performance requirements, and specifications for defining exceedances or excursions for purposes of submitting monitoring reports under § 64.4(a).

(b) Units with existing monitoring. Subject to paragraph (a)(2) of this section, the owner or operator may propose to satisfy this subpart C by using monitoring that is specified in existing applicable requirements for the emission limitations or standards that apply to a pollutant-specific emissions unit.

(c) Units without existing monitoring. (1) Subject to paragraph (a)(2) of this section, if paragraph (b) of this section is not applicable with respect to specific terms and conditions of the part 70 permit, the owner or operator may propose to satisfy paragraph (a)(1) of this section by using one of the following monitoring approaches:

(i) Recordkeeping that verifies direct compliance of the pollutant-specific emissions unit with an applicable emission limitation or standard. Such recordkeeping may include, but is not limited to, documentation of compliance with one or more of the following emission limitations or standards:

(A) Restrictions on the content or usage rates of raw materials, coatings or fuels;

(B) Restrictions on operating hours;

(C) Periodic verification of the integrity of equipment designed to specific control design standards (for example, verifying gap seal widths on a floating roof on a organic liquid storage tank);

(D) Fugitive dust control measures; or

(E) Similar operational and work practice requirements.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(ii) Recordkeeping that provides a reasonable assurance of compliance by verifying that the techniques used to control emissions from the pollutant-specific emissions unit are operated and maintained in a manner consistent with good air pollution control practices that will minimize emissions at least to the levels required by all applicable requirements. Appropriate records could include records of inspection, maintenance and repair activities, pollution prevention measures, or other process operations that document proper operation of the technique used to control emissions from a pollutant-specific emissions unit. If this paragraph (ii) is applicable, the part 70 permit shall include conditions that establish appropriate indicator ranges consistent with the criteria specified in § 64.6(a)(3) and the requirements in § 64.7(a)(3). The documentation of the appropriateness of such indicator ranges may rely on engineering assessments and manufacturer recommendations, unless the permitting authority requires compliance method or other testing for purposes of establishing appropriate indicator ranges.

(2) Subject to paragraph (a)(2) of this section, the owner or operator may propose that, based on engineering considerations, no monitoring is necessary to provide a reasonable assurance of compliance with specific terms and conditions in the part 70 permit. This approach may apply with respect to certain pollutant-specific emissions units or may apply on the basis of the type of term and condition involved. Examples of this type of situation include:

(i) Generic applicable requirements that do not require any actions by the owner or operator to control emissions (such as a generic opacity standard applying to all units at a facility, including those without significant particulate matter emissions (such as a gas-fired process heater)).

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(ii) Design requirements not requiring ongoing verification (such as a requirement to install a submerged fill pipe for an organic liquid storage tank).

(iii) Emissions from insignificant activities, as defined in § 70.5(c) of this chapter, that are unlikely to deviate from a permit term or condition based on the nature of the unit's operations, including the method used to control emissions from the unit.

(3) The provisions of paragraph (c)(2) of this section shall not apply to any pollutant-specific emissions unit that has the potential to emit the applicable regulated air pollutant in an amount, in tons per year, equal to or greater than 100 percent of the amount required for a source to be classified as a major source.

(d) If the owner or operator is required to conduct monitoring that is more stringent than the other requirements specified in paragraph (c) of this section pursuant to any requirement established under State or local law that is not an applicable requirement under the Act, the owner or operator shall propose, at a minimum, to use such monitoring for satisfying this subpart C.

Subpart D - Quality Improvement Plans (QIPs)

§ 64.10 Thresholds for requiring a QIP.

(a) The owner or operator shall develop and implement a QIP if:

(1) The total duration of excursions or exceedances, as applicable, is greater than or equal to a percent threshold, specified pursuant to paragraph (b) of this section, of operating time during any semiannual reporting period;
or

(2) The total number of periods with excursions or exceedances, as applicable, is greater than or equal to a percent threshold, specified pursuant

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

to paragraph (b) of this section, of the total periods during each semiannual period in which data are averaged to determine if an excursion or exceedance has occurred.

(b) (1) Consistent with § 64.3(b)(4), the part 70 permit shall specify appropriate percent thresholds for requiring the implementation of a QIP. In approving an appropriate threshold, the permitting authority shall consider the nature of the operations at the pollutant-specific emissions unit, the level at which an indicator range has been established, and other appropriate factors.

(2) The threshold shall be set no higher than 5 percent unless an existing applicable requirement specifies a higher percent for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices (including, for example, § 60.284(e)(1)(ii) of this chapter concerning exceedances detected by a continuous opacity monitoring system at recovery furnaces located at kraft pulp mills).

(c) The thresholds established in this section and the other QIP requirements in this subpart D are in addition to all other applicable requirements under the Act. Compliance with this section shall not affect in any manner the obligation of the owner or operator to comply with other applicable requirements of the Act, or act to excuse a violation of any other applicable requirement.

§ 64.11 QIP implementation.

(a) Elements of a QIP. (1) A QIP developed under this subpart D shall be a written plan.

(2) The initial plan shall include procedures that are adequate for evaluating the reasons for the control performance problems documented by

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

the monitoring in the CAM plan.

(3) Based on the results of the evaluation procedures, the plan shall be modified to include procedures for conducting one or more of the following actions, as appropriate:

- (i) Improved preventive maintenance practices.
- (ii) Process operation changes.
- (iii) Appropriate improvements to control methods.
- (iv) Other steps appropriate to correct control performance.
- (v) More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (i)-(iv)).

(b) Time periods for QIPs. The owner or operator shall act to develop and implement a QIP as expeditiously as practicable but in no case shall the period for completing the plan exceed 180 days from the date on which notice of the need to implement the QIP must be provided to the permitting authority under § 64.4(a)(3). If the owner or operator determines that more than 180 days will be necessary to complete the appropriate improvements, the owner or operator shall notify the permitting authority and obtain a site-specific resolution subject to permitting authority or, if necessary, EPA approval. Where appropriate, the plan may rely on procedures and corrective actions specified in an existing plan developed to satisfy a separate applicable requirement (such as a malfunction abatement plan or an operations and maintenance plan).

(c) Reporting and recordkeeping requirements. (1) If a QIP is required pursuant to this section, the owner or operator shall notify the permitting authority in accordance with the reporting requirements in § 64.4(a)(3) and shall report any period while operating in accordance with the QIP as a deviation in the annual compliance certification in accordance

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

with § 70.6(c)(5)(iii).

(2) In accordance with § 64.4(a)(2)(iii), the owner or operator shall submit a summary report on the implementation of a QIP in the next semiannual report after the plan is required under this section and in each subsequent report until the QIP has been completed. Upon completion of the QIP, the next summary report shall include documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. The documentation shall include the results of compliance method tests (or other information consistent with § 64.8(b) and (c)) to verify that the applicable pollutant-specific emissions unit is operating in compliance and that any indicator ranges remain appropriate. The report shall include the QIP completion date.

(3) If the QIP involves changes in the operating characteristics of the pollutant-specific emissions unit (including a control device and associated capture system, if applicable), the report shall also provide a rationale, consistent with § 64.8(a), to confirm that the previously approved monitoring for the pollutant-specific emissions unit continues to satisfy the requirements of this part, unless the owner or operator has submitted a proposed revision to the approved monitoring to account for the changes in the operating characteristics of the unit.

(4) The owner or operator shall maintain a written copy of the quality improvement plan as well as written records of activities conducted pursuant to the plan in accordance with the recordkeeping provisions in § 64.4(b).

(d) Permit revisions. If the owner or operator proposes to change monitoring that has previously been approved under this part (or make other changes at the source) based on the QIP, the owner or operator shall obtain

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

a permit revision, if necessary, in accordance with § 70.7 of this chapter.

PART 70 -- STATE OPERATING PERMIT PROGRAMS

1. The authority citation for part 70 continues to read as follows:

42 U.S.C. 7401, et seq.

2. Section 70.6 is amended by revising paragraphs (a)(3)(i) and (c)(5)

to read as follows:

§ 70.6 Permit content.

(a) ***

(3) Methods, monitoring, and related recordkeeping and reporting requirements.

(i) Each permit shall contain conditions specifying requirements for 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. As necessary, the permit shall include terms and conditions concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods. 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.

(c) ***

(5) ***

(i) ***

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(ii) ***

(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) A statement on the compliance status with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in paragraph (B). The certification shall identify as exceptions to the certification of compliance any period for which the owner or operator identifies a deviation.

(D) Such other facts as the permitting authority may require to determine the compliance status of the source; and

(iv) A requirement that all compliance certifications be submitted to the Administrator as well as to the permitting authority.

(v) [Deleted]

PART 71 -- FEDERAL OPERATING PERMITS PROGRAMS

1. the authority citation for part 71 continues to read as follows:

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

42 U.S.C. 7401, et seq.

2. Section 71.6 is amended by revising paragraphs (a)(3)(i), (a)(3)(iii)(C), and (c)(5) to read as follows:

§ 71.6 Permit content.

(a) ***

(3) Methods, monitoring, and related recordkeeping and reporting requirements.

(i) Each permit shall contain conditions specifying requirements for 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. As necessary, the permit shall include terms and conditions concerning the use, maintenance, and, where appropriate, installation of monitoring equipment or methods. 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.

(iii) ***

(C) For purposes of paragraph (a)(3)(iii)(B) of this section, deviation shall mean a failure to meet a part 71 permit term or condition (including any failure that may be excusable by reason of upset, malfunction, startup or shutdown, if applicable), an exceedance of an applicable emission limitation or standard, an incomplete observance or failure to perform a work practice requirement, or an excursion from a range of operating values established pursuant to an applicable

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

requirement. An exceedance or excursion includes a condition in which emissions, opacity or other parameters exceed or depart from a limit or range specified in an applicable emission limitation or standard or an established range of operating conditions. Should a particular deviation continue beyond twenty-four (24) hours, a separate deviation is initiated at the beginning of each subsequent 24 hour period until the deviation ceases. Without limitation, these terms include the conditions referred to as exceedances, excess emissions or excursions in applicable subparts of parts 60, 61 and 63 of this chapter, as well as exceedances and excursions as defined in part 64 of this chapter. A deviation is not always a violation.

(c) ***

(5) ***

(i) ***

(ii) ***

(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.

COMPLIANCE ASSURANCE MONITORING (CAM) RULE
DISCUSSION AND RULEMAKING (8/2/96 DRAFT)

(C) A statement on the compliance status with the terms and conditions of the permit for the period covered by the certification, based on the method or means designated in paragraph (B). The certification shall identify as exceptions to the certification of compliance any period for which the owner or operator identifies a deviation.

(D) Such other facts as the permitting authority may require to determine the compliance status of the source; and

(iv) A requirement that all compliance certifications be submitted to the Administrator as well as to the permitting authority.

(v) [Deleted]
