Federal Register

Wednesday
October 14, 1998

Part II

Environmental Protection Agency

40 CFR Part 63

National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD–FRL–6164–2]

RIN 2060–AG91, 2060–AF06, 2060–AG94, 2060–AF09, 2060–AE36

National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule and notice of public hearing.

SUMMARY: This consolidated rulemaking proposal includes several related elements. Today's proposal would establish a ''Generic MACT Standards'' program to be utilized by the EPA in establishing National Emission Standards for Hazardous Air Pollutants (NESHAP) under section 112 of the Clean Air Act (Act) for certain small source categories consisting of five or fewer sources. As part of this generic MACT program, the EPA is proposing an alternative methodology under which the EPA will make its maximum available control technology (MACT) determination for appropriate small categories by referring to previous MACT standards that have been promulgated for similar sources in other categories. The basic purposes of the proposed generic MACT program are to use public and private sector resources efficiently, and to promote regulatory consistency and predictability in MACT standard development.

In this consolidated rulemaking package, the EPA is also proposing general control requirements for certain types of emission points for hazardous air pollutants (HAP), which will then be referenced, as appropriate, in the generic MACT requirements for individual source categories. These proposed general control requirements are set forth in new proposed subparts and would be applicable to storage vessels managing organic materials, process vents emitting organic vapors, leaks from equipment components. In addition, the EPA is proposing a separate subpart of requirements for closed vent systems, control devices, recovery devices and routing to fuel gas systems or a process.

Today's consolidated rulemaking package also includes specific proposed MACT standards that have been developed within the generic MACT framework for four specific source categories that are included on the EPA's list of categories for which NESHAP are required. These proposals include standards for acetal resins (AR) production, acrylic and modacrylic fiber (AMF) production, hydrogen fluoride (HF) production, and polycarbonate(s) (PC) production.

DATES: *Comments.* Comments must be received on or before January 12, 1999.

Public Hearing. A public hearing will be held, if requested, to provide interested persons an opportunity for oral presentation of data, views, or arguments concerning the proposed generic MACT standards. If any person specifically requests that a public hearing be held by November 4, 1998, a public hearing will be held on November 25, 1998 beginning at 10:00 a.m.

Request to Speak at a Hearing. Any request that a hearing be held concerning this proposed rule must be submitted orally or in writing no later than November 4, 1998, by contacting Ms. Dorothy Apple at (919) 541–4487, Policy Planning and Standards Group (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

ADDRESSES: *Comments.* Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and Information Center (6102), (LE–131), Attention, Docket No. A–97–17, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. All technical comments pertaining solely to individual source categories should be submitted to the dockets established for the individual source categories (see *Docket* for individual docket numbers). The EPA requests that a separate copy of comments also be sent to Mr. David W. Markwordt (see **FOR FURTHER INFORMATION CONTACT** for address).

Comments and data may be submitted by electronic mail (e-mail) to: a-and-r-docket@epa.gov. Electronic comments must be submitted as an ASCII file to avoid the use of special characters and encryption problems. Comments and data will also be accepted on Microsoft DOS formatted 3.5 inches high-density diskettes containing WordPerfect ® 5.1 or 6.1, or ASCII formatted files. All comments and data submitted in electronic form must note the docket number: A–97–17 for nonsource category-specific comments and data; and A–97–19 for AR production, A–97–18 for AMF production, A–96–54 for HF production, and A–97–16 for PC production source category-specific comments and data. No confidential business information (CBI) should be submitted by e-mail. Electronic comments on this proposed rule may be filed online at many Federal Depository Libraries.

Public Hearing. The public hearing, if required, will be held at the EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina. Persons interested in attending the hearing should contact Ms. Dorothy Apple at (919) 541–4487, Policy Planning and Standards Group (MD–13), to verify that a hearing will be held.

Docket. A docket, No. A–97–17, containing information considered by the EPA in the development of the proposed standards for the generic MACT, is available for public inspection between 8:30 a.m. and 3:30 p.m., Monday through Friday (except for Federal holidays), at the following address: U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street SW., Washington DC 20460, telephone: (202) 260–7548. The EPA's Air Docket section is located at the above address in Room M–1500, Waterside Mall (ground floor). Dockets established for each of the source categories proposed to be assimilated under the generic MACT standards with this proposal include the following: (1) AR production (Docket No. A–97–19); AMF production (Docket No. A–97–18); HF production (Docket No. A–96–54); and PC production (Docket No. A–97–16). These dockets include source category-specific supporting information. The proposed standards, and supporting information are available for inspection and copying. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For information concerning the proposed standards, contact the following at the Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711:

Information type	Contact	Group	Phone/facsimile/ e-mail address
Nonsource category-specific.	David W. Markwordt	Policy, Planning and Standards Group.	(919) 541–0837/(919) 541–0942/ markwordt.david@epa.gov.

Information type	Contact	Group	Phone/facsimile/ e-mail address
AR Production	John M. Schaefer	Organic Chemicals Group	(919) 541–0296/(919) 541–3470/ schaefer.john@epa.gov.
AMF Production	Anthony P. Wayne	Policy, Planning and Standards Group.	(919) 541–5439/(919) 541–0942/ wayne.tony@epa.gov.
HF Production	Richard S. Colyer	Policy, Planning, and Standards Group.	(919) 541–5262/(919) 541–0942/ colyer.rick@epa.gov.
PC Production	Mark A. Morris	Organic Chemicals Group	(919) 541–5416/(919) 541–3470/ morris.mark@epa.gov.

SUPPLEMENTARY INFORMATION: This notice, the proposed regulatory text, and supporting documentation are available in Docket No. A–97–17 or by request from the EPA's Air and Radiation Docket and Information Center (see **ADDRESSES**). This notice and the proposed regulatory text are also available on the Technology Transfer Network (TTN) on the EPA's electronic bulletin boards. The TTN provides information and technology exchange in various areas of air emissions control. The service is free, except for the cost of a telephone call. Dial (919) 541–5742 for up to a 14,400 baud per second modem. For further information, contact the TTN HELP line at (919) 541–5384, from 1:00 p.m. to 5:00 p.m. Monday through Friday, or access the TTN web site at: http://www.epa.gov/ttn.

Regulated entities. Entities potentially regulated are those that produce AR, AMF, HF, and PC and are major sources of HAP as defined in section 112 of the Act. Regulated categories and entities include:

Category	Regulated entities[a]
Industry	Producers of homopolymers and/or copolymers of alternating oxymethylene units. Producers of either acrylic fiber or modacrylic fiber synthetics composed of acrylonitrile (AN) units. Producers of, and recoverers of HF by reacting calcium fluoride with sulfuric acid. For the purpose of implementing the rule, HF production is not a process that produces gaseous HF for direct reaction with hydrated aluminum to form aluminum fluoride (i.e., the HF is not recovered as an intermediate or final product prior to reacting with the hydrated aluminum). Producers of a special class polyester formed from any dihydroxy compound and any carbonate diester or by ester exchange.

[a] This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility, company, business, organization, etc., is regulated by this action, you should carefully examine the applicability criteria in § 63.1104(a)(1), (b)(1), (c)(1), and (d)(1) of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

The following outline is provided to aid in reading the preamble to the proposed generic MACT standards.

I. Background

A. Purpose of the Proposed Standards

The Act was developed, in part,

* * * to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and productive capacity of its population (the Act, section 101(b)(1)).

Sources that would be subject to the standards proposed for each of the source categories (i.e., AR production, AMF production, HF production, PC production) with today's notice are major sources of HAP emissions on the EPA's list of categories scheduled for regulation under section 112(c)(1) of the Act. Major sources of HAP emissions are those sources that have the potential to emit greater than 9.1 megagrams per year (Mg/yr) (10 tons per year (tpy)) of any one HAP or 22.7 Mg/yr (25 tpy) of any combination of HAP. The HAP that would be controlled with today's proposal are associated with a variety of adverse health effects. Adverse health effects associated with HAP include chronic health disorders (e.g., cancer, aplastic anemia, pulmonary (lung) structural changes), and acute health

disorders (e.g., dyspnea (difficulty in breathing), and neurotoxic effects.

The EPA chose to regulate the AR production, AMF production, HF production, and PC production source categories under one subpart to streamline the regulatory burden associated with the development of separate rulemaking packages. All of these source categories have 5 or fewer major sources that would be subject to the standards proposed with today's notice. This subpart will be referred to as the ''generic MACT standards'' subpart. The generic MACT standards subpart has been structured to allow source categories with similar emission points and MACT control requirements to be covered under one subpart.

B. Technical Basis for the Generic MACT Standards

Section 112 of the Act regulates stationary sources of HAP. Section 112(b) (as amended) of the Act lists 188 chemicals, compounds, or groups of chemicals as HAP. The EPA has been directed by section 112 to regulate the emission of HAP from stationary sources by establishing national emission standards.

Section 112(a)(1) of the Act defines a major source as:

> * * * any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential-to-emit, considering controls, in the aggregate 10 tons per year (tpy) or more of any HAP or 25 tpy or more of any combination of HAP.

The statute requires the EPA to establish standards to reflect the maximum degree of reduction in HAP emissions through application of MACT for major sources on the EPA's list of categories scheduled for regulation under section 112(c)(1) of the Act. The EPA is required to establish standards that are no less stringent than the level of control defined under section 112(d)(3) of the Act (this minimal level of control is referred to as the ''MACT floor.''

For new sources, the maximum degree of reduction in emissions

> shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator.

The EPA defines a similar source as a source that has comparable emissions, and a design and capacity structure, such that emissions from that source can be controlled using the same control technology as applied to the given source.

For existing sources in the same category or subcategory, standards may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than

> the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information) * * * in the category or subcategory for categories or subcategories with 30 or more sources, or * * * the average emission limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

The following approach was used to collect and evaluate information pertaining to the proposed MACT for the AR production, AMF production, HF production, and PC production source categories:

1. Established a stakeholder group consisting of representatives of the affected industries, State and local agencies, and other interested parties (e.g., environmental groups, EPA).

2. Assembled available information from previous studies within the Agency and from the affected industries on the source category.

3. Collected additional information (e.g., site visits, existing State regulations) on the source category, as necessary, for determining baseline HAP emissions and existing emissions control.

4. Determined the affected source, control applicability criteria, and MACT for the source category. The MACT for an individual source category was determined based on available information on existing emissions control that applies to (1) sources within the source category, and (2) similar sources for which standards have been promulgated outside the source category (where practical).

Section III of this notice presents the EPA's proposed rationale for and summary of the EPA's proposed approach for determining MACT for source categories with a limited population of sources. Discussion on the EPA's rationale for, and determination of, MACT under the generic MACT standards for the AR production, AMF production, HF production, and PC production source categories is presented in section VII of this notice.

C. Stakeholder and Public Participation

Representatives of the AR production, AMF production, HF production, and PC production industries; environmental groups; State and local agencies; and the EPA were consulted in the development of the proposed standards. Industry representatives were asked to assist in data gathering, arranging site visits, and technical review. Documentation for stakeholder and public participation for the AR production, AMF production, HF production and PC production standards is included in the docket for the proposed standards (Docket No. A–97–17). Source category-specific supporting information is maintained within dockets established for each of these source categories (see **ADDRESSES**). These dockets are cross referenced by the generic MACT standards docket.

Representatives from other EPA offices and programs were included in the regulatory development process. These representatives' responsibilities included the review of the proposed standards. Their involvement ensures that the impacts of the proposed standards to other EPA offices and programs are adequately considered during the development process.

Additionally, this notice solicits comment on the proposed standards and offers a chance for a public hearing on the proposal (see ADDRESSES section) in order to provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards and the generic MACT approach.

II. Source Category List

Acetal resins production, AMF production, HF production, and PC production are included in the EPA's list of categories of major sources of HAP emissions established under section 112(c)(1) of the Act. The initial list was published on July 16, 1992 (57 FR 31576). An update of the list was published on June 4, 1996 (61 FR 28202). Each of these source categories have 5 or fewer sources (i.e., plants) and are, with this proposal, the first source categories proposed to be regulated under the proposed generic MACT standards. The documentation supporting the initial listing of these source categories is entitled ''Documentation for Developing the Initial Source Category List,'' EPA–450/3–91–030, July 1992. A description of each of these source categories follows.

1. Acetal Resins Production Source Category

The AR production source category includes any facility which manufactures homo polymers and/or copolymers of alternating oxymethylene units. Acetal resins are also known as polyoxymethylenes, polyacetals, and aldehyde resins. They are generally produced by polymerizing

formaldehyde (HCHO) with the methylene functional group (CH2) and are characterized by repeating oxymethylene units (CH20) in the polymer backbone. There are currently 3 plants operating in the United States.

2. Acrylic and Modacrylic Fibers Production Source Category

The AMF production source category includes any facility engaged in the production of either of the following synthetic fibers composed of AN:

(1) Acrylic fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 percent by weight of AN units; or

(2) Modacrylic fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 35 percent but less than 85 percent by weight of AN units. There are currently 4 plants operating in the United States.

3. Hydrogen Fluoride Production Source Category

The HF production source category includes any facility engaged in the production and recovery of HF by reacting calcium fluoride with sulfuric acid. For the purpose of the proposed standards, HF production does not include any process that produces gaseous HF for direct reaction with hydrated aluminum to form aluminum fluoride. In these processes, HF is not recovered as an intermediate or final product prior to reacting with the hydrated aluminum. Facilities utilizing these processes will be regulated under a separate MACT standard.

There are currently 2 HF production plants operating in the United States, only one of which will be affected by this rule. A third HF plant has been indefinitely ''mothballed'' (shut down but not dismantled, with the possibility of resuming production in the future).

4. Polycarbonates Production Source Category

The PC production source category includes any facility engaged in the production of a special class of polyester formed from any dihydroxy compound and any carbonate diester or by ester exchange. Polycarbonates may be produced by solution or emulsion polymerization, although other methods may be used. A typical method for the manufacture of PC includes the reaction of bisphenol-A with phosgene in the presence of pyridine to form PC. Methylene chloride is used as a solvent in this polymerization reaction. There are currently 5 plants operating in the United States.

Additional source categories that are scheduled for regulation no later than November 15, 2000 that the EPA has identified as having 5 or fewer sources include the following:

1. Alumina processing
2. Ammonium sulfate production
3. Antimony oxides manufacturing
4. Asphalt/coal tar application—metal pipes
5. Carbonyl sulfide (COS) production via carbon disulfide
6. Carboxymethylcellulose production
7. Cellophane production
8. Cellulose ethers production
9. Chromium refractories production
10. Fume silica production
11. Methylcellulose production
12. Primary magnesium refining
13. Rayon production
14. Spandex production
15. Steel foundries
16. Uranium hexafluoride production

The EPA believes that there is a potential for many more of the source categories scheduled for regulation no later than November 15, 2000 to have a limited number (5 or fewer) of major sources because of the existence of synthetic minor and area HAP sources. Identification of such source categories would be made when the initial data collection and analysis is conducted for an individual source category during the ''presumptive MACT'' (discussed below) process and/or in the information gathering and analyses stage of MACT development. Source categories determined by the EPA to include a limited number (5 or fewer) major sources will be evaluated by the EPA according to the criteria described below, to determine whether or not each source category is considered to be an appropriate candidate for assimilation in generic MACT standards.

If a listed source category on the EPA's source category list for regulation is not promulgated by the scheduled date for a given source category, section 112(j)(2) requires major sources of HAP to apply for a permit (in States with approved permit programs) within 18 months and comply with emissions limitations equivalent to MACT. Section 112(g) requires compliance with MACT on a case-by-case basis for major new sources and source modifications when no national MACT standard has been set by the EPA. In such cases, State and local permitting authorities are required to make case-by-case MACT determinations. Presumptive MACT is an estimate made within a limited timeframe based on a review of available information of what the proposed MACT standard would be, and is intended to assist State and local permitting authorities in making a possible case-by-case MACT determination.

III. Basis for Generic MACT Approach

In order to fulfill the requirements of the Act, the EPA is required to develop standards that reflect the maximum degree of reduction in HAP emissions through the application of MACT for major sources. For new sources, the EPA is required to establish standards that are no less stringent than the emission control that is achieved in practice by the best controlled similar source (referred to as the ''MACT floor'' for new sources). For existing sources, the EPA is required to establish standards that are no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources in a category or subcategory with 30 or more sources, or the average emission limitation achieved by the best performing 5 sources in a category or subcategory with fewer than 30 sources (referred to as the ''MACT floor'' for existing sources).

The statute is somewhat ambiguous with respect to the process for derivation of a MACT floor for existing sources in those instances where the source category in question has fewer than five major sources. In prior rulemakings, the EPA has derived a MACT floor for categories with fewer than five sources directly, by determining the average emission limitation achieved by all sources in the category. However, while this approach to determining compliance with the MACT floor is clearly permissible, the EPA believes that derivation of a MACT floor in this manner for small source categories will generally be superfluous and uninformative with respect to the ultimate determination of MACT itself. This is especially true in those instances where the sources to be controlled are essentially the same types of sources repeatedly evaluated by the EPA as part of the development of previous MACT standards. In order to conserve limited EPA resources, avoid duplication of effort, and encourage consistency in its regulatory determinations, the EPA is now proposing to establish an alternative generic process for determining MACT for certain small source categories. This process will focus primarily on extension of prior MACT determinations to additional categories and determine compliance with MACT floor requirements by logical inference rather than a separate quantitative analysis.

A. Background

Of 93 source categories on the EPA source category list for which standards have not yet been developed, 17 have been identified as having 5 or fewer major sources. The tight schedule for establishing MACT standards for 93 source categories no later than November 15, 2000 has required the EPA to assess and implement different approaches to streamline regulatory development efforts while continuing to meet the objectives of the Act. For example, 20 source categories have been combined for regulation under one rulemaking (i.e., the Miscellaneous Organic NESHAP), and source categories with similar emission points and characteristics have been assimilated with others (e.g., the dodecanedioic acid production source category has been assimilated under the Hazardous Organic NESHAP).

Under the statutory process, even after a MACT floor has been determined, the EPA must consider control options more stringent than the floor. When considering control requirements beyond the floor, the EPA evaluates the relative cost of achieving different levels of emissions reductions, non-air quality health and environmental impacts, and the energy requirements of the controls. The objective of this consideration is to achieve the maximum degree of emission reduction without imposing unreasonable economic or other impacts.

In deciding what level of emission control constitutes MACT for a particular source category, the EPA is not limited solely to evaluation of the sources in that category. Rather, the EPA will consider its prior experience in deriving MACT requirements for similar types of sources in other categories. The more limited the population of sources in a category, the less likely that such sources will be fully representative of the range of reasonably available emission control technologies and strategies. Furthermore, in a larger source category, the statutory MACT floor determination is based on a subset of the sources in the category which is deliberately skewed toward greater control. Thus, the smaller the source category, the lower the likelihood that a MACT floor determined within the category will be useful or informative with respect to the determination of MACT itself.

For example, averaging the HAP emission control level achieved by one well-controlled source (e.g., vented to a control device achieving a HAP emission reduction of 95 percent by weight) with two uncontrolled sources (i.e., HAP emission reduction efficiency of zero percent by weight) would result in an average HAP emission control reduction level of approximately 32 percent by weight. This calculated ''average'' HAP emission control level is clearly below the HAP emission control level already demonstrated by a source in the source category, and is clearly not indicative of MACT for the source type. Selection of the median facility of the three, which is uncontrolled, would also have little relevance to the determination of MACT itself. Even if the EPA were to declare that the MACT floor is no control, the EPA would then be required to undertake a separate MACT analysis based on the general practicality of the control achieved at the well-controlled source as well as similar sources outside of the category.

B. Rationale

From the above discussion, it is apparent that, as a practical matter, the statutory safeguard of the MACT floor becomes less and less relevant to MACT itself as the size of a source category declines. Given the large number of small source categories scheduled for standard development and the limited time remaining, the EPA would like to focus its resources on the most relevant issues. Therefore, the Agency has attempted to develop a policy for small source categories which identifies and recognizes those instances where a separate MACT floor analysis is unnecessary and compliance of the overall MACT standard with the MACT floor limitation may be reasonably inferred.

There are two basic scenarios where the EPA can reasonably infer as part of establishing MACT that MACT floor requirements have been satisfied. First, when the EPA intends to select a MACT standard that coincides with the level of control achieved by the best controlled source(s) in a category, it is self-evident that the MACT floor has been met, and it is clearly a waste of EPA resources to undertake a separate quantitative MACT floor analysis based, in part, on control levels at the less well controlled facilities. This common sense principle is equally applicable to both small and large source categories.

Second, in those instances where the EPA will base its MACT standard for a small category (five or fewer sources) on MACT standards previously established for a larger group of demonstrably similar sources in other categories, it is also reasonable to infer MACT floor compliance without the need for a detailed new analysis. In each of the prior standards, the EPA will have selected a MACT standard requiring control equal to or greater than the MACT floor, and each of those MACT floors will, in turn, have been derived from a subset of the category consisting of the best-controlled facilities. Unless there is something about the nature of the sources in the small category that undercuts the basic premise that it is similar to the larger group of previously regulated sources, it is extremely implausible that the average control achieved by the small group of sources would be better than the MACT standards previously derived from the larger universe of similar sources.

If the EPA adopts objective criteria for assessing the similarity of sources in a small category to the larger group of sources upon which its generic MACT standards are based, and conducts a separate MACT analysis rather than adopting a generic standard whenever sources in the small category in question are shown to have achieved greater control or to be otherwise dissimilar, the EPA believes that the adoption of generic MACT standards will generally comport with statutory requirement.

It is apparent that a process that applies generically derived MACT requirements to small groups of sources that are similar in character to the larger groups of sources from which the generic standards were derived will conserve resources and will foster regulatory predictability and consistency. For the reasons explained above, the EPA believes that MACT standards derived in this manner will also comply with any applicable MACT floor and otherwise meet statutory requirements. Although such a conclusion is logical, the EPA decided that it would be useful to test this conclusion by comparing the results likely under this alternative approach with actual standards promulgated in the past.

In order to do this, the EPA reviewed and evaluated MACT standards promulgated as of March of 1998 that regulated source categories or source subcategories with 5 or fewer major sources. The EPA's review and evaluation supports the EPA's position that the control level established using the proposed alternative MACT determination approach would parallel the control level that would be established under the conventional MACT determination approach (refer to Docket No. A–97–17, Item No. II–B–7).

Although the EPA believes it is sensible to address small source categories through application of generic standards derived from EPA experience in setting prior standards,

the EPA will not automatically utilize a generic standard approach for all small categories. If the EPA determines that the sources in a particular small source category are demonstrably different in a material way, a generic approach will not be utilized in that instance. Factors that could cause the EPA to determine that a source category is not an appropriate candidate for generic MACT include, but are not limited to, the following: sources in the small category are dissimilar from the types of sources addressed by generic standards, factors specific to the sources in question significantly reduce or increase the practicality of the specified generic emission controls, the sources present unusual hazards of the sort that may have affected development of existing control strategies, or the sources have already achieved emission limitations greater than anticipated generic standards.

The EPA will determine the appropriateness of assimilating a particular small source category into its generic standards on a case-by-case basis. Moreover, as will be apparent from the discussion below, the EPA intends to establish a process that will enable early identification of any factors that make a small category inappropriate for inclusion in generic MACT.

C. Description of Alternative Approach

Under the EPA's proposed alternative MACT determination approach for source categories with 5 or fewer major sources, MACT would be established based on (1) sources within the category, and (2) similar sources for which standards have been promulgated outside the source category. In developing a streamlined approach for establishing MACT when a source category has a limited population of major sources, the EPA acknowledged that the following legal and procedural issues needed to be addressed:

1. The approach needed to fulfill the Act's intent of establishing MACT.

2. The approach needed to allow the EPA to establish specific enforceable standards.

3. The approach needed to allow the EPA to develop appropriate monitoring, recordkeeping, and reporting requirements.

4. The approach needed to include procedural steps to ensure appropriate decision making, and input from stakeholders.

The EPA's proposed basic approach for determining MACT for source categories with a limited population of major sources involves the following:

1. Establishment of a stakeholder group that consists of representatives of the affected industries, State and local agencies, and other interested parties (e.g., environmental groups, the EPA Regional Offices).

2. Assembly of available information from previous studies within the Agency and from the affected industries on the source category.

3. Collection of additional information (e.g., site visits, existing State regulations) on the source category, as necessary, for determining baseline HAP emissions and existing emissions control.

4. Determination of the affected source, control applicability criteria, and MACT for an individual source category based on available information on existing emissions control that applies to (1) sources within the category, and (2) similar sources for which standards have been promulgated outside the source category (where practical and there is consensus among the stakeholders).

The EPA chose the presumptive MACT process as the starting point for the alternative MACT determination because sufficient information would be available in the process to do an initial screening of small major HAP source categories (sources with five or fewer major HAP sources) to determine the appropriateness of MACT based on the alternative MACT determination approach (e.g., identification of source category as a category with a limited number of major sources; identification of HAP emission points, characteristics, and waste streams). If the EPA decides that the alternative MACT determination approach is appropriate, it will be implemented for that source category and standards for that source category would be assimilated under the generic MACT standards subpart. If it is decided that it is not appropriate to determine MACT for the source category based on the EPA's alternative approach, the conventional MACT determination process will be utilized. Under the latter scenario, the source category-specific MACT standards may be assimilated under the generic MACT standards subpart or placed in a separate subpart.

Based on the EPA's establishment of previously-promulgated MACT standards, the determination of MACT generally consists of two basic components: an ''applicability'' criteria component and a ''control requirement'' component. The applicability component consists of identifying and determining the HAP emission points within the source category that can and have been controlled by emission control technologies. The control requirement component is identified and determined by the emission control technology (or emission reduction) that should be applied to a selected source to achieve the maximum degree of reduction in HAP emissions (taking into consideration the factors specified in the Act).

The approach used to determine the applicability component for existing and new source MACT is independent of the total number or sources in the source category. This component of MACT is determined based on the characteristics specific to an individual source category (e.g., the type and quantity of HAP, size of storage vessel). Therefore, under the EPA's proposed alternative MACT determination approach, the EPA would determine the applicability component of MACT on a source category-specific basis, which would parallel what has been implemented for previously-promulgated NESHAP. For example, a small fixed roof storage vessel containing a HAP with a low vapor pressure or at a low concentration may not be a significant source of HAP emissions warranting additional emissions control. In such cases, control requirement applicability would be established for the source category's storage vessels that would acknowledge low-emitting storage vessels by exempting them from additional control, monitoring, recordkeeping, and reporting requirements.

The proposed alternative approach would establish the control requirement component based on MACT determinations made by the EPA under previously-promulgated NESHAP for emission point types sharing similar pollutant stream characteristics (e.g., organic HAP emissions from storage vessels, process vents, wastewater treatment systems, bulk organic liquid transfer loading racks, fugitive emissions from pump and valve leaks).

Under the proposed approach, the EPA would consider the following factors when determining whether it is appropriate to adopt generic control or source reduction technologies demonstrated outside of an applicable source category: (1) The volume and concentration of emissions, (2) the type of emissions, (3) the similarity of emission points, (4) the cost and effectiveness of controls for one source category relative to the cost and effectiveness of controls for the other source category, (5) whether a source has unusual characteristics that might require more or less stringent controls, and (6) whether any of the sources have existing emission controls that are

dissimilar and more stringent than controls required for similar sources outside the source category. These factors would be considered on a source category-specific basis in order to ensure that sources are appropriately similar, and that emissions control technologies and reductions demonstrated outside of a source category are achievable for new and existing sources in an applicable source category. The proposed alternative MACT determination approach would enable the EPA to determine MACT considering MACT determinations made by the EPA under previously-promulgated NESHAP for similar HAP emission point and source types sharing similar pollutant stream characteristics.

To assist in the implementation of the EPA's proposed alternative MACT determination approach, the EPA identified control technologies used in previously-promulgated NESHAP that establish standards specific to a common group of sources or emission points types (see Docket No. A–97–17, Item No. II–B–8). The control requirements selected for an emission point, and control or recovery equipment type are referred to hereafter as ''common control requirements.''

For example, at least seven MACT standards have been promulgated by the EPA for individual source categories that establish specific air emission control requirements for vessels storing liquids and other materials containing organic HAP (40 CFR 63 subparts G, R, U, CC, DD, EE, and JJJ). The EPA believes that it is reasonable to group the HAP storage vessels represented by these MACT determinations under a single emission point type because, regardless of the type of production process or operation with which the storage vessels are associated, the storage vessels have similar emission mechanisms and control technologies.

Organic HAP emissions from fixed-roof storage vessels are generated by the same emission mechanisms (e.g., breathing losses resulting from diurnal changes in ambient temperature, displacement of head space vapors when filling the storage vessel). The quantity of emissions from a storage vessel is a function of the same characteristic properties (e.g., organic vapor pressure) of the material stored in other vessels containing organic HAP. Similarly, the same control technology options are applicable to reducing the air emissions from fixed-roof storage vessels (e.g., retrofitting internal floating roofs, or venting vapors to a control device). Thus, the EPA believes that it is reasonable to apply a common set of control requirements, defined by existing MACT standards, to storage vessels sharing similar characteristics, regardless of the individual source category in which a storage vessel may be designated as an affected source. Following this rationale, common control requirements can be selected for other types of HAP emission points that share similar HAP emission characteristics.

As with previously-promulgated NESHAP and this proposal, the rationale for each MACT determination made for a small category pursuant to the alternative methodology would be presented in the preamble at the time of proposal and opportunity for comment given. Additionally, the costs, economical, and other impacts would be assessed to ensure that unreasonable impacts do not result from the implementation of the proposed MACT. The EPA is soliciting comment on the proposed generic MACT program and approach with this proposal (see section XII.A of the preamble).

IV. Summary of Proposed Standards

The proposed standards for AR production, AMF production, HF production, and PC production include requirements that reflect existing emission point control requirements for similar sources, requirements that are source category-specific, and requirements that would apply to all source categories that are regulated under the generic MACT standards subpart (e.g., general recordkeeping, reporting, compliance, operation, and maintenance requirements). Section IV.A of this preamble presents the generic MACT standards subpart structure, and sections IV.B through IV.E present a summary of the proposed standards applicable for each of the source categories being assimilated under the generic MACT standards with this proposal.

The proposed standards apply to process units and emission points that are part of a plant site that is a major source as defined in section 112 of the Act. The applicability section of the regulation specifies what source categories are being assimilated under the generic MACT standards with this proposal and defines the emission points subject to the proposed standards.

A. Generic MACT Standards Structure

The following discussion presents a summary of the structure of the proposed generic MACT standards.

1. *Applicability.* The proposed generic MACT standards have been structured to allow source categories with similar emission points and MACT control requirements to be covered under one subpart. The applicability section specifies the source categories and affected source for each of the source categories subject to the generic MACT standards. This section also clarifies the applicability of certain emission point provisions for which both the generic MACT standards subpart and other existing Federal regulations might apply.

2. *Definitions.* The definitions section specifies definitions that apply across source categories.

3. *Compliance schedule.* The compliance schedule section provides compliance dates for new and existing sources.

4. *Source category-specific applicability, definitions, and standards.* The source category-specific applicability, definitions and standards section specifies the definitions, and standards that apply to an affected source based on applicability criteria, for each source category.

5. *Applicability determination procedures and methods.* The applicability determination procedures and methods section provides procedures for an owner or operator of an affected source to follow when determining control requirements under the standard applicability section of the rule. Standard applicability determination procedures (as applicable) are footnoted in the standard requirement applicability tables specified for each source category.

6. *Generic standards and procedures for approval for an alternative means of emissions limitation.* The remaining sections of the proposed rule contain provisions that would apply across source categories within the generic MACT subpart. These provisions include generic compliance, maintenance, monitoring, recordkeeping, and reporting requirements. An alternative means of emission limitation to the design, operational, work practice, or equipment standards specified for each source category within the generic MACT subpart may also be established as provided in § 63.1113 of 40 CFR Part 63, subpart YY (Generic MACT Standards).

B. Acetal Resins Production Standards

The AR production standard consists of standards that regulate HAP emissions from storage vessels storing process feed materials, process vents, process wastewater treatment systems, and equipment leaks from compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves,

connectors, and instrumentation systems. Requirements would be the same for both existing and new sources.

Storage vessels. Storage vessels with specified sizes that store materials with specified vapor pressures would be required to control HAP emissions by using an external floating roof equipped with specified primary and secondary seals; by using a fixed roof with an internal floating roof equipped with specified seals; or by covering and venting emissions through a closed vent system to one of the following:

1. A recovery device or an enclosed combustion device that achieves a HAP control efficiency ≥95 percent.

2. A flare.

Process vents from continuous unit operations (back end and front end process vents). Front end process vents would be required to control HAP or TOC emissions by venting emissions through a closed vent system to a flare, or venting emissions through a closed vent system to any combination of control devices that reduces emissions of HAP or TOC by 60 percent by weight or to a concentration of 20 parts per million by volume (ppmv), whichever is less stringent. Back end process vents with a total resource effectiveness index value (TRE) less than 1.0 would be required to control HAP or TOC emissions by venting emissions through a closed vent system to a flare, or venting emissions through a closed vent system to any combination of control devices that reduces emissions of HAP or TOC by 98 percent by weight or to a concentration of 20 parts per million by volume (ppmv), whichever is less stringent; or by achieving and maintaining a TRE index value greater than 1.0.

Wastewater treatment systems. Process wastewater treatment systems with wastewater streams with an average HAP concentration ≥10,000 parts per million by weight (ppmw) at any flow rate, or an average HAP concentration ≥1,000 ppmw and an annual average flowrate ≥10 liters per minute would be required to control HAP emissions by covering (e.g., with a floating roof cover, or a floating membrane cover), and venting emissions through a closed vent system to one of the recovery or control devices specified for control of emissions from storage vessels. For individual drain systems, an owner or operator also has the option of using hard-piping to control HAP emissions.

Equipment leaks. For equipment containing or contacting HAP in amounts ≥5 percent, HAP emissions would be required to be controlled through the implementation of a leak detection and repair (LDAR) program for affected equipment.

C. Acrylic and Modacrylic Fibers Production Standards

The AMF production standards consist of standards that regulate AN emissions from storage vessels storing process feed materials, process vents, fiber spinning lines, process wastewater treatment systems; and equipment leaks from compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, or instrumentation systems. Requirements for individual sources would be the same for both existing and new sources.

As an alternative to these individual source requirements, an owner or operator of an affected AMF production facility can comply with the rule by controlling facility-wide AN emissions (not including equipment leaks as identified above) to a level such that emissions do not exceed 0.5 kilograms of AN per megagram (Mg) of fiber produced (1.0 pound AN per ton of fiber produced) for existing sources, and 0.25 kilograms of AN per Mg of fiber produced (0.5 pounds AN per ton of fiber produced) for new sources.

Storage vessels. Storage vessel emissions storing process feed material would be required to control AN emissions by using an external floating roof equipped with specified primary and secondary seals; using a fixed roof with an internal floating roof equipped with specified seals; or by venting emissions through a closed vent system to one of the following:

1. A recovery device that achieves a HAP control efficiency ≥95 percent;

2. An enclosed combustion control device that achieves a HAP control efficiency ≥98 percent; or

3. A flare that meets the EPA design and operation specifications of 40 CFR 60.18.

Process vents from continuous unit operations. Process vents with vent streams with an average flow rate ≥ 0.005 cubic meters per minute and a AN concentration ≥50 ppmv would be required to control HAP emissions by venting vapors through a closed vent system to a recovery or control device that reduces emissions of HAP or TOC by 95 or 98 percent by weight or to a concentration of 20 ppmv, whichever is less stringent. If the controlled vent stream is halogenated, emissions are required to be vented to a halogen reduction device that reduces hydrogen halides and halogens by 99 percent by weight or to less than 0.45 kg/hr either prior to or after (other than by using a flare) reducing the HAP or TOC by 98 percent by weight.

Fiber spinning lines. Fiber spinning lines using spinning solution or spin dope with an AN concentration ≥100 parts per million (ppm) are required to reduce AN emissions by 85 percent by weight or more by enclosing the spinning and washing areas of the spinning line and venting to a control and/or recovery device.

Wastewater treatment systems. Process wastewater treatment systems with an annual average AN concentration ≥10,000 ppmw at any flow rate, or an annual average AN concentration ≥1,000 ppmw and an annual average flowrate ≥10 liters per minute would be required to control HAP emissions from those units managing wastewater by covering (e.g., with a floating roof cover, or a floating membrane cover), and venting through a closed vent system to one of the recovery or control devices specified for control of emissions from storage vessels. For individual drain systems, an owner or operator also has the option of using hard-piping to control HAP emissions.

Equipment leaks. For equipment containing or contacting AN in amounts ≥10 percent by weight, HAP emissions would be required to be controlled through the implementation of a LDAR program for affected equipment.

D. Hydrogen Fluoride Production Standards

The HF production standards consist of standards that regulate HAP emissions from storage vessels; process vents on HF recovery and refining vessels; bulk loading of HF liquid into tank trucks and railcars; kilns used to react calcium fluoride with sulfuric acid; and equipment leaks from compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, or instrumentation systems. Requirements would be the same for both existing and new sources.

Storage vessels and transfer racks. Storage vessels and transfer loading racks would be required to control HF emissions by venting to a recovery system or wet scrubber that achieves a 99 percent by weight removal efficiency.

Process vents from continuous unit operations. Process vents for HF recovery and refining would be required to control HF emissions by venting emissions to a wet scrubber that achieves a 99 percent by weight HF removal efficiency.

Kilns. Kilns used to react calcium fluoride with sulfuric acid would be required to capture HF emissions and vent emissions to a wet scrubber that achieves a 99 percent by weight HF removal efficiency during emergencies.

Equipment leaks. All equipment leaks would be controlled through a LDAR program.

E. Polycarbonates Production Standards

The PC production standards consist of standards that regulate HAP emissions from process vents from batch and continuous unit operations, storage vessels, process wastewater treatment systems, and equipment leaks from compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are not already subject to the hazardous organic NESHAP (HON). Different requirements and applicability criteria apply for existing and new sources.

Storage vessels. Storage vessels with specified sizes that store materials with specified vapor pressures would be required to control HAP emissions by using an external floating roof equipped with specified primary and secondary seals; by using a fixed roof with an internal floating roof equipped with specified seals; or by covering and venting emissions through a closed vent system to any of the following control devices:

1. A recovery device that achieves a HAP control efficiency ≥95 percent;
2. An enclosed combustion control device that achieves a HAP control efficiency ≥95 or 98 percent (depending on the vapor pressure of contained liquid and storage vessel size); or
3. A flare.

Some vessels must use a closed vent system and recovery or control device, based on vessel size dn the vapor pressure of the stored material.

Process vents from batch unit operations. Process vents from batch unit operations that emit 11,800 kilograms or more per year (kg/yr) of HAP, and that have a vent stream flow rate less than the cutoff flow rate, are required to control emissions from process vents by an aggregated 90 percent by weight or to a TOC concentration of 20 ppmv per batch cycle.

Wastewater treatment systems at existing sources. Process wastewater treatment systems with wastewater streams with an average HAP concentration ≥10,000 ppmw at any flow rate, or with an average annual HAP concentration ≥1,000 ppmw and an annual average flowrate ≥10 liters per minute would be required to control HAP emissions by covering (e.g., with a floating roof cover, or a floating membrane cover), and venting emissions through a closed vent system to one of the recovery or control devices specified for control of emissions from storage vessels. For individual drain systems, an owner or operator also has the option of using hard-piping to control HAP emissions.

Equipment leaks. For equipment containing or contacting HAP in amounts ≥5 percent, HAP emissions would be required to be controlled through the implementation of an LDAR program for affected equipment.

V. Summary of Environmental, Energy, Cost, and Economic Impacts

In the decision process for determining MACT for an individual source category, the EPA and stakeholder group members (as applicable) consider the cost of achieving MACT and associated emissions reductions, and any nonair quality health and environmental impacts and energy requirements.

Impacts are determined relative to the baseline that is set at the level of control in absence of the rule. Environmental impacts from the application of the control or recovery devices proposed for the subject source categories include the reduction of HAP and VOC emissions, increases in other air pollutants, and decreases or increases in water pollution and solid waste. Although the intent of the proposed standards is to reduce HAP emissions, the control of organic HAP emissions would also result in the control of non-HAP and HAP VOC for the AR production, AMF production, and PC production source categories. There is a potential for a slight increase in emissions of CO and NO_X resulting from the on-site combustion of fossil fuels as part of control device operations. Impacts for water pollution and solid waste, and increases in energy use from the use of control devices, would be negligible.

The EPA believes that there would be minimal, if any, adverse environmental or energy impacts associated with the proposed standards for the AR production, AMF production, HF production, or PC production source categories. This belief is supported by previous impacts analyses associated with the application of the control and recovery devices that would be required under the proposed standards, and by the fact that each of these source categories have only 5 or fewer major sources.

The cost and economic impacts of the proposed standards for the AR production, AMF production, HF production, and PC production source categories have been estimated by the EPA to be insignificant or minimal. The MACT cost and economic impacts supporting the EPA's conclusion for each of these source categories are presented in the economic analyses for each of these source categories. The economic analyses for each of these source categories can be obtained from the dockets established for these source categories (see **ADDRESSES**).

VI. Emission Point Common Control Requirements

The EPA promulgated standard requirements for selected emission points (i.e., containers, surface impoundments, oil-water separators and organic-water separators, tanks, individual drain systems) in individual subparts under the Off Site Waste and Recovery NESHAP. This was done for ease of reference, administrative convenience, and as a step towards assuring consistency in the technical requirements of the air emission control requirements applied to similar emission points under different regulations. These subparts do not specify emissions reduction performance requirements or applicability cutoffs. Emissions reduction performance requirements and applicability cutoffs would be specified in the subpart that references these subparts.

By establishing emission point and emissions control specific subparts, the generic MACT regulation (and other regulations) can reference a common set of design, operating, testing, inspection, monitoring, repair, recordkeeping, and reporting requirements for air emissions controls. This eliminates the potential for duplicative or conflicting technical requirements, and assures consistency of the air emission requirements applied to similar emission points. Creating emission point-specific subparts and a subpart for closed vent systems, control devices, and routing to a fuel gas system or process simplifies the amendment process and ensures that all regulations that cross reference the use of such subparts are amended in a consistent and timely manner. Additionally, a subset of these subparts can be cross referenced and exceptions can be made within the referencing subpart. Therefore, these subparts do not limit the flexibility to address source category-specific needs.

The EPA reviewed the MACT determinations used for each of the NESHAP subparts promulgated for individual source categories prior to October 1996 under 40 CFR part 63. The

majority of these NESHAP regulate source categories having pollutant streams containing gaseous organic HAP. To date, NESHAP for a few source categories have been promulgated to control emissions of specific metals listed as HAP or particulate matter containing HAP. Thus, the EPA decided to focus initially on the selection of control requirements for source types emitting gaseous organic HAP.

In a number of cases, standards have been established by the EPA under NESHAP for different source categories that regulate organic HAP emissions from the same emission point type, such as storage vessels storing volatile organic liquids, process vent gas streams, leaks from equipment components used in organic liquid service. Thus, MACT determinations that the EPA has made for these NESHAP rulemakings can be grouped together by HAP emission point types having similar pollutant stream characteristics.

The EPA has identified the following individual emission point types for which specific standards have been established under more than one NESHAP: storage vessels, process vents, bulk organic liquid transfer loading operations, equipment leaks, and containers. In addition, a number of the existing NESHAP address organic HAP emissions from individual drain systems, wastewater storage vessels, oil and water separators, and surface impoundments collectively under standards related to the collection and treatment of wastewater containing organics. Therefore, the EPA decided that it is appropriate to group these emission points together in a single emission point category called ''organic wastewater treatment facilities.''

Common control requirements selected by the EPA for specific organic HAP emission point types and individual subparts are presented in table 1. Note that clarifying additions or improvements to previously-promulgated standards were made when developing the common control requirements. For example, 40 CFR Part 63, Subpart WW (National Emission Standards for Storage Vessels—Control Level 2) includes options for controlling emissions for slotted guidepoles. A complete description of the information upon which these common control requirement selections are based is presented in a technical memorandum available in the docket for this rulemaking No. A–97–17, Item No. II–B–8).

BILLING CODE 6560–50–P

TABLE 1. HAZARDOUS AIR POLLUTANT STREAM COMMON CONTROL REQUIREMENTS CONTROL LEVELS

Emission Point	Hazardous Air Pollutant Stream Control Requirements		
Storage vessels (or tanks) managing organic materials	Control Level 1	Use fixed-roof tank	Subpart OO Subpart SS
	Control Level 2	Option 1: Use external floating roof equipped with specified primary and secondary seals, or Option 2: Use fixed roof with internal floating roof equipped with specified seals, or Option 3: Cover and vent through closed vent system to one of the following control devices: 1. Recovery control device that achieves a HAP control efficiency ≥ 95% 2. Enclosed combustion control device that achieves HAP control efficiency ≥ 98% 3. Flare meeting EPA specifications	
Process vents emitting organic vapors	Route process vent vapors through closed vent system to one of the following control devices: 1. Recovery control device that achieves a HAP control efficiency ≥ 95%; 2. Enclosed combustion control device that achieves a HAP control efficiency ≥ 98%, or 20 ppmv; or 3. Flare meeting EPA specifications.		Subpart SS
Bulk organic liquid transfer loading racks	Route displaced vapors from cargo tank through closed vent system to one of the following control devices: 1. Recovery control device that achieves a HAP control efficiency ≥ 95%; 2. Enclosed combustion control device that achieves a HAP control efficiency ≥ 98%, or 20 ppmv; 3. Flare meeting EPA specifications.		Subpart SS

Emission Point		Hazardous Air Pollutant Stream Control Requirements	
	Storage vessels (or tanks)	see MACT for "storage vessels" emission point bin	
Organic wastewater treatment facilities	Oil/water separators	Option 1: Use floating roof cover equipped with specified primary and secondary seals, or Option 2: Cover and vent through closed vent system to one of the following control devices: 1. Recovery control device that achieves a HAP control efficiency ≥ 95%; 2. Enclosed combustion control device that achieves HAP control efficiency ≥ 98%; or 3. Flare meeting EPA specifications.	Subpart VV Subpart SS
	Surface impoundments	Option 1: Use floating membrane cover, or Option 2: Cover and vent through closed vent system to one of the following control devices: 1. Recovery control device that achieves a HAP control efficiency ≥ 95%; 2. Enclosed combustion control device that achieves a HAP control efficiency ≥ 98%; or 3. Flare meeting EPA specifications.	Subpart QQ Subpart SS
	Individual drain system	Option 1: Install and operate covers, water seals and other required emission control equipment on drains, junction boxes, and sewer lines, or Option 2: Use hard-piping, or Option 3: Cover and vent through closed vent system to one of the following control devices: 1. Recovery control device that achieves HAP control efficiency ≥ 95%; 2. Enclosed combustion control device that achieves HAP control efficiency ≥ 98%; or 3. Flare meeting EPA specifications.	Subpart RR Subpart SS

BILLING CODE 6560-50-C

Emission Point		Hazardous Air Pollutant Stream Control Requirements	
Leaks from equipment [a] containing or contacting organic materials	Control Level 1	1. Implement leak detection and repair program for affected pumps, valves, and connectors. Monitoring all affected equipment at regular periodic interval. 2. Standards for compressors, open-ended lines, pressure relief devices, and sampling connections same as in 40 CFR 61 subpart V. 3. Alternative standards for batch processes and for equipment inside an enclosed building.	Subpart TT
	Control Level 2	1. Implement leak detection and repair program for affected pumps, valves, and connectors. Monitoring interval established by performance requirements for a maximum allowable percentage of leaking components. 2. Standards for compressors, open-ended lines, pressure relief devices, and sampling connections same as in 40 CFR 61 subpart V. 3. Alternative standards for batch processes and for equipment inside an enclosed building.	Subpart UU
Containers managing organic materials	Control Level 1	Use one of the following: 1. Container equipped with tight-fitting cover (i.e., no visible gaps, spaces, etc.); 2. Cover material in open container with vapor-suppression barrier; or 3. Container that meets U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation.	Subpart PP Subpart SS
	Control Level 2	1. Use one of the following: a. Container demonstrated to operate with no detectable emissions using Method 21; b. Container demonstrated to be leak-tight using Method 27; or c. Container that meets U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation. 2. Load material in container to minimize exposure of material to atmosphere.	
	Control Level 3	1. Directly vent container or place container in enclosure vented through closed vent system to one of the following control devices: a. Recovery control device that achieves a HAP control efficiency ≥ 95%; b. Enclosed combustion control device that achieves HAP control efficiency ≥ 98%; or c. Flare meeting EPA specifications.	

[a] Affected equipment is pumps, compressors, agitators pressure relief devices, sampling connections, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, and instrumentation systems.

Today's document proposes additional standard requirement subparts for equipment leaks (40 CFR part 63, subparts TT and UU), storage vessels (40 CFR part 63, subpart WW), and closed vent systems, control devices, recovery devices and routing to a fuel gas system or process (40 CFR part 63, subpart SS). As with the common control requirement subparts previously promulgated together with the Off Site Waste NESHAP, these subparts provide technical requirements only and do not specify applicability cutoffs or emissions reduction performance requirements. The EPA is soliciting comment on the proposed emission point-specific subparts, and closed vent system, control devices, and routing to a fuel gas system or process subpart with this proposal (see section XII.B of the preamble).

VII. Selection of MACT for Proposed Standards

The MACT selection rationale for the AMF production, HF production, PC production, and AR production source categories is presented in the following sections. The control component of MACT for the AMF production source category affected source emission points was determined based on the generic MACT approach. The control component of MACT for the HF production source category affected source emission points was determined using the EPA's traditional MACT floor approach. The control component of MACT for the AR production source category affected source emission points was determined using the EPA's traditional MACT floor approach for front end process vents from continuous unit operations, and the generic MACT approach was used for determining MACT for back end process vents from continuous unit operations, wastewater facilities, and equipment leaks. The control component of MACT for the PC production source category affected source emission points was determined using the EPA's traditional MACT floor approach for storage vessels and process vents from continuous unit operations, and the generic MACT approach was used for determining MACT for process vents from batch unit operations, wastewater facilities, and equipment leaks.

A. MACT for Acrylic and Modacrylic Fiber Production

The AMF fibers production source category consists of facilities engaged in the production of synthetic fibers composed of AN. Acrylic fibers are defined as a manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85 percent by weight of AN units. Modacrylic fibers are composed of less than 85 percent but at least 35 percent by weight of AN units. Acrylic and modacrylic fibers are used to produce textile products and some types of carbon fibers.

Four companies operate AMF production facilities in the United States. These facilities are located in Alabama, Florida, and South Carolina. Two of the AMF production facilities are part of textile manufacturing plants. The manufacture of textile products using AMF has undergone considerable contraction in the past decade (i.e., plant closings). The other two facilities are integrated with carbon fiber manufacturing plants. Carbon fiber manufacturing is a relatively new industry, having only been developed during the past decade, and appears to be an expanding industry.

The principal HAP associated with the existing AMF plants is AN. Other HAP such as dimethylformamide, cyanide compounds, vinyl chloride, vinyl bromide, vinylidine chloride, or vinyl acetate may also be present in small quantities. These HAP are typically the comonomers used in the manufacture of acrylic polymer. Some of these pollutants are considered to be known or probable human carcinogens when inhaled, and can cause irreversible toxic effects following exposure. These effects include respiratory and skin irritation, various systemic effects including damage to the liver, blood, reproductive organs, and central nervous system, and in extreme cases, death.

Acute (short-term) exposure to AN can cause low-grade anemia with elevated white blood cell counts, bluish skin color, kidney irritation, and severe burns to the skin from dermal exposure. Chronic exposure to AN can result in headaches, fatigue, nausea, and muscle weakness. AN has also been classified as a probable human carcinogen.

Acute exposure to vinyl chloride through the air can result in affects to the central nervous system such as dizziness, headaches, and giddiness. Chronic exposure to vinyl chloride through inhalation and ingestion can cause ''vinyl chloride disease,'' which is characterized by liver damage, effects on the lungs, poor circulation in the fingers, changes in the bones at the end of the fingers, thickening of the skin, and changes in the blood. Vinyl chloride is classified as a human carcinogen.

Acute exposure to vinyl acetate by inhalation leads to irritation of the eyes and upper respiratory tract. Chronic exposure to vinyl acetate through inhalation may result in respiratory irritation, cough, and hoarseness. The EPA has classified vinyl acetate as a possible human carcinogen.

The production of AMF involves polymerization reaction processes (either solution or suspension polymerization), wet or dry solvent spinning, solvent recovery, and fiber processing (such as washing, stretching, crimping, drying). The sources of HAP emissions from these operations include: (1) Storage vessels used to store AN monomer and comonomers; (2) process vents on reactors, vessels, and storage vessels used for acrylic polymerization, monomer recovery, fiber spinning, and solvent recovery operations; (3) AMF spinning lines that are sources of process fugitive emissions from spinning or fiber processing operations; (4) wastewater treatment systems used to manage the wastewater containing AN generated by the AMF production process; and (5) leaks from equipment components used to handle AN monomer and comonomers.

The EPA chose to determine MACT for AMF production facilities based on the control of pollutant streams containing AN. This pollutant is the principal HAP associated with and emitted from AMF production facilities. Other organic HAP constituents, if present, would only be associated with those pollutant streams containing AN with the exception of raw material storage. The EPA expects that control of sources emitting AN will also achieve comparable levels of control for other organic HAP emitted from AMF production facilities.

1. *AN storage vessels.* The capacities of the storage vessels associated with AMF fibers production at textile plants typically are greater than 100,000 gallons for AN monomer and 20,000 gallons for comonomers. At carbon fiber plants, use of storage vessel sizes in the range of 25,000 gallons for AN storage is typical. All of these storage vessels are used strictly for monomer or comonomer feedstock storage with no mixing, blending, or heating of the material contained in the storage vessel. During summer months under typical AN storage conditions at the existing facilities, the maximum vapor pressure of AN can exceed 20 kPa.

The characteristics of storage vessels used in the AMF industry are not unique. The AN storage vessel capacities and vapor pressures are similar to storage vessel characteristics for which the EPA has already determined MACT to be the level of control that would be achieved by applying Control Level 2 storage vessel

common control requirements (described in section VI of this notice). Because of these similarities, the EPA concluded that the Control Level 2 storage vessel common control requirements are appropriate to use as MACT for AN storage vessels at AMF production facilities (see Docket No. A–97–17, Item No. II-B–8).

2. *AN process vents.* At AMF production plants there are a number of process vent streams containing AN. Within suspension polymerization and fiber production, there are two general process vent types: (1) vents associated with the monomer recovery system (i.e., the vacuum flash vent or the slurry stripper condenser vent), and (2) vents associated with polymer filtering, dewatering, and drying operations (i.e., the vacuum pump filter vents and the polymer dryer exhausts). Solvent recovery operations utilizing distillation operations have associated process vents, typically the condenser exhaust. Some polymerization reactors have vents which are potential organic HAP emission points.

The properties of the continuous process vent streams containing AN are similar to the process stream characteristics for which the EPA has already determined MACT to be the level of control that would be achieved by applying the process vent common control requirements described in section V.D of today's notice. Because of these similarities, the EPA concluded that the process vent common control requirements are appropriate to use as MACT for process vents on equipment used for acrylic polymerization, monomer recovery, fiber spinning, and solvent recovery operations at AMF production facilities. (see Docket No. A–97–17, Item No. II-B–8).

3. *AN fiber spinning lines.* During the spinning process, unreacted monomer and the organic solvent used to dissolve the polymer are volatilized into room air and vented to the atmosphere. Major process fugitive emission points include the filtering, spinning, washing, drying, and crimping steps.

The EPA considered several alternative control approaches as MACT for the fiber spinning lines. Emissions of AN from a fiber spinning line could be controlled by capture and subsequent routing to an incinerator. One option is to require an overall reduction of AN emissions without specifying an individual capture efficiency and/or control device performance level. A second option is to specify both capture efficiency and control device performance level. Both of these options require an enclosure over the spinning and washing areas of the spinning line and venting the enclosure to an appropriate control device. This is the technical basis for the acrylic and modacrylic fiber new source performance standards (NSPS) in 40 CFR 60, subpart HHH. However, while technically feasible, some owners and operators would prefer not to enclose their fiber spinning lines. Therefore, a third option is to use process modifications to reduce the amount of residual AN monomer available for volatilization during spinning operations. Considerable efforts have been made on the part of some plants to significantly reduce the amount of residual AN monomer in the fiber spinning solution. By reducing the AN content prior to spinning and fiber processing, this source reduction technique reduces the amount of AN that is ultimately volatilized into the room air and emitted to the atmosphere. The alternative to this is to not enclose the spinning lines and to vent the very low concentration AN exhaust air to a control device that is capable of adequately handling the high volume, low concentration gas stream.

The properties of the spinning line exhaust streams containing AN are similar to the process vent stream characteristics for which the EPA has already determined MACT to be the level of control that is achieved by applying the process vent common control requirements (described in section V.D of this notice). Because of these similarities, the EPA concluded that MACT for fiber spinning lines using a spinning solution or spin dope having a total organic HAP concentration equal to or greater than 100 ppmw is use of an enclosure around the spinning and washing areas of the spinning line and venting of the enclosure to an appropriate control device to achieve an overall AN emission reduction greater than or equal to 85 percent by weight (see Docket No. A–97–17, Item No. II–B–8). This value is based on the assumption that the enclosure achieves a minimum capture efficiency of 90 percent by weight and the captured vapor stream is routed to an organic recovery or destruction control device that achieves a total HAP reduction of 95 percent by weight or greater. The alternative means of emission limitation option allows owners or operators the flexibility to establish an alternative (e.g., a maximum limit on the AN content of the spinning monomer which would provide a comparable level of AN emission control) to enclosing their spinning lines and venting to a control device.

4. *AN wastewater facilities.* At the acrylic and modacrylic textile fiber plants, significant quantities of wastewater containing AN are generated (i.e., millions of gallons per day). Major points of wastewater generation are the polymer washing, filtering, and dewatering steps and the monomer recovery unit separation storage vessels. All of these emission sources are associated with the suspension polymerization process. Solution polymerization does not generate comparable quantities of wastewater because there are no slurry stripping and polymer washing steps. Potential emission points related to wastewater treatment, storage, and collection include the individual drain systems, open surface impoundments (equalization basin), bio-treatment units, and wastewater filter system.

The AN concentration, flow rates and other properties of the wastewater streams containing AN from acrylic or modacrylic fiber production processes are similar to the wastewater streams containing organic HAP in other source categories for which the EPA has already determined MACT to be the level of control that is achieved by applying the wastewater treatment facility common control requirements described in section VI of this preamble. Because of these similarities, the EPA concluded that the wastewater treatment facility common control requirements are appropriate to use as MACT for wastewater treatment systems used to manage the wastewater containing AN generated by the acrylic or modacrylic fiber production process (see Docket No. A–97–17, Item No. II–B–8).

5. *AN equipment leaks.* Fugitive AN emissions from equipment leaks (e.g., pump shafts and valve stems) also occur during production of AMF. The equipment components and the properties of the AN equipment leak emissions are similar to the equipment component characteristics in other source categories for which the EPA has already determined MACT to be the level of control that is achieved by applying the equipment leak common control requirements described in section V.D of this preamble. Because of these similarities, the EPA concluded that the equipment leak common control requirements under 40 CFR part 63, subparts TT or UU are appropriate to use as MACT for leaks from equipment components used to handle AN monomer and comonomers at AMF production facilities (see Docket No. A–97–17, Item No. II–B–8).

B. MACT for Hydrogen Fluoride Production

The HF production source category consists of facilities engaged in the production and recovery of HF by reacting calcium fluoride with sulfuric acid. Three companies own HF production facilities in the United States. These facilities are located in Kentucky, Louisiana, and Texas. Currently, two of the facilities are producing HF and the third facility (in Kentucky) is temporarily shutdown but may resume production in the future.

The only HAP emitted from the process is HF. Exposure to HF can cause injury through inhalation, direct contact, or ingestion. Acute exposure to HF will result in irritation, burns, ulcerous lesions, and localized destruction of the tissues (necrosis) of the eyes, skin, and mucous membranes.

The potential sources of HF emissions at these facilities are: 1) process vents on HF recovery and refining equipment, 2) storage vessels used to store HF, 3) bulk loading of tank trucks and tank rail cars, 4) leaks from HF handling equipment, and 5) reaction kiln seal leaks.

Owners and operators of HF production facilities have strong worker safety and economic incentives to prevent or control HF emissions from these sources. At all facilities, comprehensive worker safety programs are implemented to prevent any exposure of plant personnel to HF because even mild exposure to HF vapor can cause eye and respiratory system irritation. Furthermore, prevention of HF losses provides increased revenue from maximizing the recovery of a salable product and cost savings from minimizing the damage to process equipment due to HF corrosion. Consequently, all of the HF production facilities in the United States currently are well controlled for HF emissions, and MACT is inherently defined by these air emission control measures.

The MACT for this source category was selected for each type of emission point by identifying the best emission control currently used in the industry, obviating the need for any floor determination. In addition, the EPA knows of no other air emission control measures in the industry or alternative HF production processes that would result in lower HF emissions, and thus other alternatives were not considered.

1. *Hydrogen fluoride process vents.* At all three existing facilities, refrigerated condensers and caustic scrubbers are used to remove HF from the reaction kiln overhead gas stream as part of the crude HF recovery and refining operations. The HF gases exhausted from process vents on HF recovery and refining equipment are routed to wet scrubbers. Because HF is very water soluble, HF gases are effectively controlled by scrubbing. Each of the existing wet scrubbers achieves an HF emission reduction of at least 99 percent. Therefore, the EPA selected MACT for process vents to be the routing of the HF gases exhausted from process vents on HF recovery and refining equipment to a wet scrubber achieving a HF removal efficiency of 99 percent or more.

2. *Hydrogen fluoride storage vessels.* Storage vessels used to store HF are currently controlled for HF emissions at all three existing facilities. At two of these facilities, HF gases from the storage vessels are routed to either the same or identical wet scrubbers that are used to control the process vent emissions. At the third plant, the storage vessels are equipped with pressure relief devices vented to a wet scrubber that achieves an HF emission reduction of at least 80 percent. The EPA selected MACT for storage vessels to be venting of each storage vessel to a wet scrubber achieving a HF removal efficiency of 99 percent or more.

3. *Hydrogen fluoride product bulk transfer racks.* The HF is shipped from each facility either in bulk tank trucks or tank rail cars. At each facility HF emissions from transfer loading racks to rail cars and tank trucks are vented to either the wet scrubber used to control storage vessel emissions or to the wet scrubber used to control process vent emissions. At the completion of the loading process, the loading line is purged with nitrogen either back to the wet scrubber or into the loaded cargo storage vessel. Consequently, there are no fugitive HF emissions when the loading line is disconnected. The EPA selected MACT for HF product bulking transfer loading racks to be venting HF emissions during loading to a wet scrubber achieving a HF removal efficiency of 99 percent or more.

4. *Hydrogen fluoride equipment leaks.* Unlike leaks of organic vapors, even very small HF leaks from equipment are readily visible (a leak produces a visible white plume or corrosion at the leakage point). Furthermore, there are strong incentives to detect and repair leaks (to prevent the loss of valuable product, prevent corrosion, and avoid personnel exposure), the workers at each plant are attentive to preventing equipment leaks. Upon detection of a HF leak, the leak is repaired as soon as possible. Each plant has frequent visual inspection procedures in place. The EPA selected MACT to be implementation of a visual and olfactory LDAR program that entails inspection each working shift. If a leak is found, repair or component replacement must be initiated within 1 hour, and completed as soon as possible, but no later than within 15 days. Equipment containing or contacting any HF is affected.

5. *Kiln seals.* During normal operation, HF reaction kilns are maintained under negative pressure and there are no HF emissions through the kiln seals. The primary purpose of the seals is to prevent infiltration of air and water to the process. Any HF emissions from the kiln seals only occur during process upsets when back pressure builds. In the event of a back pressure excursion, the kiln seal emissions at two of the facilities are vented to an emergency wet scrubber system. In addition, standard operating practice at all of the facilities is to immediately shut down kiln operations when a back pressure excursion occurs. Based on the ability of other wet scrubbers in these facilities to achieve 99 percent reduction efficiency, the EPA has selected MACT to be venting kiln seal emissions to a wet scrubber that can achieve at least a 99 percent HF removal efficiency, and immediate shutdown of kiln operations during a back pressure event. It should be noted that neither facility has experienced a back pressure event since the emergency systems were installed because of improvements in operating procedures.

To provide flexibility to owners and operators, the EPA allows an owner or operator to request an alternative means of emission limitation (e.g., use of leakless seals, emergency vacuum boost system). The use of leakless seals or an emergency vacuum boost system could provide 100 percent control of kiln HF emissions, however, neither of these leak prevention technologies have been demonstrated in the industry.

C. MACT for Polycarbonates Production

The PC production source category consists of facilities engaged in the production of a special class of polyester formed from dihydroxy compound and carbonate diester or by ester interchange. Polycarbonates commonly are produced by solution or emulsion polymerization, although other methods may be used. All PC production in the United States is currently based on the polymerization reaction of bisphenols with phosgene in the presence of catalysts and other additives. Methylene chloride is used as the solvent in this polymerization process.

All phosgene used as a feedstock for PC production is produced onsite to reduce potential hazards associated with transporting and storing this material. The phosgene is fed directly from dedicated phosgene production equipment to PC polymerization process equipment. Consequently, phosgene production is integrated with PC production; the production of one cannot occur without the other process operating. Since dedicated phosgene production units are integral to the PC production process, the EPA considers such phosgene production units to be part of the PC production source category. Phosgene production units that are not dedicated to PC production are subject to 40 CFR part 63, subpart F, National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry.

Three companies operate five PC production plants in the United States. These facilities are located in Alabama, Massachusetts, Indiana, and Texas. Four of these facilities produce PC resin. The fifth plant produces a family of PC polysiloxane copolymers.

The principal HAP associated with PC production facilities are phosgene and methlylene chloride. Phosgene is a highly toxic material which can cause adverse health effects from both acute (short-term) and chronic (long-term) exposure. Acute exposure by inhalation of phosgene may result in pulmonary edema, pulmonary emphysema, and death. Other symptoms include choking, chest constriction, coughing, painful breathing, and bloody sputum. Acute phosgene poisoning may also adversely affect the brain, heart, and blood. Chronic exposure to phosgene through inhalation may cause emphysema and pulmonary fibrosis. Due to lack of animal and human data, the EPA has been unable to classify phosgene as a human carcinogen. Acute exposure to high levels of methylene chloride affects the central nervous system and can impair vision and hearing. These effects are reversible once exposure ceases. Chronic methylene chloride exposure adversely affects the central nervous system and causes headaches, dizziness, nausea, and memory loss. The EPA has classified methylene chloride as a probable human carcinogen. Other HAP may be present in catalysts, solvents, and polymer washing agents used for the process.

Polycarbonates are produced using continuous and batch processes. At the four plants producing PC resin, reactors operate either as a continuous process or by sequentially operating multiple batch reactors such that at least one reactor is always producing PC resin. At the plant producing PC polysiloxanes copolymers, reactors are operated on an intermittent batch basis.

To minimize the potential for an accidental release of phosgene to the atmosphere, the phosgene production process at existing facilities is well controlled. All phosgene production equipment is located inside enclosures which are maintained at a slightly negative pressure. Air vented from the enclosures is routed to a caustic scrubber to control and neutralize any phosgene which may have been released from equipment leaks inside an enclosure.

The sources of HAP emissions from PC production process are: (1) Storage vessels used to store methlylene chloride and other organic solvents; (2) process vents on polymerization, polymer solution purification, and solvent recovery equipment; and (3) wastewater treatment systems used to manage the wastewater containing HAP generated by the polycarbonate process; and (4) equipment leaks.

1. *Polycarbonate solvent storage vessels.* The storage vessels associated with PC production are primarily used for storage of methylene chloride and other solvents. Under typical storage conditions at the existing facilities, the vapor pressure of the solvents stored in the storage vessels range from approximately 2 kPa to more than 90 kPa.

The EPA had sufficient information to determine a MACT floor and evaluate the technological and economic feasibility of options more stringent than the floor when determining MACT (for both the applicability and control components) for solvent storage vessels at PC production facilities. Based on the EPA's analysis, it was determined that MACT for solvent storage vessels at PC production facilities reflected the level of control required under the HON.

2. *Polycarbonate process vents (from continuous and batch unit operations).* Polycarbonate production facilities reduce their emissions from continuous and batch process vents using both control and recovery device systems. The EPA determined that MACT was the MACT floor for continuous process vents at PC production facilities. The EPA established the proposed MACT for process vents based on the level of control present after recovery.

The EPA used data on HAP flow and air flow emission rates obtained during the development of the HON, and combustion total resource effectiveness (TRE) indices for PC streams. The HON total resource effectiveness TRE equation and coefficients were used to calculate TRE indices for use as applicability criteria. TRE indices are indicators of the cost-effectiveness of controlling a gas stream; the higher the index, the higher the cost of controlling the stream. The proposed MACT for continuous process vents would require that all existing vents with TRE indices less than or equal to 2.7 be controlled to 98 percent or greater. For new sources, the proposed MACT would require vents with TRE indices less than or equal to 9.6 be controlled to 98 percent or greater.

Insufficient data was available to do a MACT floor analysis for batch process vents. Therefore, for batch process vents, the EPA is proposing that if a batch process vent emits organic HAP emissions greater than 225 kg/yr, an owner or operator needs to apply MACT. The proposed MACT for batch process vents is to control HAP emissions from each batch process vent for the batch cycle by 90 weight percent using a control device. This proposal is consistent with what was promulgated for the polymer and resins I and IV NESHAP source categories. (Docket No. A–97–17), Item No. II–B–8). These standards have been challenged in litigation. In the event that the EPA makes or is directed to make any changes in these standards in connection with that litigation prior to promulgation of this standard, the EPA will evaluate the appropriateness of making conforming changes in the PC standard.

3. *Polycarbonate wastewater facilities.* Existing polycarbonate production facilities typically strip their wastewater streams and either recover or destroy the stripped organics. Potential emission points related to wastewater treatment, storage, and collection include the individual drain systems, open surface impoundments (equalization basin), bio-treatment units, and wastewater filter systems.

The HAP concentration, flow rates and other properties of the wastewater streams containing HAP from PC production processes are similar to the wastewater streams containing organic HAP in other source categories for which the EPA has already determined MACT to be the level of control that is achieved by applying the wastewater treatment facility common control requirements described in section VI of this preamble. Because of these similarities, the EPA concluded that the wastewater treatment facility common control requirements are appropriate to use as MACT for wastewater treatment systems used to manage the wastewater

containing HAP generated by the PC production process.

4. *Polycarbonates equipment leaks.* Fugitive HAP emissions from equipment leaks (e.g., pump shafts and valve stems) also occur during production of PC. The properties of these HAP equipment leak emissions are similar to the equipment component characteristics in other source categories for which the EPA has already determined MACT to be the level of control that is achieved by applying the equipment leak common control requirements described in section VI of this preamble. Because of these similarities, the EPA concluded that the equipment leak common control requirements under 40 CFR part 63, subparts TT or UU are appropriate to use as MACT for leaks from equipment components used to handle HAP at polycarbonate production facilities (see Docket No. A–97–17, Item No. II–B–8).

D. MACT for Acetal Resins Production.

The AR production source category consists of facilities engaged in the manufacture of homopolymers and/or copolymers of alternating oxymethylene units. Three companies operate three facilities in the United States that produce AR. These facilities are located in Texas, Alabama, and West Virginia. Two of the AR production facilities produce an acetal copolymer and one facility produces an acetal homopolymer. Acetal resins are produced in a continuous process.

Acetal copolymers are formed by the polymerization of trioxane, which is formed by the trimerization of formaldehyde, with a copolymer, which is typically a cyclic ether such as ethylene oxide. Acetal homopolymers are formed by reacting anhydrous formaldehyde to form a polymer. Trioxane is manufactured in a separate unit by the trimerization of formaldehyde. The trioxane is then stored in storage vessels until needed for the resins production process. All trioxane is produced on site at acetal resins plants. The production of trioxane is not being regulated by this action because it is covered under another rulemaking. Homopolymers use anhydrous formaldehyde which means a formaldehyde-water solution from which the water has been removed. For the homopolymers process, aqueous formaldehyde is stored in a feedstock storage vessel. The formaldehyde-water solution is then drawn into the process as needed. Prior to being sent to the reactor the water is removed in a separate process unit. Process vents from this process unit are referred to as front end process vents while all other acetal resin production process vents are referred to as back end process vents.

The principal HAP associated with the existing AR plants include formaldehyde and ethylene oxide. Both acute (short-term) and chronic (long-term) exposure of humans to formaldehyde irritates the eyes, nose, and throat and may cause coughing, chest pains, and bronchitis. The EPA has classified formaldehyde as a probable human carcinogen. Methanol also exhibits acute and chronic health effects. Acute effects include visual disturbances such as blurred or dimmed vision. Neurological damage, specifically motor dysfunction may also result. Chronic effects from inhalation or oral exposure may result in conjunctivitis, headache, giddiness, insomnia, gastric disturbances, and blindness. The EPA has not classified methanol with respect to carcinogenicity.

1. *Acetal resins storage vessels.* The storage vessels associated with AR production are primarily used for storage of solvents. Under typical storage conditions at the existing facilities, the vapor pressure of the reactants and solvents stored in the storage vessels range from approximately 8 kPa to more than 50 kPa.

The AR storage vessel capacities and HAP type (i.e., organic HAP) are similar to storage vessel characteristics for which the EPA has already determined MACT to be the level of control that would be achieved by applying the Control Level 2 storage vessel common control requirements under 40 CFR part 63, subpart WW. Because of these similarities, the EPA concluded that the Control Level 2 storage vessel common control requirements are appropriate to use as MACT for solvent storage vessels at AR production facilities. The vapor pressure applicability cutoffs were determined based on the average vapor pressure of solvents stored for existing controlled facilities. The cutoffs are much higher than for the Hazardous Organic NESHAP due to the lower volatility of chemicals being stored (see Docket No. A–97–17, Item No. II–B–8).

2. *Acetal resins process vents. Front end process vents.* The homopolymer process utilizes a unique step not found in the copolymer process. This step is the purification of formaldehyde for use as a feedstock. The copolymer process uses trioxane that is produced from formaldehyde in a separate unit. The tioxane process would not be regulated by this action. Because the purification step is unique to the copolymer process and results in different emission characteristics than the homopolymer processes, an emission plank for front end process vents was developed. Front end process vents are limited to those vents that (1) occur prior to the polymer reactor, and (2) are used to produce purified formaldehyde for the reaction process. Emissions data indicate that all front end process vents are controlled at 60 percent HAP reduction by weight. Therefore, the MACT floor for front end process vents is 60 percent reduction by weight in HAP. Since all process vents are controlled there is no applicability cutoff.

Back end process vents. Back end process vents can be defined as any process vent that is not a front end process vent. Back end process vent emissions occur from reactor units, mixing vessels, solvent recovery operations, and other operations. All three facilities surveyed by the EPA used scrubbers to recover methanol and formaldehyde from emission streams. The majority of the recovered monomer is recycled back to the process. One facility uses an incinerator that is 98 percent effective to control back end process vent streams after the streams have been sent through scrubbers being used as recovery devices. Insufficient information was available to do a rigorous analysis. Information was available to determine that all process vent emission streams are continuous and contain either methanol or formaldehyde. The vent streams in their composition are very similar to those streams regulated by the HON. Due to these similarities it was determined to use the HON total resource effectiveness equation indices for AR streams. The TRE for all process vents after recovery devices was set at 1.0 as it is in the HON. Therefore, all back end process vents with TRE index values greater than 1.0 will be required to control to 98 percent by weight or greater.

3. *Acetal resins wastewater.* Existing wastewater streams from AR resin plants contain formaldehyde and methanol. The flow rates and other properties of the wastewater streams containing HAP from existing AR production processes are similar to the wastewater streams containing organic HAP in other source categories for which the EPA has already determined MACT. Two facilities treat their wastewater by hardpiping the water to a biotreatment facility. The wastewater streams contain mostly methanol. In addition, the third facility's wastewater streams are not controlled and are composed predominately of formaldehyde. Formaldehyde is not required to be controlled in EPA wastewater provisions for similar

organic chemical processes. Because of these similarities, the EPA concluded that the wastewater treatment system facility common control requirements are appropriate to use as MACT for wastewater treatment systems used to manage the wastewater containing HAP generated by the AR production process (Docket No. A–97–17, Item No. II–B–8).

4. *Acetal resins equipment leaks.* Fugitive HAP emissions from equipment leaks also occur during the production of AR. The properties of these HAP equipment leak emissions are similar to the equipment component characteristics in other source categories for which the EPA has already determined MACT to be the level of control that is achieved by applying the equipment leak common control requirements described in section VI of this preamble. In fact, all of the existing AR production facilities already operate an LDAR program similar to those prescribed by the equipment leak common control requirements. Because of these similarities, the EPA is proposing that the equipment leak common control requirements under 40 CFR part 63, subparts TT or UU are appropriate to use as MACT for leaks from equipment components used to handle HAP at AR facilities (see Docket No. A–97–17, Item No. II–B–8).

VII. Selection of Format

Section 112(d) of the Act requires that emission standards for control of HAP be prescribed unless, in the judgement of the Administrator, it is not feasible to prescribe or enforce emission standards. Section 112(h) identifies two conditions under which it is not considered feasible to prescribe or enforce emission standards. These conditions include: (1) If the HAP cannot be emitted through a conveyance device, or (2) if the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations. If emission standards are not feasible to prescribe or enforce, then the Administrator may instead promulgate equipment, work practice, design or operational standards, or a combination thereof.

Formats for emission standards include (1) percent reduction, (2) concentration limits, or (3) a mass emission limit. In some instances, adoption of an emission standard may be feasible for certain sources within a category or subcategory and not for other sources within the same category or subcategory. In such cases, the EPA may adopt both an emission standard and an alternative equipment, design, work practice, or operational standard, but only one type of standard will apply to a given source depending on the nature and configuration of that source. The proposed generic MACT standards for equipment leaks, process vents and transfer from continuous unit operations, and storage vessels, and transfer racks consist of a combination of (1) emission standards, and (2) equipment, design, work practice, and operational requirements consistent with requirements promulgated for similar emission points and emission characteristics (i.e., similar emission points and emission characteristics to that of the Hazardous Organic NESHAP (57 FR 62608, December 31, 1992), or Off-Site Waste NESHAP (59 FR 51913, October 13, 1994).

Selection of Format for Process Vents From Continuous Unit Operations

The format chosen for process vent streams is dependent on the control method chosen. For vent streams controlled by control devices other than flares, the format is a combination of a weight-percent reduction and an outlet concentration. A weight-percent reduction format is appropriate for streams with HAP concentrations above 1000 ppmv because such a format ensures that the stream will meet the weight-percent reduction. For process vents with concentrations below 1000 parts per million by volume, a 20 ppmv outlet concentration was selected because a weight-percent reduction may not be achievable (57 FR 62608, December 31, 1992).

The combustion of vent streams containing halogenated organic compounds can produce emissions of halogens and hydrogen halides, some of which are HAP's, such as hydrogen chloride, chlorine, and hydrogen fluoride. To reduce these emissions, the proposed standards required the use of a scrubber after the combustion device for halogenated process vent streams. The format of the standard for such scrubbers is a percent reduction or outlet concentration of those halogens and hydrogen halides that can be measured using the EPA Method 26 or 26A. A percent reduction format ensures that most streams will meet the MACT requirements. However, an alternative outlet concentration level is needed for low concentration streams where the specified percent reduction would result in outlet levels too low to measure.

For vent streams controlled by a flare, the proposal includes equipment and operating specifications because it is very difficult to measure the emissions from a flare to determine its efficiency.

Selection of Format for Storage Vessel Provisions

The storage vessel provisions require control by (1) tank improvements (internal or external roofs with proper seals and fittings) or (2) a closed vent system and control device depending on the type of storage vessel. The format for the storage vessel provisions is dependent on the type of storage vessel and control methodology selected. For storage vessels controlled with internal or external floating roofs, the format is a combination of design, equipment, work practice, and operational standards. This format is the only practicable control strategy compatible with these type of storage vessels. Other control strategies are available but require the conversion of the storage vessel to another type of vessel. The EPA chose not to propose an emission limit format for all types of storage vessels because that would require equipping non-fixed roof storage vessels with a capture system, which would be cost-prohibitive (57 FR 62608, December 31, 1992).

The design requirements for vessels controlled with vessel improvements are specified in subpart WW of this part. Additional operational and work practice requirements, which consist of inspection and repair requirements are also specified to ensure the continued integrity of the control equipment.

For vessels controlled by a closed vent system and control device, the EPA is proposing a design and equipment format. This format accounts for the wide variation in emissions and flow rates being vented from the vessel, and requires that the closed vent system and control device meet a specified weight-percent requirement. The closed vent system must be capable of collecting HAP vapors and gases discharged from the storage vessel. The control device must reduce the HAP emissions discharged into it at a specified efficiency for the source category and must be operated to achieve the specified level of emission reduction. Operational requirements, which consist of, among other things, inspection, repair, and work practice requirements, are necessary to ensure the proper operation and integrity of control equipment meeting a design and equipment standard.

Selection of Format for Wastewater Management Units Provisions

The provisions for controlling air emissions from wastewater streams are a combination of equipment, operational, work practice, and emission standards. It was determined

that a numerical standard would not be feasible because it would be difficult to capture and measure emissions from wastewater management units for the purpose of evaluating compliance (59 FR 51913, October 13, 1994).

Selection of Format for Equipment Leaks

The provisions of subparts TT and UU of this part for controlling emissions from equipment leaks are in the format of work practice and equipment specifications. It was determined that it is not feasible to prescribe or enforce emission standards because emissions cannot be emitted through a conveyance device and the application of a measurement methodology is not practicable due to technological or economic limitations (57 FR 62608, December 31, 1992).

VIII. Selection of Test Methods and Procedures

Test methods and procedures specified in the proposed standards would be used to demonstrate compliance. Procedures and methods included in the proposed standards are, where appropriate, based on procedures and methods previously developed by the EPA for use in implementing standards for sources similar to those being proposed for regulation today.

IX. Selection of Monitoring, Inspection, Recordkeeping and Reporting Requirements

Monitoring, inspection, recordkeeping, and reporting requirements specified in the proposed standards would be used to assure and document compliance with the proposed standards. Monitoring, inspection, recordkeeping and reporting requirements included in the proposed standards are, where appropriate, based on monitoring, inspection, recordkeeping and reporting requirements previously developed by the EPA for use in implementing standards for sources similar to those being proposed for regulation today.

Additionally, the generic MACT standards subpart cross-references §§ 63.1 through 63.5, and §§ 63.12 through 63.15 of the General Provisions for this part, and has pulled some of the regulatory text contained in §§ 63.6 through 63.11 into the rule. The General Provisions have been challenged in litigation. In the event that the EPA makes or is directed to make any changes in these standards in connection with that litigation prior to promulgation of the standard, the EPA will evaluate the appropriateness of making conforming changes in the Generic MACT Standards subpart. The EPA has also recently published a direct final notice to amend the General Provisions flare specifications by adding specifications for hydrogen-fueled flares (63 FR 24436). It is the EPA's intent to add these changes in specifications (once finalized) to the proposed flare specifications of 40 CFR part 63, subpart SS (Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process) at promulgation.

X. Relationship to other Standards and Programs Under the Act

A. Relationship to the Part 70 and Part 71 Permit Programs

Under title V of the Act, the EPA established a permitting program (part 70 and part 71 permitting program) that requires all owners and operators of HAP-emitting sources to obtain an operating permit (57 FR 32251, July 21, 1992). Sources subject (i.e., affected sources subject to the generic MACT standards) to the permitting program are required to submit complete permit applications within a year after a State program is approved by the EPA or, where a State program is not approved, within a year after a program is promulgated by the EPA. If the State where the facility is located does not have an approved permitting program, the owner or operator of a facility must submit the application to the EPA Regional Office in accordance with the requirements of the part 63 General Provisions (40 CFR 63 subpart A).

B. Overlapping Federal Regulations

The EPA recognizes that the potential exists for regulatory overlap between the proposed air emission standards and other standards developed under the Act. Therefore, the EPA has clarified the applicability of requirements under subpart YY as it relates to other NSPS and parts 61 and 63 NESHAP that apply to the same source in the applicability section of the rule.

XI. Solicitation of Comments

Comments are specifically requested on several aspects of the proposed standards. These topics are summarized below.

A. Proposed Generic MACT Approach

The EPA is proposing use of an alternative methodology for determining MACT and MACT floor compliance in appropriate instances where a source category has five or fewer sources and the sources in question are demonstrably similar to larger groups of sources regulated in prior MACT standards. Under this approach, individual source categories will be assimilated into a generic MACT structure and control requirements for the source category will be established by utilizing common control requirements established for particular types of emission points. EPA believes that this approach will conserve resources, encourage consistency and uniformity in standard setting, and assure conformity to applicable statutory requirements. (See section III. of this preamble for the basis for and summary of the EPA's proposed generic MACT approach). The EPA solicits comment on the feasibility and legality of the proposed generic MACT approach. EPA requests that, if any commenter asserts that this approach is unreasonable, the commenter provide specific examples where the proposed approach would yield an unacceptable outcome.

B. Emission Point General Control Requirement Subparts

The EPA promulgated air emission control requirements for selected emission points (i.e., containers, surface impoundments, oil-water separators and organic-water separators, tanks, individual drain systems) in individual subparts with the Off Site Waste and Recovery NESHAP.

Today's notice proposes additional air emission control requirement subparts for equipment leaks (40 CFR part 63, subparts TT and UU), storage vessels (40 CFR part 63, subpart WW), and closed vent systems and control and recovery devices (40 CFR part 63, subpart SS)(see section VI. Emission Point Common Control Requirements of today's notice for a description of, and rationale for, the proposed common control requirements). The EPA is soliciting comment on these emission point-specific subparts with this proposal. Specifically, the EPA soliciting comment on their content and application usefulness for source categories with similar emission points and emission characteristics.

XII. Administrative Requirements

A. Public Hearing

A public hearing will be held, if requested, to discuss the proposed standard in accordance with section 307(d)(5) of the Act. Persons wishing to make oral presentation on the proposed standards for AR production, AMF production, HF production, or PC production; the proposed alternative MACT determination approach for source categories with a limited population of major sources; or the reference control requirement subparts

(i.e., subparts SS, TT, UU, WW) for closed vent systems, control devices, recovery devices and routing to a fuel gas system or process, control levels 1 and 2 for equipment leaks, and storage vessels; should contact the EPA at the address given in the ADDRESSES section of this preamble. Oral presentations will be limited to 15 minutes each. If a hearing is held, interested persons may submit their statements in a written form, and the record will remain open for 30 days following the hearing for submission of rebuttal or supplementary information. Written statements should be addressed to the Air Docket Section address given in the **ADDRESSES** section of this preamble and should refer to Docket No. A–97–17.

A verbatim transcript of the hearing and written statements will be available for public inspection and copying during normal working hours at EPA's Air Docket Section in Washington, DC (see **ADDRESSES** section of this preamble).

B. Docket

The docket is an organized file of basic underlying information utilized by the EPA, and all comments and other information submitted to the EPA, during the rulemaking process. The principal purposes of the docket are:

1. To allow interested parties to readily identify and locate basic underlying documents so that they can intelligently and effectively participate in the rulemaking process; and

2. To serve as the record in case of judicial review (except for interagency review materials (section 307(d)(7)(A)).

The docket for today's proposed standards is A–97–17. Dockets established for each of the source categories with proposed standards with this proposal include the following: (1) AR production (Docket No. A–97–19); AMF production (Docket No. A–97–18); HF production (Docket No. A–97–x); and PC production (Docket No. A–97–16). The source category-specific dockets contain source category-specific supporting information and are cross referenced in the generic MACT standards docket (Docket No. A–97–17).

The docket contains copies of proposed regulatory text, and technical memoranda documenting the information considered by the EPA in the development of the proposed standards. The docket is available for public inspection at the EPA's Air and Radiation Docket and Information Center, the location of which is given in the **ADDRESSES** section of this notice.

C. Executive Order 12866

Under Executive Order (EO) 12866, [58 FR 51735 (October 4, 1993)] the EPA must submit significant regulatory actions to the Office of Management and Budget (OMB) for review. The EO defines ''significant regulatory action'' as one that OMB determines is likely to result in a rule that may:

(1) Have an annual effect of the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

In this instance, the OMB has agreed that the EPA need not submit this proposal for review under EO 12286.

D. Enhancing the Intergovernmental Partnership Under Executive Order 12875

In compliance with EO 12875, the EPA has involved State governments in the development of this rule. Although this proposal does not impose requirements on State, local, or tribal governments, these entities will be required to implement the rule by incorporating the rule into permits and enforcing the rule upon delegation. They will collect permit fees that will be used to offset the resource burden of implementing the rule.

Representatives of State governments are members of the MACT partnerships that were consulted during the development of the proposed standards for the AR production, AMF production, HF production, and PC production source categories. Partnership groups were consulted throughout the development of the proposed standards. In addition, all State, local, and tribal governments and other representatives are encouraged to comment on the proposed standards during the public comment period, and the EPA intends to fully consider these comments in the development of the final standards.

E. Paperwork Reduction Act

The information collection requirements in these proposed rules have been submitted for approval to the OMB under the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* An information Collection Request (ICR) document has been prepared by the EPA (ICR No. 1871.01 and copies may be obtained from Sandy Farmer, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M Street, SW; Washington, DC 20460 or by calling (202) 260–2740.

Information is required to ensure compliance with the provisions of the proposed standards. If the relevant information were collected less frequently, the EPA would not be reasonably assured that a source is in compliance with the proposed standards. In addition, the EPA's authority to take administrative action would be reduced significantly.

The proposed standards would require owners or operators of affected sources to retain records for a period of 5 years. The 5 year retention period is consistent with the provisions of the General Provisions of 40 CFR Part 63, and with the 5 year record retention requirement in the operating permit program under title V of the Act.

All information submitted to the EPA for which a claim of confidentiality is made will be safeguarded according to the EPA policies set forth in title 40, chapter 1, part 2, subpart B, Confidentiality of Business Information. See 40 CFR 2; 41 FR 36902, September 1, 1976; amended by 43 FR 3999, September 8, 1978; 43 FR 42251, September 28, 1978; and 44 FR 17674, March 23, 1979. Even where the EPA has determined that data received in response to an ICR is eligible for confidential treatment under 40 CFR part 2, subpart B, the EPA may nonetheless disclose the information if it is relevant in any proceeding: under the statute (42 U.S.C. 7414 (C); 40 CFR 2.301 (g). This information collection complies with the Privacy Act of 1974 and Office of Management and Budget (OMB) Circular 108.

The estimated annual average hour and annual average cost burden per respondent for the proposed standards for the AR production, AMF production, HF production, and PC production source categories are presented in table 2.

TABLE 2.—Estimated Annual Average Hour and Cost Burden per Respondent [a]

Source category	Annual average hours	Annual average cost ($)
AR Production ...	1,300	55,500
AMF Production	1,900	83,200

TABLE 2.—Estimated Annual Average Hour and Cost Burden per Respondent [a]—Continued

Source category	Annual average hours	Annual average cost ($)
HF Production ...	310	13,200
PC Production ...	3,200	138,600
Total	6,710	290,500

[a] Burden hour and cost estimates are aggregated for the affected sources and averaged over the first 3 years of the rule.

The EPA projects that a maximum of 50 sources will be assimilated under the generic MACT standards. Assuming a future-looking burden scenario (i.e., the burden associated with the monitoring, recordkeeping, and reporting requirements for the PC production source category), the estimated annual average hour and annual average cost burden for the generic MACT standards inclusive of all source categories that could be assimilated in the future would be 32,300 and $1.4 million, respectively. Note that these burden estimates reflect a maximum future-looking burden scenario and would be spread over a minimum of 10 source categories with 5 or fewer facilities or respondents. The burden for a source category with 5 facilities or respondents would be an estimated 3,230 hours and $140 thousand per year. The burden per facility or respondent would be an estimated 646 hours and $28 thousand per year.

The future-looking burden estimates assume that reports are required on a semi-annual and annual basis (depending on the reports) and as required, as in the case of startup, shutdown, and malfunction reports. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

Comments are requested on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICRs to the Director, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M Street, SW; Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number(s) in any correspondence. Since OMB is required to make a decision concerning the ICR's between 30 and 60 days after October 14, 1998, a comment to OMB is best assured of having its full effect if OMB receives it by November 13, 1998. The final standards will respond to any OMB or public comments on the information collection requirements contained in this proposal.

F. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment on rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. This proposed rule would not have a significant impact on a substantial number of small entities because it would only apply to source categories with 5 or fewer major sources. Therefore, the EPA certifies that today's action would not have a significant economic impact on a substantial number of small entities. Thus, the Agency did not prepare an initial regulatory flexibility analysis (IRFA).

Although the statute does not require the EPA to prepare an IRFA because the Administrator is certifying that the rule will not have a significant economic impact on a substantial number of small entities, the EPA did undertake a limited assessment of possible outcomes and the economic effect of these on small entities as part of the economic analysis conducted for each of the source categories for which standards are being proposed with today's notice. The economic analysis for each of the source categories for which standards are being proposed can be obtained from the source category-specific dockets established for each of the source categories (see *Docket* in **ADDRESSES** section for individual docket numbers).

G. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA), P.L. 104–4, requires that the EPA prepare a budgetary impact statement before promulgating a rule that includes a Federal mandate that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Section 203 requires the EPA to establish a plan for obtaining input from and informing, educating, and advising any small governments that may be significantly or uniquely affected by the rule.

Because this proposed rule, if promulgated, does not include a Federal mandate and is estimated to result in expenditures less than $100 million in any one year by State, local, and tribal governments, the EPA has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. In addition, because small governments would not be significantly or uniquely affected by this rule, the EPA is not required to develop a plan with regard to small governments. Therefore, the requirements of the UMRA do not apply to this action.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) directs all Federal agencies to use voluntary consensus standards instead of government-unique standards in their regulatory activities unless it would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., material specifications, test methods, sampling and analytical procedures, business practices, etc.) that are developed or adopted by one or more voluntary consensus standards bodies. Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials (ASTM), International Organization for Standardization (ISO), International Electrotechnical Commission (IEC), American Petroleum Institute (API), National Fire Protection Association (NFPA) and Society of Automotive Engineers (SAE). The NTTAA requires

Federal agencies like the EPA to provide Congress, through OMB, explanations when an agency decides not to use available an applicable voluntary consensus standards.

This action does not involve the proposal of any new technical standards. It does, however, incorporate by reference existing technical standards, including government-unique technical standards. The technical standards proposed with this notice are standards that have been proposed and promulgated under other rulemakings for similar source control applicability and compliance determinations. The EPA solicits comment on the identification of potentially-applicable voluntary consensus standards that could be used in lieu of standard proposed under today's action. The EPA request that submitted comments include an explanation why such standards should be used in lieu of those proposed.

As part of a larger effort, the EPA is undertaking a project to cross-reference existing voluntary consensus standards on testing, sampling, and analysis, with current and future EPA test methods. When completed, this project will assist the EPA in identifying potentially-applicable voluntary consensus standards that can then be evaluated for equivalency and applicability in determining compliance with future regulations.

I. Protection of Children From Environmental Health Risks and Safety Under Executive Order 13045

The EO 13045 applies to any rule that (1) OMB determines is ''economically significant'' as defined under EO 12866, and (2) the EPA determines the environmental health or safety risk addressed by the rule has a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety aspects of the planned rule on children; and explain why the planned rule is preferable to other potentially effective and reasonably feasible alternatives considered by the EPA.

The proposed rule is not subject to EO 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), because it does not involve decisions on environmental health risks or safety risks that may disproportionately affect children.

J. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments. If the mandate is unfunded, EPA must provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.'' Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. Although this proposal does not impose requirements on tribal governments, these entities will be required to implement the rule by incorporating the rule into permits and enforcing the rule upon delegation. Accordingly, the requirements of section 3(c) of Executive Order 13084 do not apply to this rule.

XIII. Statutory Authority

The statutory authority for this proposal is provided by section 101, 112, 114, 116, and 302 of the Act, as amended; 42 U.S.C., 7401, 7412, 7414, 7416, and 7601.

List of Subjects in 40 CFR part 63

Environmental protection, Acetal resins production, Acrylic and modacrylic fiber production, Air emissions control, Equipment leaks, Hazardous air pollutants, Hydrogen fluoride production, Kilns, Fiber spinning lines, Polycarbonates production, Process vents, Storage vessels, Transfer racks, Wastewater treatment units.

Dated: September 15, 1998.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations are proposed to be amended as follows:

PART 63—[AMENDED]

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. Part 63 is amended by adding subpart SS to read as follows:

Subpart SS—National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process

Sec.

§ 63.980 Applicability.

(a) The provisions of this subpart include requirements for closed vent systems, control devices and routing of air emissions to a fuel gas system or process. These provisions apply when another subpart references the use of this subpart for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to a referencing subpart. The provisions of 40 CFR part 63, subpart A (General Provisions) do not apply to this subpart except as specified in a referencing subpart.

§ 63.981 Definitions.

Alternative test method means any method of sampling and analyzing for an air pollutant that is not a reference test or equivalent method, and that has been demonstrated to the

Administrator's satisfaction, using Method 301 in appendix A of 40 CFR part 63, or previously approved by the Administrator prior to the promulgation date of standards for an affected source or affected facility under a referencing subpart, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this subpart.

Automated monitoring and recording system means any means of measuring values of monitored parameters and creating a hard copy or computer record of the measured values that does not require manual reading of monitoring instruments and manual transcription of data values. Automated monitoring and recording systems include, but are not limited to, computerized systems and strip charts.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

By compound means by individual stream components, not carbon equivalents.

Closed loop system means an enclosed system that returns process fluid to the process and is not vented to the atmosphere except through a closed vent system.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device. Closed vent system does not include the vapor collection system that is part of any tank truck or railcar.

Closed vent system shutdown means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a closed vent system or part of a closed vent system consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a closed vent system shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the closed vent system or part of the closed vent system of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled closed vent system shutdown, is not a closed vent system shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not closed vent system shutdowns.

Combustion device means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of organic emissions.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.998(b).

Control device means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart. Such equipment or devices include, but are not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For process vents from continuous unit operations, recapture devices and combustion devices are considered control devices but recovery devices are not considered control devices. For process vents from batch unit operations, recapture devices, recovery devices, and combustion devices are considered control devices except for primary condensers. Primary condensers on stream strippers or fuel gas systems are not considered control devices.

Control system means the combination of the closed vent system and the control devices used to collect and control vapors or gases from a regulated emission source.

Ductwork means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Flame zone means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

Flow indicator means a device which indicates whether gas flow is, or whether the valve position would allow gas flow to be, present in a line.

Fuel gas means gases that are combusted to derive useful work or heat.

Fuel gas system means the offsite and onsite piping and flow and pressure control system that gathers gaseous streams generated by onsite operations, may blend them with other sources of gas, and transports the gaseous streams for use as fuel gas in combustion devices or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

Hard-piping means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ANSI B31–3.

High-throughput transfer rack means those transfer racks that transfer a total of 11.8 million liters per year or greater of liquid containing regulated material.

Incinerator means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

Low-throughput transfer rack means those transfer racks that transfer less than a total of 11.8 million liters per year of liquid containing regulated material.

Operating parameter value means a minimum or maximum value established for a control device parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit or operating limit.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds based on a detection principle such as infra-red, photo ionization, or thermal conductivity.

Owner or operator means any person who owns, leases, operates, controls, or supervises a regulated source or a stationary source of which a regulated source is a part.

Performance level means the level at which the regulated material in the gases or vapors vented to a control or recovery device are removed, recovered, or destroyed. Examples of control device performance levels include: achieving a minimum organic reduction efficiency expressed as a percentage of regulated material removed or destroyed in the control device inlet stream on a weight-basis; achieving an organic concentration in the control device

exhaust stream that is less than a maximum allowable limit expressed in parts per million by volume on a dry basis corrected to 3 percent oxygen; or maintaining appropriate control device operating parameters indicative of the device performance at specified values.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission limit as specified in the performance test section of this subpart or in the referencing subpart.

Primary fuel means the fuel that provides the principal heat input to a device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

Process heater means an enclosed combustion device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water. A process heater may, as a secondary function, heat water in unfired heat recovery sections.

Recapture device means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers. For purposes of the monitoring, recordkeeping and reporting requirements of this subpart, recapture devices are considered recovery devices.

Recovery device means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

Reference method means any method of sampling and analyzing for a regulated material as specified in an applicable subpart, the appendices to 40 CFR parts 60 or 63, or in appendix B of 40 CFR part 61.

Referencing subpart means the subpart which refers an owner or operator to this subpart.

Regulated material, for purposes of this part, refers to vapors from volatile organic liquids (VOL), volatile organic compounds (VOC), or hazardous air pollutants (HAP), or other chemicals or groups of chemicals that are regulated by a referencing subpart.

Regulated source for the purposes of this subpart, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to a referencing subpart.

Routed to a process or route to a process means the gas streams are conveyed to any enclosed portion of a process unit where the emissions are recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not regulated materials; and/or incorporated into a product; and/or recovered.

Run means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this subpart. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

Secondary fuel means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Set pressure means the pressure at which a properly operating pressure relief device begins to open to relieve atypical process system operating pressure.

Specific gravity monitoring device means a unit of equipment used to monitor specific gravity and having a minimum accuracy of ± 0.02 specific gravity units.

Temperature monitoring device means a unit of equipment used to monitor temperature and having a minimum accuracy of ± percent of the temperature being monitored expressed in degrees Celsius or ±1.2 degrees Celsius (°C), whichever is greater.

§ 63.982 Requirements.

(a) *Storage vessel requirements.* An owner or operator of a storage vessel that is referred to this subpart for controlling regulated material emissions by venting emissions through a closed vent system to a flare, nonflare control device or routing to a fuel gas system or process shall comply with the applicable requirements of paragraphs (a)(1) through (a)(3) of this section.

(1) *Closed vent system and flare.* Owners or operators that control emissions through a closed vent system to a flare shall meet the requirements in § 63.983 for closed vent systems; § 63.987 for flares; and § 63.997(a),(b) and (c) for provisions regarding flare compliance determinations; and the monitoring, recordkeeping and reporting requirements referenced therein. No other provisions of this subpart apply to storage vessel emissions through a closed vent system to a flare.

(2) *Closed vent system and nonflare control device.* Owners or operators that control emissions through a closed vent system to a nonflare control device shall meet the requirements in § 63.983 for closed vent systems; and § 63.985 for nonflare control devices and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to storage vessel emissions vented through a closed vent system to a nonflare control device unless specifically required in the monitoring plan submitted under § 63.985(c).

(3) *Route to a fuel gas system or process.* Owners or operators that control emissions by routing storage vessel emissions to a fuel gas system or process shall meet the requirements in § 63.984 and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to storage vessel emissions being routed to a fuel gas system or a process.

(b) *Process vent requirements.* The owner or operator that is referred to this subpart for controlling regulated material emissions by venting emissions through a closed vent system to a flare, nonflare control device, or a final recovery device shall comply with the applicable requirements of paragraphs (b)(1) through (b)(3) of this section.

(1) *Closed vent system and flare.* Owners or operators that control emissions by venting emissions through a closed vent system to a flare shall meet the applicable requirements in § 63.983 for closed vent systems; § 63.987 for flares; and § 63.997(a), (b) and (c) for provisions regarding flare compliance determinations; and the monitoring, recordkeeping, and reporting requirements referenced

therein. No other provisions of this subpart apply to process vent emissions routed through a closed vent system to a flare.

(2) *Closed vent system and nonflare control device.* Owners or operators that control emissions by venting emissions through a closed vent system to a nonflare control device shall meet the applicable requirements in § 63.983 for closed vent systems; the requirements applicable to the control devices being used in §§ 63.988 through 63.992, or § 63.995; the applicable general monitoring requirements of § 63.996 and the applicable performance test requirements and procedures of § 63.997; and the monitoring, recordkeeping, and reporting requirements referenced therein. Owners or operators subject to halogen reduction device requirements under a referencing subpart must also comply with § 63.994 and the monitoring, recordkeeping and reporting requirements referenced therein. The requirements of §§ 63.984 through 63.986 do not apply to process vents.

(3) *Final recovery devices.* Owners or operators who use a final recovery device to control air emissions from process vents from continuous unit operations shall meet the requirements in § 63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; and the applicable monitoring requirements in § 63.996 and the recordkeeping and reporting requirements referenced therein. No other provisions of this subpart apply to process vents.

(c) *Transfer rack requirements.* The owner or operator that is referred to this subpart for controlling regulated material emissions by venting emissions through a closed vent system to a flare, nonflare control device, or routing to a fuel gas system or process shall comply with the applicable requirements of paragraphs (c)(1) through (c)(4) of this section.

(1) *Closed vent system and flare.* Owners or operators who vent transfer rack emissions through a closed vent system to a flare shall meet the applicable requirements in § 63.983 for closed vent systems; § 63.987 for flares; and § 63.997(a), (b) and (c) for provisions regarding flare compliance determinations; and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to transfer rack emissions vented through a closed vent system to a flare.

(2) *Closed vent system and nonflare control device for low-throughput transfer racks.* An owner or operator of a low-throughput transfer rack, as defined in § 63.981, that vents emissions through a closed vent system to a nonflare control device shall meet the applicable requirements in § 63.983 for closed vent systems and § 63.985 for nonflare control devices and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of §§ 63.984 through 63.986 do not apply to high throughput transfer rack emissions routed through a closed vent system to a nonflare control device. No other provisions of this subpart apply to low-throughput transfer rack emissions being routed through a closed vent system to a nonflare control device.

(3) *Closed vent system and nonflare control devices for high throughput transfer racks.* Owners or operators of high throughput transfer racks that vent emissions through a closed vent system to a nonflare control device shall meet the applicable requirements in § 63.983 for closed vent systems; the requirements applicable to the control device being used in §§ 63.988 through 63.992, or 63.995; the applicable general monitoring requirements of § 63.996; and the applicable performance test requirements and procedures of § 63.997; and the monitoring, recordkeeping, and reporting requirements referenced therein. Owners or operators subject to halogenated stream requirements under a referencing subpart must also comply with § 63.994 and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of §§ 63.984 through 63.986 do not apply to high throughput transfer rack emissions routed through a closed vent system to a nonflare control device.

(4) *Route to a fuel gas system or process.* Owners or operators that control air emissions by routing transfer rack emissions to a fuel gas system or to a process shall meet the applicable requirements in § 63.984 and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to transfer rack emissions being routed to a fuel gas system or process.

(d) *Equipment leak requirements.* The owner or operator that is referred to this subpart for controlling regulated material emissions from equipment leaks by venting emissions through a closed vent system to a flare, nonflare control device, or routing to a fuel gas system or process shall comply with the applicable requirements of paragraphs (d)(1) through (d)(3) of this section.

(1) *Closed vent system and flare.* Owners or operators that vent equipment leak emissions through a closed vent system to a flare shall meet the requirements in § 63.983 for closed vent systems; § 63.987 for flares; and § 63.997(a), (b) and (c) for provisions regarding flare compliance determinations; and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions vented through a closed vent system to a flare.

(2) *Closed vent system and nonflare control device.* Owners or operators that vent equipment leak emissions through a closed vent system to a nonflare control device shall meet the requirements in § 63.983 for closed vent systems and § 63.986 for nonflare control devices used for equipment leak emissions and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions vented through a closed vent system to a nonflare control device.

(3) *Route to a fuel gas system or process.* Owners or operators that route equipment leak emissions to a fuel gas system or to a process shall meet the requirements in § 63.984 and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions being routed to a fuel gas system or process.

(e) *Combined emissions.* When emissions from different emission types (e.g., emissions from process vents, transfer racks, and/or storage vessels) are combined, an owner or operator shall comply with the requirements of either paragraph (e)(1) or (e)(2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements of § 63.982(b) for process vents, and the requirements of § 63.982(c) for transfer racks); or

(2) Comply with the first set of requirements identified in paragraphs (e)(2)(i) through (e)(2)(iii) of this section which applies to any individual emission stream that is included in the combined stream. Compliance with the first applicable set of requirements identified in paragraphs (e)(2)(i) through (e)(2)(iii) of this section constitutes compliance with all other emissions requirements for other emission streams.

(i) The requirements of § 63.982(b) for process vents, including applicable

monitoring, recordkeeping, and reporting;

(ii) The requirements of § 63.982(c) for high throughput transfer racks, including applicable monitoring, recordkeeping, and reporting;

(iii) The requirements of § 63.982(a) for control of emissions from storage vessels or low throughput transfer racks, including applicable monitoring, recordkeeping, and reporting.

§ 63.983 Closed vent systems.

(a) *Closed vent system equipment and operating requirements.* The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) *Collection of emissions.* Each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

(2) *Period of operation.* Closed vent systems used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to, or collected by, them.

(3) *Bypass monitoring.* Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the owner or operator shall comply with the provisions of either paragraphs (a)(3)(i) or (a)(3)(ii) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.998(d)(1)(ii)(B). The flow indicator shall be installed at the entrance to any bypass line.*ERR08*

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Records shall be generated as specified in § 63.998(d)(1)(i)(B).

(4) *Loading arms at transfer racks.* Each closed vent system collecting regulated material from a transfer rack shall be designed and operated so that regulated material vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(5) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's closed vent system shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) *Closed vent system inspection requirements.* The provisions of this subpart apply to closed vent systems collecting regulated material from a regulated source. Inspection records shall be generated as specified in § 63.998(d)(1)(iii) and (d)(1)(iv).

(1) Except for closed vent systems operated and maintained under negative pressure, and any closed vent systems that are designated as unsafe or difficult to inspect as provided in paragraphs (b)(2) and (b)(3) of this section, each closed vent system shall be inspected as specified in paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) If the closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) of this section.

(A) Conduct an initial inspection according to the procedures in paragraph (c) of this section; and

(B) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(ii) If the closed vent system is constructed of ductwork, the owner or operator shall conduct an initial and annual inspection according to the procedures in paragraph (c) of this section.

(2) Any parts of the closed vent system that are designated, as described in § 63.998(d)(1)(i), as unsafe to inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the conditions of paragraphs (b)(2)(i) and (b)(2)(ii) of this section are met.

(i) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (b)(1) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.

(3) Any parts of the closed vent system that are designated, as described in § 63.998(d)(1)(i), as difficult-to-inspect are exempt from the inspection requirements of paragraph (b)(1) of this section if the provisions of paragraphs (b)(3)(i) and (b)(3)(ii) of this section apply.

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and

(ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(c) *Closed vent system inspection procedures.* The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) Each closed vent system subject to this paragraph shall be inspected according to the procedures specified in paragraphs (c)(1)(i) through (c)(1)(vii) of this section.

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A, except as specified in this section.

(ii) Except as provided in (c)(1)(iii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the representative composition of the process fluid and not of each individual VOC in the stream. For process streams that contain nitrogen, air, or other inerts that are not organic HAP or VOC, the representative stream response factor shall be determined on an inert-free basis. The response factor may be determined at any concentration for which the monitoring for leaks will be conducted.

(iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 specified in paragraphs (c)(1)(ii) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in paragraphs (c)(1)(ii) of this section.

(iv) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(v) Calibration gases shall be as specified in paragraphs (c)(1)(v)(A) through (c)(1)(v)(C) of this section.

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (c)(1)(ii) of this section. In such cases, the calibration gas may be a

mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,500 parts per million.

(vi) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects not to adjust readings for background, all such instrument readings shall be compared directly to 500 parts per million to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in this section. The owner or operator shall subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If the owner or operator elects to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining whether there is a leak.

(2) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A.

(3) Except as provided in paragraph (c)(4) of this section, inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor.

(4) Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor.

(d) *Closed vent system leak repair provisions.* The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by paragraph (b)(1)(i)(B) of this section, the owner or operator shall follow the procedure specified in either paragraph (d)(1)(i) or (d)(1)(ii) of this section.

(i) The owner or operator shall eliminate the leak.

(ii) The owner or operator shall monitor the equipment according to the procedures in paragraph (c) of this section.

(2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in paragraph (d)(3) of this section. Records shall be generated as specified in § 63.998(d)(1)(iii) when a leak is detected.

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(ii) Except as provided in paragraph (d)(2) of this section, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair within 15 days after a leak is detected is technically infeasible without a closed vent system shutdown, as defined in the referencing subpart, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

§ 63.984 Fuel gas systems and processes to which storage vessel, transfer rack, or equipment leak regulated material emissions are routed.

(a) *Equipment and operating requirements for fuel gas systems and processes.* (1) Except as provided in the referencing subpart, the fuel gas system or process shall be operating at all times when regulated material emissions are routed to it.

(2) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's system returning vapors to a fuel gas system or process shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(3) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's system returning vapors to a fuel gas system or process shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) *Fuel gas system and process compliance determination.* (1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation.

(2) If emissions are routed to a process, the regulated material in the emissions shall meet one or more of the conditions specified in paragraphs (b)(2)(i) through (b)(2)(iv) of this section. The owner or operator of storage vessels subject to this paragraph shall comply with the compliance demonstration requirements in paragraph (b)(3) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not regulated materials;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(3) To demonstrate compliance with paragraph (b)(2) of this section for a storage vessel, the owner or operator shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the conditions specified in paragraphs (b)(2)(i) through (b)(2)(iv) of this section are being met. The owner or operator shall submit the design evaluation as specified in § 63.999(b)(3)(iii).

(c) *Statement of connection.* For storage vessels and transfer racks, the owner or operator shall submit the reports specified in § 63.999(b)(1)(ii) and/or (b)(1)(iii), as appropriate.

§ 63.985 Nonflare control devices used to control emissions from storage vessels and low throughput transfer racks.

(a) *Nonflare control device equipment and operating requirements.* The owner or operator shall operate and maintain the nonflare control device so that the monitored parameters defined as required in paragraph (c) of this section remain within the ranges specified in the Initial Compliance Status Report whenever emissions of regulated material are routed to the control device except during periods of startup, shutdown, and malfunction.

(b) *Nonflare control device design evaluation or performance test requirements.* When using a control device other than a flare, the owner or operator shall comply with the requirements in paragraphs (b)(1)(i), (b)(1)(ii), or (b)(1)(iii) of this section, except as provided in paragraph (b)(2) of this section.

(1) Unless a design evaluation or performance test is required in the referencing subpart or was previously conducted and submitted for a storage vessel or low-throughput transfer rack, the owner or operator shall either

prepare and submit with the Initial Compliance Status Report, as specified in § 63.999(b)(5), a design evaluation that includes the information specified in paragraph (b)(1)(i) of this section, or the results of the performance test as described in paragraph (b)(1)(ii) or (b)(1)(iii) of this section.

(i) *Design evaluation.* The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during the reasonably expected maximum storage vessel filling or transfer loading rate. This documentation is to include a description of the gas stream that enters the control device, including flow and regulated material content, and additionally for storage vessels, under varying liquid level conditions, and the information specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(E) of this section, as applicable. This documentation shall be submitted with the Initial Compliance Status Report as specified in § 63.999(b)(2).

(A) The efficiency determination is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet an emission reduction requirement specified in a referencing subpart for storage vessels and transfer racks, documentation that those conditions exist is sufficient to meet the requirements of paragraph (b)(1)(i) of this section.

(C) Except as provided in paragraph (b)(1)(i)(B) of this section, for enclosed combustion devices, the design evaluation shall include the estimated autoignition temperature of the stream being combusted, the flow rate of the stream, the combustion temperature, and the residence time at the combustion temperature.

(D) For carbon adsorbers, the design evaluation shall include the estimated affinity of the regulated material vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity, the temperature, the flow rate of the inlet stream and, if applicable, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(E) For condensers, the design evaluation shall include the final temperature of the stream vapors, the type of condenser, and the design flow rate of the emission stream.

(ii) *Performance test.* A performance test is acceptable to demonstrate compliance with emission reduction requirements for storage vessels and transfer racks. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (b)(1)(i) of this section if a performance test will be performed that meets the criteria specified in paragraphs (b)(1)(ii)(A) and (b)(1)(ii)(B) of this section.

(A) The performance test will demonstrate that the control device achieves greater than or equal to the required control device performance level specified in a referencing subpart for storage vessels and transfer racks; and

(B) The performance test meets the applicable performance test requirements and the results are submitted as part of the Initial Compliance Status Report as specified in § 63.999(b)(2).

(iii) If the control device used to comply with storage vessel or with low-throughput transfer rack control requirements is also used to comply with process vent or nonlow throughput transfer rack control requirements, a performance test required by §§ 63.988(b), 63.989(b), 63.990(b), 63.991(b), 63.992(b), or 63.995(b) is acceptable to demonstrate compliance with storage vessel and low throughput transfer rack control requirements. The owner or operator is not required to prepare a design evaluation for the control device as described in paragraph (b)(1)(i) of this section, if a performance test will be performed that meets the criteria specified in paragraphs (b)(1)(iii)(A) and (b)(1)(iii)(B) of this section.

(A) The performance test demonstrates that the control device achieves greater than or equal to the required efficiency specified in the referencing subpart for storage vessels or transfer racks; and

(B) The performance test is submitted as part of the Initial Compliance Status Report as specified in § 63.999(b)(2).

(2) A design evaluation or performance test is not required if the owner or operator uses a combustion device meeting the criteria in paragraph (b)(2)(i), (b)(2)(ii), (b)(2)(iii), or (b)(2)(iv) of this section.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater.

(ii) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements specified in paragraph (b)(2)(ii)(A) or (b)(2)(ii)(B) of this section.

(A) The boiler or process heater has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H, or

(B) The boiler or process heater has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(iii) A hazardous waste incinerator for which the owner or operator meets the requirements specified in paragraph (b)(2)(iii)(A) or (b)(2)(iii)(B) of this section.

(A) The incinerator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O; or

(B) Has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(iv) A boiler or process heater into which the vent stream is introduced with the primary fuel.

(c) *Nonflare control device monitoring requirements.* (1) The owner or operator shall submit with the Initial Compliance Status Report, a monitoring plan containing the information specified in § 63.999(b)(2) to identify the parameters that will be monitored to assure proper operation of the control device.

(2) The owner or operator shall monitor the parameters specified in the Initial Compliance Status Report, in the operating permit. Records shall be generated as specified in § 63.998(d)(2)(i).

§ 63.986 Nonflare control devices used for equipment leaks only.

(a) *Equipment and operating requirements.* (1) Owners or operators using a nonflare control device to meet the applicable requirements of a referencing subpart for equipment leaks shall meet the requirements of this section.

(2) Control devices used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to them.

(b) *Performance test requirements.* A performance test is not required for any control device used only to control emissions from equipment leaks.

(c) *Monitoring requirements.* Owners or operators of control devices that are used to comply only with the provisions of a referencing subpart for control of equipment leak emissions shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. The owner or operator shall maintain the records as specified in § 63.998(d)(4).

§ 63.987 Flare requirements.

(a) *Flare equipment and operating requirements.* Flares subject to this subpart shall meet the performance

requirements of paragraphs (a)(1) through (a)(7) of this section.

(1) Flares shall be operated at all times when emissions are vented to them.

(2) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (b)(3)(i) of this section, except for periods not to exceed a total of 5 minutes during any two consecutive hours.

(3) Flares shall be operated with a flare flame or at least one pilot flame present at all times, as determined by the methods specified in paragraph (c) of this section.

(4) Flares shall be used only when the net heating value of the gas being combusted is 11.2 megajoules per standard cubic meter (300 British thermal units per standard cubic foot) or greater if the flare is steam-assisted or air-assisted; or when the net heating value of the gas being combusted is 7.45 megajoules per standard cubic meter (200 British thermal units per standard cubic foot) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (b)(3)(ii) of this section.

(5) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(6) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (b)(3)(iii) of this section, of less than 18.3 meters per second (60 feet per second), except as provided in paragraphs (a)(6)(i) and (a)(6)(ii) of this section, as applicable.

(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (b)(3)(iii) of this section, equal to or less than 122 meters per second (400 feet per second) if the net heating value of the gas being combusted is greater than 37.3 megajoules per standard cubic meter (1,000 British thermal units per standard cubic foot).

(ii) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (b)(3)(iii) of this section, of less than the velocity, V_{max}, and less than 122 meters per second (400 feet per second), where the maximum permitted velocity, V_{max}, is determined by the following equation.

$$\mathrm{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7 \quad \text{[Eq. 1]}$$

Where:

V_{max} = Maximum permitted velocity, meters per second

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined in paragraph (b)(3)(ii) of this section.

(7) Air-assisted flares shall be designed for and operated with an exit velocity as determined by the methods specified in paragraph (b)(3)(iii) of this section less than the velocity, V_{max}, where the maximum permitted velocity, V_{max}, is determined by the following equation.

$$V_{max} = 8.706 + 0.7084(H_T) \quad \text{[Eq. 2]}$$

Where:

V_{max} = Maximum permitted velocity, meters per second

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in paragraph (b)(3)(ii) of his section.

(b) *Flare compliance determination.*

(1) The owner or operator shall conduct an initial flare compliance determination of any flare used to comply with the provisions of this subpart. Flare compliance determination records shall be kept as specified in § 63.998(a)(1) and a flare compliance determination report shall be submitted as specified in § 63.999(a)(2). An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet regulated material or total organic compound concentration when a flare is used.

(2) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a flare to replace an existing control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, a flare compliance determination shall be performed using the methods specified in paragraph (b)(3) of this section within 180 days. The compliance determination report shall be submitted to the Administrator within 60 days of completing the determination as provided in § 63.999(a)(2)(ii). If an owner or operator elects to use a flare to replace an existing final recovery device that is used on an applicable process vent, the owner or operator shall comply with the applicable provisions in referencing subpart.

(3) Flare compliance determinations shall meet the requirements specified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section.

(i) Method 22 of appendix A of part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours, except for transfer racks as provided in (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) For transfer racks, if the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(B) For transfer racks, if additional loading cycles are initiated within the 2-hour period, then visible emissions observations shall be conducted for the additional cycles.

(ii) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K_1 \sum_{j=1}^{n} D_j H_j \quad \text{[Eq. 3]}$$

Where:

H_T = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$K_1 = 1.740 \times 10^{-7}$ (parts per million by volume) $-$ 1 (gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

D_j = Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946–77; and

H_j = Net heat of combustion of sample component j, kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury). The heat of combustion of stream components may be determined using ASTM D2382–76 if published values are not available or cannot be calculated.

(iii) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Methods 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(iv) Flare flame or pilot monitors, as applicable, shall be operated during any flare compliance determination.

(c) *Flare monitoring requirements.* Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame is present. Flame monitoring and compliance records shall be kept as specified in § 63.998(a)(1).

§ 63.988 Incinerators.

(a) *Incinerator equipment and operating requirements.* (1) Owners or operators using incinerators to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Incinerators used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Incinerator performance test requirements.* (1) Except as specified in § 63.997(b), and paragraph (b)(2) of this section, the owner or operator shall conduct an initial performance test of any incinerator used to comply with the provisions of a referencing subpart and this subpart according to the procedures in §§ 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(2)(i) and (a)(2)(ii) and a performance test report shall be submitted as specified in § 63.999(a). As provided in § 63.985(b)(1), a performance test may be used as an alternative to the design evaluation for storage vessels and low throughput transfer rack controls. As provided in § 63.986(b), no performance test is required for equipment leaks.

(2) An owner or operator is not required to conduct a performance test for a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(3) Unless already permitted by the applicable title V permit, if an owner or operator elects to use an incinerator to replace an existing control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, an incinerator performance test shall be performed, using the methods specified in § 63.997(a) through (e) within 180 days, if required by paragraph (b)(1) of this section. The performance test report shall be submitted to the Administrator within 60 days of completing the determination, as provided in § 63.999(a)(1)(ii).

(c) *Incinerator monitoring requirements.* (1) Where an incinerator is used, a temperature monitoring device capable of providing a continuous record that meets the provisions specified in paragraph (c)(1)(i) or (c)(1)(ii) of this section is required. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in the referencing subpart and § 63.996.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) The owner or operator shall establish a range for monitored parameters that indicate proper operation of the incinerator. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.989 Boilers and process heaters.

(a) *Boiler and process heater equipment and operating requirements.* (1) Owners or operators using boilers and process heaters to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) The vent stream shall be introduced into the flame zone of the boiler or process heater.

(3) Boilers and process heaters used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Boiler and process heater performance test requirements.* (1) Except as specified in § 63.997(b), and paragraph (b)(2) of this section, the owner or operator shall conduct an initial performance test of any boiler or process heater used to comply with the provisions of a referencing subpart and this subpart according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(2)(i) and (a)(2)(ii) and a performance test report shall be submitted as specified in § 63.999(a). As provided in § 63.985(b)(1), a performance test may be used as an alternative to the design evaluation for storage vessels and low throughput transfer rack control requirements. As provided in § 63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(2) An owner or operator is not required to conduct a performance test when any of the control devices specified in paragraphs (b)(2)(i) through (b)(2)(iii) are used.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater.

(ii) A boiler or process heater into which the vent stream is introduced with the primary fuel or is used as the primary fuel.

(iii) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements

specified in paragraph (b)(2)(iii)(A) or (b)(2)(iii)(B) of this section.

(A) The boiler or process heater has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(B) The boiler or process heater has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(3) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a boiler or process heater to replace an existing control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, a boiler or process heater performance test shall be performed using the methods specified in § 63.997(a) through (e) within 180 days, if required by paragraph (b)(1) of this section. The performance test report shall be submitted to the Administrator within 60 days of completing the determination as provided in § 63.999(a)(2)(ii).

(c) *Boiler and process heater monitoring requirements.* (1) Where a boiler or process heater of less than 44 megawatts (150 million British thermal units per hour) design heat input capacity is used and the regulated vent stream is not introduced as or with the primary fuel, a temperature monitoring device in the fire box capable of providing a continuous record is required. Any boiler or process heater in which all vent streams are introduced with primary fuel or are used as the primary fuel is exempt from monitoring. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in the referencing subpart and § 63.996.

(2) Where monitoring is required, the owner or operator shall establish a range for monitored parameters that indicates proper operation of the boiler or process heater. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.990 Absorbers used as control devices.

(a) *Absorber equipment and operating requirements.* (1) Owners or operators using absorbers to meet a weight-percent or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Absorbers used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Absorber performance test requirements.* (1) Except as specified in § 63.997(b), the owner or operator shall conduct an initial performance test of any absorber used as a recapture device to comply with the provisions of the referencing subpart and this subpart according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(2)(i) and (a)(2)(ii) and a performance test report shall be submitted as specified in § 63.999(a). As provided in § 63.985(b)(1), a performance test may be used as an alternative to the design evaluation for storage vessels and low throughput transfer rack controls. As provided in § 63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(2) Unless already permitted by the applicable title V permit, if an owner or operator elects to use an absorber to replace an existing recovery or control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, the provisions specified in paragraphs (b)(2)(i) or (b)(2)(ii) as applicable shall be followed.

(i) *Replace final recovery device.* If an owner or operator elects to replace the final recovery device on a process vent with an absorber used as a control device, the owner or operator shall comply with the applicable applicability determination provisions of a referencing subpart.

(ii) *Replace control device.* If an owner or operator elects to replace a control device on a process vent or a transfer rack with an absorber used as a control device, the owner or operator shall perform a performance test using the methods specified in § 63.997(a) through (e) within 180 days. The performance test report shall be submitted to the Administrator within 60 days of completing the test as provided in § 63.999(a)(2)(ii).

(c) *Absorber monitoring requirements.* (1) Where an absorber is used as a control device, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.996.

(2) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the absorber. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.991 Condensers used as control devices.

(a) *Condenser equipment and operating requirements.* (1) Owners or operators using condensers to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Condensers used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Condenser performance test requirements.* (1) Except as specified in § 63.997(b), the owner or operator shall conduct an initial performance test of any condenser used as a recapture device to comply with the provisions of a referencing subpart and this subpart according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(2)(i) and (a)(2)(ii) and a performance test report shall be submitted as specified in § 63.999(a). As provided in § 63.985(b)(1), a performance test may be used as an alternative to the design evaluation for storage vessels and low throughput transfer rack controls. As provided in § 63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(2) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a condenser to replace an existing recovery or control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, the provisions specified in paragraphs (b)(2)(i) or (b)(2)(ii) of this section, as applicable, shall be followed.

(i) *Replace final recovery device.* If an owner or operator elects to replace the final recovery device on a process vent with a condenser used as a control device, the owner or operator shall comply with the applicable applicability determination provisions of a referencing subpart.

(ii) *Replace control device.* If an owner or operator elects to replace a control device on a process vent or a transfer rack with a condenser used as a control device, the owner or operator shall perform a performance test using the methods specified in § 63.997(a) through (e) within 180 days. The performance test report shall be submitted to the Administrator within 60 days of completing the test as provided in § 63.999(a)(2)(ii).

(c) *Condenser monitoring requirements.* (1) Where a condenser is used as a control device, an organic monitoring device capable of providing a continuous record or a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.999(b)(iii).

(2) The owner or operator shall establish a range for monitored parameters that indicates proper operation of a condenser. In order to establish the range, the information required in § 63.999(b)(5) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications in § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.992 Carbon adsorbers used as control devices.

(a) *Carbon adsorber equipment and operating requirements.* (1) Owners or operators using carbon adsorbers to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Carbon adsorbers used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Carbon adsorber performance test requirements.* (1) Except as specified in § 63.997(b), the owner or operator shall conduct an initial performance test of any carbon absorber used as a control device to comply with the provisions of a referencing subpart and this subpart according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(1) and (a)(2) and a performance test report shall be submitted as specified in § 63.999(a). As provided in § 63.985(b)(1), a performance test may be used as an alternative to the design evaluation for storage vessels and low-throughput transfer rack controls. As provided in § 63.986(b), no performance test is required to demonstrate compliance for equipment leaks.

(2) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a carbon adsorber to replace an existing recovery or control device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(b)(7) before implementing the change. Upon implementing the change, the provisions specified in paragraphs (b)(2)(i) or (b)(2)(ii), as applicable, shall be followed.

(i) *Replace final recovery device.* If an owner or operator elects to replace the final recovery device on a process vent with a carbon adsorber used as a control device, the owner or operator shall comply with the applicable applicability determination provisions of a referencing subpart.

(ii) *Replace control device.* If an owner or operator elects to replace a control device on a process vent or transfer rack with a carbon adsorber used as a recapture device, the owner or operator shall perform a performance test using the methods specified in § 63.997 (a) through (e) within 180 days. The performance test report shall be submitted to the Administrator within 60 days of completing the test as provided in § 63.999(a)(2)(ii).

(c) *Carbon adsorber monitoring requirements.* (1) Where a carbon adsorber is used as a control device, an organic monitoring device capable of providing a continuous record or an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.996.

(2) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the carbon adsorber. Where the regeneration stream flow and carbon-bed temperature are monitored, the range shall be in terms of the total regeneration stream flow per regeneration cycle and the temperature of the carbon bed determined within 15 minutes of the completion of the regeneration cooling cycle. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications in § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.993 Absorbers, condensers, carbon adsorbers and other recovery devices used as final recovery.

(a) *Final recovery device equipment and operating requirements.* (1) Owners or operators using a recovery device to meet the requirement to operate to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of this section.

(2) Recovery devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Recovery device performance test requirements.* (1) There are no performance test requirements for recovery devices. TRE index value determination records shall be generated as specified in § 63.998(a)(3).

(2) *Replace a final recovery device or control device.* Unless already permitted by the applicable title V permit, if an owner or operator elects to use a recovery device to replace an existing final recovery or control device at a later

date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in § 63.999(d) before implementing the change. Upon implementing the change, the owner or operator shall comply with the applicable applicability determination provisions of a referencing subpart.

(c) *Recovery device monitoring requirements.* (1) Where an absorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record shall be used. General requirements for monitoring and continuous parameter monitoring systems are contained in § 63.996.

(2) Where a condenser is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.996.

(3) Where a carbon adsorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon-bed temperature monitoring device, capable of recording the carbon-bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.996.

(4) If an owner or operator uses a recovery device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, reporting and recordkeeping procedures as required under § 63.998(c)(5). The Administrator will approve or deny the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

(5) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the recovery device. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications in § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart. Where the regeneration stream flow and carbon-bed temperature are monitored, the range shall be in terms of the total regeneration stream flow per regeneration cycle and the temperature of the carbon-bed determined within 15 minutes of the completion of the regeneration cooling cycle.

§ 63.994 Halogen scrubbers and other halogen reduction devices.

(a) *Halogen scrubber and other halogen reduction device equipment and operating requirements.* (1) An owner or operator of a halogen scrubber or other halogen reduction device subject to this subpart shall reduce the overall emissions of hydrogen halides and halogens by the control device performance level specified in a referencing subpart.

(2) Halogen scrubbers and other halogen reduction devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Halogen scrubber and other halogen reduction device performance test requirements.* (1) An owner or operator of a combustion device followed by a halogen scrubber or other halogen reduction device to control halogenated vent streams in accordance with a referencing subpart and this subpart shall conduct an initial performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(1) and (a)(2) and a performance test report shall be submitted as specified in § 63.999(a).

(2) An owner or operator of a halogen scrubber or other halogen reduction technique to reduce the vent stream halogen atom mass emission rate prior to a combustion device to comply with a performance level specified in a referencing subpart shall determine the halogen atom mass emission rate prior to the combustor according to the procedures specified in the referencing subpart. Records of the halogen concentration in the vent stream shall be generated as specified in § 63.998(a)(4).

(c) *Halogen scrubber and other halogen reduction device monitoring requirements.* (1) Where a halogen scrubber is used, the monitoring equipment specified in paragraphs (c)(1)(i) and (c)(1)(ii) of this section is required for the scrubber. Monitoring results shall be recorded as specified in § 63.998(b). General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and § 63.996.

(i) A pH monitoring device capable of providing a continuous record shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter capable of providing a continuous record shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (c)(1)(ii)(A) through (c)(1)(ii)(D) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) The owner or operator may measure the gas stream flow at the scrubber inlet.

(C) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for the process unit of which it is part as specified in a referencing subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to that compliance date may be utilized to comply with this subpart if it is still representative.

(D) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method that will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method that will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than startups, shutdowns, or malfunctions. The plan shall include a

description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in a referencing subpart.

(2) Where a halogen reduction device other than a scrubber is used, the procedures in § 63.998(c)(5) shall be followed to establish monitoring parameters.

(3) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the scrubber or other halogen reduction device. In order to establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications in § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.995 Other control devices.

(a) *Other control device equipment and operating requirements.* (1) Owners or operators using another control device other than one listed in §§ 63.987 through 63.992 to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Other control devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) *Other control device performance test requirements.* An owner or operator of a control device other than those specified in §§ 63.987 through 63.992, to comply with a performance level specified in a referencing subpart shall perform an initial performance test according to the procedures in § 63.997(a) through (e). Performance test records shall be kept as specified in § 63.998(a)(1) and (a)(2) and a performance test report shall be submitted as specified in § 63.999(a).

(c) *Other control device monitoring requirements.* (1) If an owner or operator uses a control device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, recordkeeping and reporting procedures as required under § 63.998(c)(5). The Administrator will approve, deny, or modify based on the reasonableness of the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

(2) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the control device. To establish the range, the information required in § 63.999(b)(3) shall be submitted in the Initial Compliance Status Report or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications in § 63.997(b)(1) or upon existing ranges or limits established under a referencing subpart.

§ 63.996 General monitoring requirements for control and recovery devices.

(a) *General monitoring requirement applicability.* (1) This section applies to the owner or operator of a regulated source required to monitor under this subpart.

(2) Flares subject to § 63.987(c) are not subject to the requirements of this section.

(3) Flow indicators are not subject to the requirements of this section.

(b) *Conduct of monitoring.* (1) Monitoring shall be conducted as set forth in this section and in the relevant sections of this subpart unless the provision in either paragraph (b)(1)(i) or (b)(1)(ii) of this section applies.

(i) The Administrator specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) The Administrator approves the use of alternatives to any monitoring requirements or procedures as provided in the referencing subpart.

(2) When one CPMS is used as a backup to another CPMS, the owner or operator shall report the results from the CPMS used to meet the monitoring requirements of this subpart. If both such CPMS's are used during a particular reporting period to meet the monitoring requirements of this part, then the owner or operator shall report the results from each CPMS for the relevant compliance period.

(c) *Operation and maintenance of continuous parameter monitoring systems.* (1) All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(2) The owner or operator of a regulated source shall maintain and operate each CPMS as specified in this section, or in a relevant subpart, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of a regulated source shall ensure the immediate repair or replacement of CPMS parts to correct ''routine'' or otherwise predictable CPMS malfunctions. The necessary parts for routine repairs of the affected equipment shall be readily available.

(ii) If under the referencing subpart, an owner or operator has developed a startup, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be reported in the semiannual startup, shutdown, and malfunction report.

(iii) The Administrator's determination of whether acceptable operation and maintenance procedures are being used for the CPMS will be based on information that may include, but is not limited to, review of operation and maintenance procedures, operation and maintenance records, manufacturer's recommendations and specifications, and inspection of the CPMS.

(3) All CPMS's shall be installed and operational, and the data verified as specified in this subpart either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(4) All CPMS's shall be installed such that representative measurements of parameters from the regulated source are obtained.

(5) In accordance with the referencing subpart, except for system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, all continuous parameter monitoring systems shall be in continuous operation when emissions are being routed to the monitored device.

(d) An owner or operator may request approval to monitor control, recovery, halogen scrubber, or halogen reduction device operating parameters other than those specified in this subpart by following the procedures specified in a referencing subpart.

§ 63.997 Performance test and compliance determination requirements for control devices.

(a) *Performance tests and flare compliance determinations.* Where §§ 63.985 through 63.995 require or the owner or operator elects to conduct a performance test of a control device or a halogen reduction device, or a compliance determination for a flare, the requirements of paragraphs (b) through (d) of this section apply.

(b) *Prior test results and waivers.* Initial performance tests and initial flare compliance determinations are required only as specified in this subpart.

(1) Unless requested by the Administrator, an owner or operator is not required to conduct a performance test or flare compliance determination under this subpart if a prior performance test or compliance determination was conducted using the same methods specified in § 63.997(e) and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(2) Individual performance tests and flare compliance determinations may be waived upon written application to the Administrator, per § 63.999(a)(1)(iii), if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, the source is being operated under an extension or waiver of compliance, or the owner or operator has requested an extension or waiver of compliance and the Administrator is still considering that request.

(3) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notification is given to the owner or operator of the source.

(c) *Performance tests and flare compliance determinations schedule.* (1) Unless a waiver of performance testing or flare compliance determination is obtained under this section or the conditions of a referencing subpart, the owner or operator shall perform such tests as specified in paragraphs (c)(1)(i) through (c)(1)(vii) of this section.

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial startup date before the effective date of that standard; or

(ii) Within 180 days after initial startup for a new source that has an initial startup date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in a referencing subpart for an existing source, or within 180 days after startup of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance or a waiver of compliance for an existing source that obtains an extension of compliance under 40 CFR 63.6(i) of subpart A, or waiver of compliance under 40 CFR 61.11, subpart A; or

(vi) Within 180 days after the compliance date for a new source, subject to an emission standard established pursuant to section 112(f) of the Act, for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of the relevant standard established pursuant to section 112(f); or

(vii) When a referencing subpart promulgated emission standard is more stringent than the standard that was proposed, the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If a referencing subpart promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with a referencing subpart promulgated standard.

(2) The Administrator may require an owner or operator to conduct performance tests and compliance determinations at the regulated source at any time when the action is authorized by section 114 of the Act.

(d) *Performance testing facilities.* If required to do performance testing, the owner or operator of each new regulated source and, at the request of the Administrator, the owner or operator of each existing regulated source, shall provide performance testing facilities as specified in paragraphs (d)(1) through (d)(5) of this section.

(1) Sampling ports adequate for test methods applicable to such source. This includes, as applicable, the requirements specified in (d)(1)(i) and (d)(1)(ii) of this section.

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) *Performance test procedures.* Where §§ 63.985 through 63.995 require or the owner or operator elects to conduct a performance test of a control device or a halogen reduction device, an owner or operator shall follow the requirements of paragraphs (e)(1)(i) through (e)(1)(v) of this section, as applicable.

(1) *General procedures.*—(i) *Continuous unit operations.* For continuous unit operations, performance tests shall be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. During the performance test, an owner or operator may operate the control or halogen reduction device at maximum or minimum representative operating conditions for monitored control or halogen reduction device parameters, whichever results in lower emission reduction. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(ii) *Batch unit operations.* For batch unit operations, performance tests shall, at a minimum, include testing for peak emission episode(s). The peak emission episode shall be characterized by the criteria presented in paragraph (e)(ii)(A), (e)(1)(ii)(B), or (e)(1)(i)(C) of this section. For the purposes of testing the combustion, recovery, or recovery device the peak emission episode may

be simulated based on the emission profile described in paragraph (e)(1)(i)(D). A simulated peak emission episode must have a representative composition, HAP load, and duration that would be predicted from the emission profile.

(A) The period of combined batch cycles in which a process vent gas will contain at least 50 percent of the total regulated material load (in lb) from the batch cycle or combined batch cycles (if more than one cycle is vented through the same process vent) over a time duration that is sufficient to include all batch cycles routed to the common process vent. An emission profile as described in paragraph (e)(1)(ii)(D) of this section shall be used to identify the peak emission episode.

(B) A 1-hour period of time in which a process vent from the batch cycle or combination of batch cycles (if more than one cycle is vented through the same process vent) will contain the highest regulated material mass loading rate, in lb/hr, experienced over a time duration that is sufficient to include all batch cycles routed to the common process vent. An emission profile, as described in paragraph (e)(1)(ii)(D) of this section, shall be used to identify the peak emission episode.

(C) If a condenser is used to control the process vent stream(s), the peak emission episode(s) shall represent a 1-hour period of time in which a process vent from the batch cycle or combination of batch cycles (if more than one cycle is vented through the same process vent) will require the maximum heat removal capacity, in Btu/hr, to cool the process vent stream to a temperature that, upon calculation of regulated material concentration, will yield the required removal efficiency for the entire cycle. The calculation of maximum heat load shall be based on the emission profile described in paragraph (e)(1)(ii)(D) of this section and a concentration profile that will allow calculation of sensible and latent heat loads.

(D) *Emission profile.* For process vents from batch unit operations, the owner or operator may choose to perform tests only during those periods of the peak emission episode(s) that the owner or operator selects to control as part of achieving the required emission reduction. The owner or operator must develop an emission profile for the process vent, based on either process knowledge or test data collected, to demonstrate that test periods are representative. The emission profile must profile the regulated organic regulated material loading rate (in lb/hr) versus time for all emission episodes contributing to the process vent stack for a period of time that is sufficient to include all batch cycles venting to the stack. Examples of information that could constitute process knowledge include calculations based on material balances, and process stoichiometry. Previous test results may be used to develop an emission profile, provided the results are still representative of the current process vent stream conditions.

(iii) *Combination of both continuous and batch unit operations.* For a combination of both continuous and batch unit operations, performance tests shall be conducted both at maximum representative operating conditions for the process for continuous unit operations as specified in paragraph (e)(1)(i) of this section, and at peak emission episode(s) for batch unit operations as specified in paragraph (e)(1)(ii) of this section.

(iv) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this subpart, in each relevant standard, and, if required, in applicable appendices of 40 CFR parts 51, 60, 61, and 63 unless the Administrator specifies one of the provisions in paragraphs (e)(1)(iv)(A) through (e)(1)(iv)(E) of this section.

(A) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(B) Approves the use of an alternative test method, the results of which the Administrator has determined to be adequate for indicating whether a specific regulated source is in compliance. The alternate method or data shall be validated using the applicable procedures of Method 301 of appendix A of 40 CFR part 63; or

(C) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(D) Waives the requirement for the performance test as specified in paragraph (b)(2) of this section because the owner or operator of a regulated source has demonstrated by other means to the Administrator's satisfaction that the regulated source is in compliance with the relevant standard; or

(E) Approves the use of an equivalent method.

(v) Except as provided in paragraphs (e)(1)(v)(A) through (e)(1)(v)(C) of this section, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for at least 1 hour and under the conditions specified in this section. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(A) For control devices, used to control emissions from transfer racks except low throughput transfer racks, that are capable of continuous vapor processing but do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously, each run shall represent at least one complete tank truck or tank car loading period, during which regulated materials are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(B) For intermittent vapor processing systems used for controlling transfer rack emissions except low throughput transfer racks that do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously, each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(C) For batch unit operations, testing of peak emission episodes less than or equal to 1 hour, testing shall include three runs, each of a duration not less than the duration of the peak emission episode.

(*1*) For testing of batch emission episodes of greater than 1 hour, the emission rate from a single test run may be used to determine compliance.

(*2*) For testing of batch emission episodes of duration greater than 8 hours, the owner or operator shall perform at least 8 hours of testing. The test period must include the period of time in which the peak emission episode(s) is predicted by the emission profile.

(*3*) For process vents from batch unit operations, the owner or operator may choose to perform tests only during those periods of peak emission episode(s) that the owner or operator selects to control as part of achieving the required emission reduction. The owner or operator must develop an emission profile for the process vent,

based on either process knowledge or test data collected, to demonstrate that test periods are representative. The emission profile must profile regulated material loading rate (in lb/hr) versus time for all emission episodes contributing to the process vent stack for a period of time that is sufficient to include all batch cycles venting to the stack. Examples of information that could constitute process knowledge include calculations based on material balances, and process stoichiometry. Previous test results may be used to develop an emissions profile, provided the results are still representative of the current process vent stream conditions.

(2) *Specific procedures.* Where §§ 63.985 through 63.995 require or the owner or operator elects to conduct a performance test of a control device, or a halogen reduction device, an owner or operator shall conduct that performance test using the procedures in paragraphs (e)(2)(i) through (e)(2)(iv) of this section, as applicable. The regulated material concentration and percent reduction may be measured as either total organic regulated material or as TOC minus methane and ethane according to the procedures specified.

(i) *Selection of sampling sites.* Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites.

(A) For determination of compliance with a percent reduction requirement of total organic regulated material or TOC, sampling sites shall be located as specified in paragraphs (e)(2)(i)(A)(*1*) and (e)(2)(i)(A)(*2*) of this section, and at the outlet of the control device.

(*1*) For process vents from continuous unit operations, the control device inlet sampling site shall be located after the final product recovery device.

(*2*) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic regulated material or TOC (minus methane and ethane) concentrations, as applicable, in all vent streams and primary and secondary fuels introduced into the boiler or process heater.

(*3*) For process vents from batch unit operations, the inlet sampling site shall be located at the exit from the batch unit operation before any recovery device.

(B) For determination of compliance with a parts per million by volume total regulated material or TOC limit in a referencing subpart, the sampling site shall be located at the outlet of the control device.

(ii) *Gas volumetric flow rate.* The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate. For batch unit operations, gas stream volumetric flow rates shall be measured at 15-minute intervals, or at least once during the peak emission episode(s).

(iii) *Total organic regulated material or TOC concentration.* To determine compliance with a parts per million by volume total organic regulated material or TOC (minus methane and ethane) limit, the owner or operator shall use method 18 of 40 CFR part 60, appendix A, to measure either TOC minus methane and ethane or total organic regulated material, as applicable. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of 40 CFR part 63, may be used. Method 25A of 40 CFR part 60, appendix A may be used for transfer racks as detailed in paragraph (e)(2)(iii)(D) of this section. The procedures specified in paragraphs (e)(2)(iii)(A) through (e)(2)(iii)(D) of this section shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen.

(A) *Sampling time.—*(*1*) *Continuous unit operations and a combination of both continuous and batch unit operations.* For continuous unit operations and for a combination of both continuous and batch unit operations, the minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15 minute intervals during the run.

(*2*) *Batch unit operations.* For batch unit operations, the organic regulated material concentration shall be determined from samples collected in an integrated sample over the duration of the peak emission episode(s) characterized by the criteria presented in paragraph, or from grab samples collected simultaneously with flow rate measurements (at approximately equal intervals of about 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate.

(B) *Concentration calculation.* The concentration of either TOC (minus methane or ethane) or total organic regulated material shall be calculated according to paragraph (e)(2)(iii)(B)(*1*) or (e)(2)(iii)(B)(*2*) of this section.

(*1*) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using equation 4.

$$C_{TOC} = \sum_{i=1}^{x} \frac{\left(\sum_{j=1}^{n} C_{ji} \right)}{x} \qquad \text{[Eq. 4]}$$

Where:

C_{TOC}=Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

x=Number of samples in the sample run.

n=Number of components in the sample.

C_{ji}=Concentration of sample components j of sample i, dry basis, parts per million by volume.

(*2*) The total organic regulated material (C_{REG}) shall be computed according to the equation in paragraph (e)(2)(iii)(B)(*1*) of this section except that only the regulated species shall be summed.

(C) *Concentration correction calculation.* The concentration of TOC or total organic regulated material, as applicable, shall be corrected to 3 percent oxygen if a combustion device is the control device.

(*1*) The emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A, shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic regulated material or organic compound samples, and the samples shall be taken during the same time that the organic regulated material or organic compound samples are taken.

(*2*) The concentration corrected to 3 percent oxygen (C_c) shall be computed using equation 5.

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O2_d} \right) \qquad \text{[Eq. 5]}$$

where:

C_c=Concentration of TOC or organic regulated material corrected to 3 percent oxygen, dry basis, parts per million by volume.

C_m = Concentration of TOC (minus methane and ethane) or organic regulated material, dry basis, parts per million by volume.

$\%O2_d$ = Concentration of oxygen, dry basis, percentage by volume.

(D) Method 25A of 40 CFR part 60, appendix A may be used for the purpose of determining compliance with a parts per million by volume limit for transfer racks. If Method 25A of 40 CFR part 60, appendix A is used, the procedures specified in paragraphs (e)(2)(iii)(D)(*1*) through (e)(2)(iii)(D)(*4*) of this section

shall be used to calculate the concentration of organic compounds (C_{TOC}):

(*1*) The principal organic regulated material in the vent stream shall be used as the calibration gas.

(*2*) The span value for Method 25A of 40 CFR part 60, appendix A, shall be between 1.5 and 2.5 times the concentration being measured.

(*3*) Use of Method 25A of 40 CFR part 60, appendix A, is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(*4*) The concentration of TOC shall be corrected to 3 percent oxygen using the procedures and equation in paragraph (e)(2)(iii)(C) of this section.

(iv) To determine compliance with a percent reduction requirement, the owner or operator shall use Method 18 of 40 CFR part 60, appendix A; alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. Method 25A or 25B of 40 CFR part 60, appendix A may be used for transfer racks as detailed in paragraph (e)(2)(iv)(E) of this section. Procedures specified in paragraphs (e)(2)(iv)(A) through (e)(2)(iv)(E) of this section shall be used to calculate percent reduction efficiency.

(A) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(B) The mass rate of either TOC (minus methane and ethane) or total organic regulated material (E_i, E_o) shall be computed as applicable.

(*1*) Equations 6 and 7 shall be used.

$$E_i = K_2\left(\sum_{j=1}^{n} C_{ij}M_{ij}\right)Q_i \qquad \text{[Eq. 6]}$$

$$E_o = K_2\left(\sum_{j=1}^{n} C_{oj}M_{oj}\right)Q_o \qquad \text{[Eq. 7]}$$

Where:

E_i, E_o = Emission rate of TOC (minus methane and ethane) (E_{TOC}) or emission rate of total organic regulated material (E_{RM}) in the sample at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

K_2 = Constant, 2.494×10^{-6} (parts per million)$^{-1}$ (gram-mole per standard cubic meter) (kilogram per gram) (minute per hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

n = Number of components in the sample.

C_{ij}, C_oj = Concentration on a dry basis of organic compound j in parts per million by volume of the gas stream at the inlet and outlet of the control device, respectively. If the TOC emission rate is being calculated, C_{ij} and C_o include all organic compounds measured minus methane and ethane; if the total organic regulated material emissions rate is being calculated, only organic regulated material are included.

M_{ij}, M_oj = Molecular weight of organic compound j, gram per gram-mole, of the gas stream at the inlet and outlet of the control device, respectively.

Q_i, Q_o = Process vent flow rate, dry standard cubic meter per minute, at a temperature of 20°C, at the inlet and outlet of the control device, respectively.

(*2*) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by method 18 of 40 CFR part 60, appendix A, are summed using the equation in paragraph (e)(2)(iv)(B)(*1*) of this section.

(*3*) Where the mass rate of total organic regulated material is being calculated, only the species comprising the regulated material shall be summed using the equation in paragraph (e)(2)(iv)(B)(*1*) of this section.

(C) *Percent reduction in TOC or total organic regulated material—(1) Continuous unit operations and a combination of both continuous and batch unit operations.* For continuous unit operations and for a combination of both continuous and batch unit operations, the percent reduction in TOC (minus methane and ethane) or total organic regulated material shall be calculated using Equation 8.

$$R = \frac{E_i - E_o}{E_i}(100) \qquad \text{[Eq. 8]}$$

where:

R = Control efficiency of control device, percent.

E_i = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the inlet to the control device as calculated under paragraph (e)(2)(iv)(B) of this section, kilograms TOC per hour or kilograms organic regulated material per hour.

E_o = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the outlet of the control device, as calculated under paragraph (e)(2)(iv)(B) of this section, kilograms TOC per hour or kilograms total organic regulated material per hour.

(*2*) *Batch unit operations.* For process vents from batch unit operations, the owner shall determine the organic regulated material emission reduction for process vents from batch unit operations using Equation 9.

$$RED_{PPU} = \left(\frac{\sum_{i=1}^{n}(E_{unc,i})(R_i)}{\sum_{i=1}^{n}(E_{unc,i}) + \sum_{j=1}^{m}(E_{unc,i})}\right) * 100 \qquad \text{[Eq. 9]}$$

Where:

RED_{PPU} = Organic regulated material emission reduction for the group of process vents from batch unit operations in the process unit, percent

$E_{unc,i}$ = Uncontrolled organic regulated material emissions from process vent i that is controlled using a combustion, recovery, or recapture device, kilograms per batch cycle for process vents from batch unit operations.

n = Number of process vents from batch unit operations in the applicable production process unit and controlled using a combustion, recovery, or recapture device

R_i = Control efficiency of the combustion, recovery, or recapture device used to control organic regulated material emissions from vent i, determined in accordance with paragraph (e)(2)(iv)(C)(3) of this section.

$E_{unc,j}$ = Uncontrolled organic regulated material emissions from process vent j that is not controlled using a combustion, recovery, or recapture device, kilograms per batch cycle for process vents from batch unit operations, kilograms per hour for process vents from continuous unit operations.

m = Number of process vents in the applicable production process unit that are subject to the same requirements of a referencing subpart and that are not controlled using a combustion, recovery, or recapture device.

(*3*) *Batch unit operations—control efficiency.* The control efficiency, R_i, shall be assigned as specified below in (e)(2)(iv)(C)(*3*)(*i*) or (e)(2)(iv)(C)(*3*)(*ii*)of this section.

(*i*) If the process vent is controlled using a flare, or a combustion device as specified in this subpart and a

performance test has not been conducted, the control efficiency shall be assumed to be 98 percent.

(*ii*) If the process vent is controlled using a combustion, recovery, or recapture device for which a performance test has been conducted in accordance with the provisions of this section, the control efficiency shall be the efficiency determined by the performance test.

(D) If the vent stream entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total organic regulated material or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total organic regulated material in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic regulated material exiting the combustion device, respectively.

(E) Method 25A of 40 CFR part 60, appendix A, may also be used for the purpose of determining compliance with the percent reduction requirement for transfer racks.

(*i*) If Method 25A of 40 CFR part 60, appendix A, is used to measure the concentration of organic compounds (C_{TOC}), the principal organic regulated material in the vent stream shall be used as the calibration gas.

(*ii*) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(*iii*) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(*iv*) The mass at the inlet and outlet of the control device during each testing interval shall be calculated using equation 10.

$$M_j = FKV_sC_t \qquad \text{[Eq. 10]}$$

Where:

M_j = Mass of organic compounds emitted during testing interval j, kilograms.

$F = 10^{-6}$ = Conversion factor, (cubic meters regulated material per cubic meters air) * (parts per million by volume)$^{-1}$.

K = Density, kilograms per standard cubic meter organic regulated material; 659 kilograms per standard cubic meter organic regulated material.

(**NOTE:** The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of M_j.)

V_s = Volume of air-vapor mixture exhausted at standard conditions, 20 °C and 760 millimeters mercury, standard cubic meters.

C_t = Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.

(*v*) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated as follows:

$$E_i = \frac{\sum_{j=1}^{n} M_{ij}}{T} \qquad \text{[Eq. 11]}$$

$$E_o = \frac{\sum_{j=1}^{n} M_{oj}}{T} \qquad \text{[Eq. 12]}$$

Where:

E_i, E_o = Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the control device, kilograms per hour.

n = Number of testing intervals.

M_{ij}, M_oj = Mass of organic compounds at the inlet (i) or outlet (o) during testing interval j, kilograms.

T = Total time of all testing intervals, hours.

(3) An owner or operator using a halogen scrubber or other halogen reduction device to control process vent and transfer rack halogenated vent streams in compliance with a referencing subpart, who is required to conduct a performance test to determine compliance with a control efficiency or emission limit for hydrogen halides and halogens, shall follow the procedures specified in paragraphs (e)(3)(i) through (e)(3)(iv) of this section.

(i) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator determining compliance with a kilogram per hour outlet emission limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to any releases to the atmosphere.

(ii) Except as provided in paragraph (e)(1)(ii) of this section, Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(iii) To determine compliance with the percent removal efficiency, the mass emissions for any hydrogen halides and halogens present at the inlet of the halogen reduction device shall be summed together. The mass emissions of the compounds present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(iv) To demonstrate compliance with a kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other halogen reduction device is below the kilogram per hour outlet emission limit specified in a referencing subpart.

§ 63.998 Recordkeeping requirements.

(a) *Compliance determination, monitoring, and compliance records*—(1) *Conditions of flare compliance determination, monitoring, and compliance records.* Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of flare compliance determinations performed pursuant to § 63.987(b).

(i) *Flare compliance determination records.* When using a flare to comply with this subpart, record the information specified in paragraphs (a)(1)(i)(A) through (a)(1)(i)(C) of this section for each flare compliance determination performed pursuant to § 63.987(b). As specified in § 63.999(a)(1)(i), the owner or operator shall include this information in the flare compliance determination report.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance determination; and

(C) All periods during the flare compliance determination when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

(ii) *Monitoring records.* Each owner or operator shall keep up to date and readily accessible hourly records of

whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present. For transfer racks, hourly records are required only while the transfer rack vent stream is being vented.

(iii) *Compliance records.* (A) Each owner or operator shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in § 63.999(b)(9).

(B) Each owner or operator shall keep records of the times and durations of all periods during which the monitor is not operating.

(2) *Performance test and TRE index value determination records for process vents and transfer racks except low throughput transfer racks*—(i) *Conditions of performance tests records.* Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests performed pursuant to §§ 63.988(b), 63.989(b), 63.990(b), 63.991(b), 63.992(b), 63.994(b), or 63.995(b).

(ii) *Nonflare combustion control device and halogen reduction device performance test records.* (A) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the data specified in (a)(2)(ii)(B)(*1*) through (a)(2)(ii)(B)(*3*) of this section, as applicable, measured during each performance test performed pursuant to §§ 63.988(b), 63.989(b), 63.990(b), 63.991(b), 63.992(b), 63.994(b), or 63.995(b), and also include that data in the Initial Compliance Status Report required under § 63.999(a)(1). The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, or the outlet concentration of TOC or regulated material is determined.

(B) *Nonflare combustion device.* Where an owner or operator subject to the provisions of this paragraph seeks to demonstrate compliance with a percent reduction requirement or a parts per million by volume requirement using a nonflare combustion device the information specified in (a)(2)(ii)(B)(*1*) through (a)(2)(ii)(B)(*6*) of this section shall be recorded.

(*1*) For thermal incinerators, record the fire box temperature averaged over the full period of the performance test.

(*2*) For catalytic incinerators, record the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test.

(*3*) For a boiler or process heater with a design heat input capacity less than 44 megawatts and a vent stream that is not introduced with or as the primary fuel, record the fire box temperature averaged over the full period of the performance test.

(*4*) For an incinerator, record the percent reduction of organic regulated material, if applicable, or TOC achieved by the incinerator determined as specified in § 63.997 (e)(2)(i) and (e)(2)(ii), as applicable, or the concentration of organic regulated material (parts per million by volume, by compound) determined as specified in § 63.997 (e)(2)(iii)(B)(*1*) and (e)(2)(iii)(B)(*2*) at the outlet of the incinerator.

(*5*) For a boiler or process heater, record a description of the location at which the vent stream is introduced into the boiler or process heater.

(*6*) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, record the percent reduction of organic regulated material or TOC, or the concentration of regulated material or TOC (parts per million by volume, by compound) determined as specified in § 63.997(e)(2) at the outlet of the combustion device.

(C) *Other nonflare control devices.* Where an owner or operator seeks to use an absorber, condenser, or carbon adsorber as a control device, the information specified in paragraphs (a)(2)(ii)(C)(*1*) through (a)(2)(ii)(C)(*5*) shall be recorded, as applicable.

(*1*) Where an absorber is used as the control device, the exit specific gravity and average exit temperature of the absorbing liquid averaged over the same time period as the performance test (both measured while the vent stream is normally routed and constituted); or

(*2*) Where a condenser is used as the control device, the average exit (product side) temperature averaged over the same time period as the performance test while the vent stream is routed and constituted normally; or

(*3*) Where a carbon adsorber is used as the control device, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the performance test, and temperature of the carbon-bed after each regeneration during the period of the performance test (and within 15 minutes of completion of any cooling cycle or cycles; or

(*4*) As an alternative to paragraph (a)(2)(ii)(B)(*1*), (a)(2)(ii)(B)(*2*), or (a)(2)(ii)(B)(*3*) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber averaged over the same time period as the TRE determination while the vent stream is normally routed and constituted.

(*5*) For an absorber, condenser, or carbon adsorber used as a control device, the percent reduction of regulated material achieved by the control device or concentration of regulated material (parts per million by volume, by compound) at the outlet of the control device.

(D) *Halogen reduction devices.* When using a scrubber following a combustion device to control a halogenated vent stream, record the information specified in paragraphs (a)(2)(ii)(D)(*1*) through (a)(2)(ii)(D)(*3*) of this section.

(*1*) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in § 63.997(e)(3).

(*2*) The pH of the scrubber effluent averaged over the time period of the performance test; and

(*3*) The scrubber liquid-to-gas ratio averaged over the time period of the performance test.

(3) *Recovery device monitoring records during TRE index value determination.* For process vents that require control of emissions under a referencing subpart shall maintain the continuous records specified in paragraph (a)(3)(i) through (a)(3)(v) of this section, as applicable.

(i) Where an absorber is the final recovery device in the recovery system, the exit specific gravity (or alternative parameter that is a measure of the degree of absorbing liquid saturation if approved by the Administrator) and average exit temperature of the absorbing liquid averaged over the same time period as the TRE index value determination (both measured while the vent stream is normally routed and constituted); or

(ii) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature averaged over the same time period as the TRE index value determination while the vent stream is routed and constituted normally; or

(iii) Where a carbon adsorber is the final recovery device in the recovery system, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the TRE index value determination, and

temperature of the carbon-bed after each regeneration during the period of the TRE index value determination (and within 15 minutes of completion of any cooling cycle or cycles; or

(iv) As an alternative to paragraph (a)(3)(i), (a)(3)(ii), or (a)(3)(iii) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber averaged over the same time period as the TRE index value determination while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream as specified in a referencing subpart.

(4) *Halogen concentration records.* Record the halogen concentration in the vent stream determined according to the procedures specified in a referencing subpart. Submit this record in the Initial Compliance Status Report, as specified in § 63.999(b)(8).

(b) *Continuous records and monitoring system data handling.*

(1) Where this subpart requires a continuous record, the owner or operator shall maintain the record specified in paragraphs (b)(1)(i) or (b)(1)(ii) of this section, as applicable:

(i) A record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or

(ii) A record of block average values for 15-minutes or shorter periods calculated from all measured data values during each period or at least one measured data value per minute if measured more frequently than once per minute.

(iii) The owner or operator may calculate and retain block hourly average values from each 15 minute block averages period or from at least one measured value per minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records.

(iv) A record as required by an alternative approved under paragraph (c)(5) of this section.

(2) Monitoring data recorded during periods identified in paragraphs (b)(2)(i) through (b)(2)(iii) of this section, shall not be included in any average computed to determine compliance under this subpart.

(i) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

(iii) Startups, shutdowns, and malfunctions.

(3) Owners or operators shall also keep records as specified in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, unless an alternative monitoring or recordkeeping system has been requested and approved under paragraph (c)(5) of this section.

(i) Except as specified in paragraph (b)(3)(ii) of this section, 3-hour average values of each continuously monitored parameter shall be calculated from data meeting the specifications of paragraph (b)(2) of this section for each 3-hour period of operation, and retained for 5 years.

(A) The 3-hour average shall be calculated as the average of all values for a monitored parameter recorded during 3-hours of operation. The average shall cover a 3-hour period if operation is continuous, or the period of operation per 3 hours if operation is not continuous (e.g., for transfer racks the average shall cover periods of loading). If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the 3-hour average instead of all measured values.

(B) The 3-hour periods of operation that are to be included in the 3-hour averages shall be defined in the operating permit or the Initial Compliance Status Report.

(ii) If all recorded values for a monitored parameter during a 3-hour period are within the range established in the Initial Compliance Status Report or in the operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a 3-hour average for that 3-hour period.

(4) Unless determined otherwise according to paragraph (b)(5) of this section, the data collected pursuant to paragraphs (b)(1) through (b)(3) of this section shall be considered valid.

(5) For any parameter with respect to any item of equipment associated with a process vent or transfer rack (except low throughput transfer loading racks), the owner or operator may implement the recordkeeping requirements in paragraphs (b)(5)(i) or (b)(5)(ii) of this section as alternatives to the continuous parameter monitoring and recordkeeping provisions listed in paragraphs (b)(1) through (b)(3) of this section. The owner or operator shall retain each record required by paragraphs (b)(5)(i) or (b)(5)(ii) of this section as provided in a referencing subpart, except as provided otherwise in paragraphs (b)(5)(i) or (b)(5)(ii) of this section.

(i) The owner or operator may retain only the 3-hour average value, and is not required to retain more frequently monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (b)(5)(i)(A) through (b)(5)(i)(F) of this section are met. The owner or operator shall notify the Administrator in the Initial Compliance Status Report or, if the Initial Compliance Status Report has already been submitted in the Periodic Report immediately preceding implementation of the requirements of this paragraph.

(A) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than startups, shutdowns or malfunctions (e.g., a temperature reading of −200 °C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in a 3-hour period constitute a single occurrence.

(B) The monitoring system generates a running average of the monitoring values, updated at least hourly throughout each 3-hour period, that have been obtained during that 3-hour period, and the capability to observe this average is readily available to the Administrator on-site during the 3-hour period. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (b)(5)(i)(B)(*1*) through (b)(5)(i)(B)(*2*) of this section. All instances in a 3-hour period constitute a single occurrence.

(*1*) The running average is above the maximum or below the minimum established limits;

(*2*) The running average is based on at least three one-hour average values; and

(*3*) The running average reflects a period of operation other than a startup, shutdown, or malfunction.

(C) The monitoring system is capable of detecting unchanging data during periods of operation other than startups, shutdowns or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in a 3-hour period constitute a single occurrence.

(D) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (b)(5)(i)(B)

of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(E) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (b)(5)(i) of this section, at the times specified in paragraphs (b)(5)(i)(E)(*1*) through (b)(5)(i)(E)(*3*) of this section. The owner or operator shall document that the required verifications occurred.

(*1*) Upon initial installation.

(*2*) Annually after initial installation.

(*3*) After any change to the programming or equipment constituting the monitoring system, that might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(F) The owner or operator shall retain the records identified in paragraphs (b)(5)(i)(F)(*1*) through (b)(5)(i)(F)(*3*) of this section.

(*1*) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (c)(5) of this section.

(*2*) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraph (b)(5)(i)(A) through (b)(5)(i)(E) of this section. The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in the subpart that references this subpart, except as provided in paragraph (b)(5)(i)(F)(*1*) of this section.

(*3*) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of paragraph (b)(5)(i) of this section.

(*4*) Owners and operators subject to paragraph (b)(5)(i)(F)(*2*) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall be retained on-site at all times or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after being superseded. Thereafter, the superseded description may be stored off-site.

(ii) If an owner or operator has elected to implement the requirements of paragraph (b)(5)(i) of this section, and a period of 6 consecutive months has passed without an excursion as defined in paragraph (b)(5)(ii)(D) of this section, the owner or operator is no longer required to record the 3-hour average value for that parameter for that unit of equipment, for any 3-hour period when the 3-hour average value is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring were required and/or approved by the Administrator.

(A) If the owner or operator elects not to retain the 3-hour average values, the owner or operator shall notify the Administrator in the next Periodic Report. The notification shall identify the parameter and unit of equipment.

(B) If there is an excursion as defined in paragraph (b)(5)(ii)(D) of this section in any 3-hour period after the owner or operator has ceased recording 3-hour averages as provided in paragraph (b)(5)(ii) of this section, the owner or operator shall immediately resume retaining the 3-hour average value for each 3-hour period, and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each 3-hour average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (b)(5)(ii)(D) of this section.

(C) The owner or operator shall retain the records specified in paragraphs (b)(5)(i)(A) through (b)(5)(i)(F) of this section for the duration specified in a referencing subpart. For any calendar week, if compliance with paragraphs (b)(5)(i)(A) through (b)(5)(i)(D) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a startup, shutdown, or malfunction.

(D) For purposes of paragraph (b)(5)(ii) of this section, an excursion means that the 3-hour average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (b)(5)(ii)(D)(*1*) and (b)(5)(ii)(D)(*2*) of this section.

(*1*) The 3-hour average value during any startup, shutdown or malfunction shall not be considered an excursion for purposes of paragraph (b)(5)(ii), if the owner or operator follows the applicable provisions of the startup, shutdown, and malfunction plan required by a referencing subpart.

(*2*) An excused excursion, as described in paragraph (b)(5)(ii)(E), shall not be considered an excursion for purposes of this paragraph.

(E) One excused excursion for each control device or recovery device for each semiannual period is allowed. If a source has developed a startup, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of startup, shutdown, or malfunction (and the source is operated during such periods in accordance with the startup, shutdown, and malfunction plan) or during periods of nonoperation of the process unit or portion thereof (resulting in cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.

(c) *Nonflare control and recovery device regulated source monitoring records*—(1) *Monitoring system records.* The owner or operator subject to this subpart shall keep the records specified in this paragraph, as well as records specified elsewhere in this part.

(i) For CPMS's used to comply with this part, a record of the procedure used for calibrating the CPMS.

(ii) For a CPMS used to comply with this subpart, records of the information specified in paragraphs (c)(1)(ii)(A) through (c)(1)(ii)(E) of this section, as indicated in a referencing subpart.

(A) The date and time of completion of calibration and preventive maintenance of the CPMS.

(B) The ''as found'' and ''as left'' CPMS readings, whenever an adjustment is made that affects the CPMS reading and a ''no adjustment'' statement otherwise.

(C) The start time and duration or start and stop times of any periods when the CPMS is inoperative.

(D) Records of the occurrence and duration of each startup, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions (as defined in a referencing subpart).

(E) For each startup, shutdown, and malfunction during which excess emissions as defined in a referencing subpart occur, records that the procedures specified in the source's

startup, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a ''checklist,'' or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event.

(iii) *Batch unit operation compliance monitoring records.* If all recorded values for a monitored parameter during a 3-hour period are above the minimum or below the maximum level established in accordance with what is specified in the referencing subpart, the owner or operator may record that all values were above the minimum or below the maximum level established, rather than calculating and recording a 3-hour average or batch cycle 3-hour average for that 3-hour period. Monitoring data recorded during periods of non-operation of the process resulting in cessation of regulated material emissions shall not be included in computing the batch cycle 3-hour averages.

(2) *Combustion control and halogen reduction device monitoring records.*

(i) Each owner or operator using a combustion control or halogen reduction device to comply with this subpart shall keep the following records up-to-date and readily accessible, as applicable. Continuous records of the equipment operating parameters specified to be monitored under §§ 63.988(c) (incinerator monitoring), 63.989(c) (boiler and process heater monitoring), 63.994(c) (halogen reduction device monitoring), and 63.995(c) (other combustion systems used as a control device) or specified by the Administrator in accordance with paragraph (c)(5) of this section.

(ii) Each owner or operator shall keep records of the 3-hour average value of each continuously monitored parameter for each 3-hour period determined according to the procedures specified in paragraph (b)(3)(i) of this section. For catalytic incinerators, record the 3-hour average of the temperature upstream of the catalyst bed and the 3-hour average of the temperature differential across the bed. For halogen scrubbers record the pH and the liquid-to-gas ratio.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are the 3-hour average values established pursuant to §§ 63.988(c)(2) (incinerator monitoring), 63.989(c)(2) (boiler and process heater monitoring), 63.994(c)(3) (halogen reduction device monitoring), or 63.995(c)(2) (other combustion systems used as control devices monitoring), as applicable.

(3) *Monitoring records for recovery device process vents, and for absorbers, condensers, carbon adsorbers or other noncombustion systems used as control devices.*

(i) Each owner or operator using a recovery device to achieve and maintain a TRE index value greater than the control applicability level specified in the referencing subpart but less than 4.0 or using an absorber, condenser, carbon adsorber or other non-combustion system as a control device shall keep readily accessible, continuous records of the equipment operating parameters specified to be monitored under §§ 63.990(c) (absorber monitoring), 63.991(c) (condenser monitoring), 63.992(c) (carbon adsorber monitoring), or 63.995(c) (other noncombustion systems used as a control device monitoring) or specified by the Administrator in accordance with paragraph (c)(5) of this section. For transfer racks, continuous records are required while the transfer vent stream is being vented.

(ii) Each owner or operator shall keep records of the 3-hour average value of each continuously monitored parameter for each 3-hour period determined according to the procedures specified in § 63.998(b)(1)(iii)(A). If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in paragraphs (c)(3)(ii)(A) and (c)(3)(ii)(B) of this section shall be kept instead of the 3-hour averages.

(A) Records of total regeneration stream mass or volumetric flow for each carbon-bed regeneration cycle.

(B) Records of the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are the 3-hour average values established pursuant to §§ 63.990(c)(2) (absorber monitoring), 63.991(c)(2) (condenser monitoring), 63.992(c)(2) (carbon adsorber monitoring), or 63.995(c)(2) (other noncombustion systems used as control devices monitoring), as applicable.

(4) *Alternatives to the continuous operating parameter monitoring and recordkeeping provisions.* An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in §§ 63.988(c), 63.989(c), 63.990(c), 63.991(c), 63.992(c), 63.993(c), 63.994(c), 63.998(a)(2) through (a)(4), and paragraphs (c)(2) and (c)(3) of this section.

(i) Requests shall be included in the operating permit application or as otherwise specified by the permitting authority, and shall contain the information specified in paragraphs (c)(4)(iii) of this section.

(ii) The provisions specified in a referencing subpart will govern the review and approval of requests.

(iii) An owner or operator may request approval to use other alternative monitoring and recordkeeping systems as specified in a referencing subpart. The application shall contain a description of the proposed alternative system. In addition, the application shall include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the regulated source using the required method.

(5) *Monitoring a different parameter than those listed.* The owner or operator who has been directed by any section of this subpart that expressly references this paragraph to set unique monitoring parameters or who requests, as allowed by § 63.996(d), approval to monitor a different parameter than those listed in §§ 63.988(c), 63.989(c), 63.990(c), 63.991(c), 63.992(c), 63.993(c), 63.994(c), 63.998(a)(2) through (a)(4), or paragraphs (c)(2) or (c)(3) of this section, or who has been directed by §§ 63.994(c)(2) or 63.995(c)(1) to set unique monitoring parameters shall submit the information specified in paragraphs (c)(5)(i) through (c)(5)(iii) of this section with the operating permit application or as otherwise specified by the permitting authority.

(i) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Initial Compliance Status Report if required under a referencing subpart, unless this information has already been included in the operating permit application.

(iii) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of 3-hour average values when the monitored parameter value is outside the range established in the operating permit or Initial Compliance Status Report will not be included in Periodic Reports required under § 63.999(b)(6)(i). The rationale for the proposed monitoring, recording, and reporting system shall be included.

(d) *Other records.*—(1) *Closed vent system records.* For closed vent systems the owner or operator shall record the information specified in paragraphs (d)(1)(i) through (d)(1)(iv) of this section, as applicable.

(i) For closed vent systems collecting regulated material from a regulated source, the owner or operator shall record the identification of all parts of the closed vent system, that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by § 63.983(b)(2)(ii) or (b)(3)(ii).

(ii) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (d)(1)(ii)(A) or (d)(1)(ii)(B) of this section, as applicable.

(A) Hourly records of whether the flow indicator specified under § 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(B) Where a seal mechanism is used to comply with § 63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(iii) For a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in § 63.983(d)(1), the information specified in paragraphs (d)(1)(iii)(A) through (d)(1)(iii)(F) of this section shall be recorded and kept for 2 years.

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of the first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) The maximum instrument reading measured by the procedures in § 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(E) ''Repair delayed'' and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(F) Copies of the periodic reports as specified in § 63.999(b), if records are not maintained on a computerized database capable of generating summary reports from the records.

(iv) For each instrumental or visual inspection conducted in accordance with § 63.983(b)(1) for closed vent systems collecting regulated material from a regulated source during which no leaks are detected, the owner or operator shall record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(2) *Storage vessel records.* An owner or operator shall keep readily accessible records of the information specified in paragraphs (d)(2)(i) through (d)(2)(iii) of this section, as applicable.

(i) A record of the measured values of the parameters monitored in accordance with § 63.985(c) or § 63.987(c).

(ii) A record of the planned routine maintenance performed on the control system during which the control system does not meet the applicable specifications of §§ 63.983(a), 63.985(a), or 63.987(a), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in paragraphs (d)(2)(ii)(A) through (d)(2)(ii)(C) of this section. This information shall be submitted in the periodic reports as specified in § 63.999(b)(1)(i).

(A) The first time of day and date the requirements of §§ 63.983(a). § 63.985(a), or § 63.987(a), as applicable, were not met at the beginning of the planned routine maintenance, and

(B) The first time of day and date the requirements of §§ 63.983(a), 63.985(a), or 63.987(a), as applicable, were met at the conclusion of the planned routine maintenance.

(C) A description of the type of maintenance performed.

(iii) *Bypass records for storage vessel emissions routed to a process or fuel gas system.* An owner or operator who uses the bypass provisions of § 63.983(a)(3) shall keep in a readily accessible location the records specified in paragraphs (d)(2)(iii)(A) through (d)(2)(iii)(C) of this section.

(A) The reason it was necessary to bypass the process equipment or fuel gas system;

(B) The duration of the period when the process equipment or fuel gas system was bypassed;

(C) Documentation or certification of compliance with the applicable provisions of § 63.983(a)(3)(i) or (a)(3)(ii).

(3) *Regulated source and control equipment startup, shutdown and malfunction records.*

(i) Records of the occurrence and duration of each startup, shutdown, and malfunction of operation of process equipment or of air pollution control equipment used to comply with this part during which excess emissions (as defined in a referencing subpart) occur.

(ii) For each startup, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's startup, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a startup, shutdown, and malfunction plan includes procedures for routing control device emissions to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a ''checklist,'' or other form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for the event.

(4) *Equipment leak records.* The owner or operator shall maintain records of the information specified in paragraphs (d)(4)(i) and (d)(4)(ii) of this section for closed vent systems and control devices if specified by the equipment leak provisions in a referencing subpart. The records specified in paragraph (d)(4)(i) of this section shall be retained for the life of the equipment. The records specified in paragraph (d)(4)(ii) of this section shall be retained for 2 years.

(i) The design specifications and performance demonstrations specified

in paragraphs (d)(4)(i)(A) through (d)(4)(i)(C) of this section.

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) A description of the parameter or parameters monitored, as required in a referencing subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(ii) Records of operation of closed vent systems and control devices, as specified in paragraphs (d)(4)(ii)(A) through (d)(4)(ii)(C) of this section.

(A) Dates and durations when the closed vent systems and control devices required are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of startups and shutdowns of control devices required in this subpart.

§ 63.999 Notifications and other reports.

(a) *Performance test and flare compliance determination notifications and reports.*

(1) *General requirements.* General requirements for performance test and flare compliance determination notifications and reports are specified in paragraphs (a)(1)(i) through (a)(1)(iii) of this section.

(i) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to allow the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original test date. The owner or operator shall provide at least 7 days prior notice of the rescheduled date of the performance test, or arrange a rescheduled date with the Administrator by mutual agreement.

(ii) Unless specified differently in this subpart or a referencing subpart, performance test and flare compliance determination reports, not submitted as part of an Initial Compliance Status Report, shall be submitted to the Administrator within 60 days of completing the test or determination.

(iii) Any application for a waiver of an initial performance test or flare compliance determination, as allowed by § 63.997(b)(2), shall be submitted no later than 90 calendar days before the performance test or compliance determination is required. The application for a waiver shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.

(2) *Performance test and flare compliance determination report submittal and content requirements.* Performance test and flare compliance determination reports shall be submitted as specified in paragraphs (a)(2)(i) through (a)(2)(iii) of this section.

(i) For performance tests of flare compliance determinations, the Initial Compliance Status Report or performance test and flare compliance determination report shall include one complete test report as specified in paragraph (a)(2)(ii) of this section for each test method used for a particular kind of emission point and other applicable information specified in (a)(2)(iii) of this section. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of this subpart shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(iii) The performance test or flare compliance determination report shall also include the information specified in (a)(2)(iii)(A) through (a)(2)(iii)(C), as applicable.

(A) For flare compliance determinations, the owner or operator shall submit the records specified in § 63.998(a)(1)(i).

(B) For nonflare combustion device and halogen reduction device performance tests as required under §§ 63.988(b), 63.989(b), 63.990(b), 63.991(b), 63.992(b), 63.994(b), or 63.995(b), also submit the records specified in § 63.998(a)(2)(ii), as applicable.

(C) For process vents also submit the records specified in § 63.998(a)(3), as applicable.

(b) *Control device monitoring reports.*

(1) *Control of emissions from storage vessels, periodic reports.* For storage vessels, the owner or operator shall include in each periodic report required the information specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section.

(i) For the 6-month period covered by the periodic report, the information recorded in § 63.998(d)(2)(ii)(A) through (d)(2)(iii)(C).

(ii) For the time period covered by the periodic report and the previous periodic report, the total number of hours that the control system did not meet the requirements of §§ 63.983(a), 63.985(a), or 63.987(a) due to planned routine maintenance.

(iii) A description of the planned routine maintenance during the next 6-month periodic reporting period that is anticipated to be performed for the control system when it is not expected to meet the required control efficiency. This description shall include the type of maintenance necessary, planned frequency of maintenance, and expected lengths of maintenance periods.

(2) *Control of emissions from storage vessels and transfer racks through routing to a fuel gas system or process, Initial Compliance Status Report.* An owner or operator who elects to comply with § 63.984 by routing emissions from a storage vessel or transfer rack to a process or to a fuel gas system shall submit as part of the Initial Compliance Status Report the information specified in paragraphs (b)(2)(i) and (b)(2)(ii), or (b)(2)(iii) of this section, as applicable.

(i) *Storage vessels.* If storage vessels emissions are routed to a process, the owner or operator shall submit the information specified in § 63.984(b)(2).

(ii) *Storage vessels.* If storage vessels emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of § 63.983.

(iii) *Transfer racks.* Report that the transfer operation emission stream is being routed to a fuel gas system or process, when complying with a referencing subpart.

(3) *Control of emissions from storage vessels and low throughput transfer racks through a nonflare control device, Initial Compliance Status Report.* An owner or operator who elects to comply with § 63.985 by routing emissions from

a storage vessel or low throughput transfer rack to a nonflare control device shall submit, with the Initial Compliance Status Report required by a referencing subpart, the information specified in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, and in either paragraph (b)(3)(iii) or (b)(3)(iv) of this section; and paragraph (b)(3)(v), if applicable.

(i) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed (e.g., when the liquid level in the storage vessel is being raised). If continuous records are specified, whether the provisions of paragraphs (b)(6)(i) and (b)(6)(iii) of this section apply.

(ii) The information specified in paragraphs (b)(3)(ii)(A) and, if applicable, (b)(3)(ii)(B) of this section.

(A) The operating range for each monitoring parameter identified in the monitoring plan. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(B) Summary of the results of the performance test described in § 63.985(b)(1)(ii) or (b)(1)(iii), as applicable. If a performance test is conducted as provided in § 63.985(b)(1)(ii), submit the results of the performance test, including the information specified in § 63.999(a)(1)(i) and (a)(1)(ii).

(iii) The documentation specified in § 63.985(b)(1)(i), if the owner or operator elects to prepare a design evaluation; or

(iv) The information specified in paragraphs (b)(3)(iv)(A) and (b)(3)(iv)(B) of this section if the owner or operator elects to submit the results of a performance test as specified in § 63.985(b)(1)(ii) or (b)(1)(iii).

(A) Identification of the storage vessel or transfer rack and control device for which the performance test will be submitted, and

(B) Identification of the emission point(s), if any, that share the control device with the storage vessel or transfer rack and for which the performance test will be conducted.

(v) The provisions of paragraphs (b)(6)(i) and (b)(6)(ii) of this section do not apply to any low throughput transfer rack for which the owner or operator has elected to comply with § 63.985 or to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under (b)(3)(i) and (b)(3)(ii) of this section to keep continuous records. If continuous records are required, the owner or operator shall specify in the monitoring plan whether the provisions of paragraphs (b)(6)(i) and (b)(6)(ii) of this section apply.

(4) *Control of emissions from storage vessels and low throughput transfer racks through a nonflare control device, periodic reports.* If a control device other than a flare is used to control emissions from storage vessels or low throughput transfer racks, the periodic report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Initial Compliance Status Report in accordance with paragraph (b)(3) of this section. The description shall include the information specified in paragraphs (b)(4)(i) and (b)(4)(ii) of this section.

(i) Identification of the control device for which the measured parameters were outside of the established ranges, and

(ii) The cause for the measured parameters to be outside of the established ranges.

(5) *Control of emissions from process vents and transfer operations (except low throughput transfer racks), Initial Compliance Status Report.* The owner or operator shall submit as part of the Initial Compliance Status Report, the operating range for each monitoring parameter identified for each control, recovery, or halogen reduction device as determined in §§ 63.988(c)(2), 63.989(c)(2), 63.990(c)(2), 63.991(c)(2), 63.992(c)(2), 63.993(c)(5), 63.994(c)(3), and 63.995(c)(2). The specified operating range shall represent the conditions for which the control, recovery, or halogen reduction device is being properly operated and maintained. This report shall include the information in paragraphs (b)(5)(i) through (b)(5)(iii) of this section, as applicable, unless the range and the 3-hour periods have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control, recovery, or halogen reduction device, as specified in paragraphs (b)(5)(ii)(A), (b)(5)(ii)(B), or (b)(5)(ii)(C) of this section, as applicable.

(A) If a performance test or TRE index value determination is required a referencing subpart for a control, recovery or halogen removal device, the range shall be based on the parameter values measured during the TRE index value determination or performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. TRE index value determinations and performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test or TRE index value determination is not required by a referencing subpart for a control, recovery, or halogen reduction device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(C) The range may be based on ranges or limits previously established under a referencing subpart.

(iii) A definition of the source's 3-hour periods for purposes of determining 3-hour average values of monitored parameters. The definition shall specify the times at which a 3-hour period begins and ends.

(6) *Control of emissions from regulated sources, periodic reports.* (i) Periodic reports shall include the 3-hour average values of monitored parameters, calculated as specified in § 63.998(c)(1) for any days when the 3-hour average value is outside the bounds as defined in § 63.998(b)(2) or the data availability requirements defined in paragraphs (b)(6)(i)(A) through (b)(6)(i)(D) of this section are not met, whether these excursions are excused or unexcused excursions. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified. An excursion means any of the three cases listed in paragraphs (b)(6)(i)(A) through (b)(6)(i)(C) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (b)(6)(i)(A) through (b)(6)(i)(C) of this section, this is considered a single excursion for the control device.

(A) When the 3-hour average value of one or more monitored parameters is outside the permitted range.

(B) When the period of control or recovery device operation is 4 hours or greater in a 3-hour period and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(C) When the period of control or recovery device operation is less than 4 hours in a 3-hour period and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(D) Monitoring data are insufficient to constitute a valid hour of data as used in paragraphs (b)(6)(i)(B) and (b)(6)(i)(C) of this section, if measured values are unavailable for any of the 15-minute periods within the hour.

(ii) Report all carbon-bed regeneration cycles during which the parameters recorded under § 63.998(a)(2)(ii)(C) were outside the ranges established in the Initial Compliance Status Report or in the operating permit.

(7) *Replacing an existing control or recovery device.* As specified in §§ 63.987(b)(2), 63.988(b)(3), 63.989(b)(3), 63.990(b)(2), 63.991(b)(2), 63.992(b)(2), or 63.993(b)(2), if an owner or operator at a facility not required to obtain a title V permit elects at a later date to use a different control or recovery device, then the Administrator shall be notified by the owner or operator before implementing the change. This notification may be included in the facility's periodic reporting.

(8) *Halogen reduction device.* The owner or operator shall submit as part of the Initial Compliance Status Report the information recorded pursuant to § 63.998(a)(4).

(9) *Flare compliance monitoring results.* The owner or operator shall submit as part of the periodic reports the information recorded pursuant to § 63.998(a)(1)(iii).

3. Part 63 is amended by adding subpart TT to read as follows:

Subpart TT—National Emission Standards for Equipment Leaks—Control Level 1

Sec.

§ 63.1000 Applicability.

(a) The provisions of this subpart apply to the control of air emissions from equipment leaks for which another subpart references the use of this subpart for such air emission control. These air emission standards for equipment leaks are placed here for administrative convenience and only apply to those owners and operators of facilities subject to the referencing subpart. The provisions of 40 CFR part 63 subpart A (General Provisions) do not apply to this subpart except as noted in the referencing subpart.

(b) *Equipment subject to this subpart.* This subpart applies to pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors and any closed vent systems and control devices used to meet the requirements of this subpart that contacts or services regulated material as specified in the referencing subpart.

(c) *Exemptions.* Paragraphs (c)(1) and (c)(2) delineate equipment that is excluded from the requirements of this subpart.

(1) *Equipment in vacuum service.* Equipment that is in vacuum service is excluded from the requirements of this subpart.

(2) *Equipment in service less than 300 hours per calendar year.*

(i) Equipment that is in regulated material service less than 300 hours per calendar year is excluded from the requirements of §§ 63.1006 through 63.1015 of this subpart if it is identified as required in paragraph (c)(2)(ii) of this section.

(ii) The identity, either by list, location (area or group), or other method, of equipment in regulated-material service less than 300 hours per calendar year within a process unit and affected facility subject to the provisions of this subpart shall be recorded.

(iii) *Lines and equipment not containing process fluids.* Except as provided in a referencing subpart, lines and equipment not containing process fluids are not subject to the provisions of this subpart. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process unit or affected facility.

§ 63.1001 Definitions.

All terms used in this part shall have the meaning given them in the Act and in this section.

Connector means flanged, screwed, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are not inaccessible, ceramic, or ceramic-lined (e.g., porcelain, glass, or glass-lined) as described in § 63.1008(d)(2) of this subpart.

Distance piece means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in regulated-material service; and any control devices or systems used to comply with this subpart.

First attempt at repair, for the purposes of this subpart, means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in § 63.1004(b) of this subpart, as appropriate, to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

In gas or vapor service means that a piece of equipment in regulated material service contains a gas or vapor at operating conditions.

In heavy liquid service means that a piece of equipment in regulated-material service is not in gas or vapor service or in light liquid service.

In light liquid service means that a piece of equipment in regulated-material service contains a liquid that meets the following conditions:

(1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kilopascals at 20 °C,

(2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kilopascals at 20 °C is equal to or greater than 20 percent by weight of the total process stream, and

(3) The fluid is a liquid at operating conditions.

(**NOTE:** Vapor pressures may be determined by standard reference texts or ASTM D–2879.)

In liquid service means that a piece of equipment in regulated-material service is not in gas or vapor service.

In regulated-material service means, for the purposes of this subpart, equipment which meets the definition of ''in VOC service'', ''in VHAP service'', ''in organic hazardous air pollutant service,'' or ''in'' other chemicals or groups of chemicals ''service'' as defined in the referencing subpart.

In-situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kilopascals below ambient pressure.

Instrumentation system means a group of equipment components used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (e.g., composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in instrumentation systems; however, other types of equipment may also be included in these systems. Only valves nominally 1.27 centimeters (0.5 inches) and smaller, and connectors nominally 1.91 centimeters (0.75 inches) and smaller in diameter are considered instrumentation systems for the purposes of this subpart. Valves greater than nominally 1.27 centimeters (0.5 inches) and connectors greater than nominally 1.91 centimeters (0.75 inches) associated with instrumentation systems are not considered part of instrumentation systems and must be monitored individually.

Liquids dripping means any visible leakage from the seal including dripping, spraying, misting, clouding, and ice formation. Indications of liquids dripping include puddling or new stains that are indicative of an existing evaporated drip.

Nonrepairable means that it is technically infeasible to repair a piece of equipment from which a leak has been detected without a process unit or affected facility shutdown.

Open-ended valve or line means any valve, except relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

Organic monitoring device means a unit of equipment used to indicate the concentration level of organic compounds based on a detection principle such as infra-red, photo ionization, or thermal conductivity.

Pressure relief device or valve means a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process equipment. A common pressure relief device is a spring-loaded pressure relief valve. Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the relief device. This release can be one release or a series of releases over a short time period due to a malfunction in the process.

Referencing subpart means the subpart which refers an owner or operator to this subpart.

Regulated material, for purposes of this subpart, refers to gases from volatile organic liquids (VOL), volatile organic compounds (VOC), hazardous air pollutants (HAP), or other chemicals or groups of chemicals that are regulated by the referencing subpart.

Regulated source for the purposes of this subpart, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a referencing subpart.

Relief device or valve means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

Repaired, for the purposes of this subpart and subpart SS of this part, means the following:

(1) Equipment is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart, and

(2) Equipment, unless otherwise specified in applicable provisions of this subpart, is monitored as specified in § 63.1004(b) and subpart SS of this part, as appropriate, to verify that emissions from the equipment are below the applicable leak definition.

Sampling connection system means an assembly of equipment within a process unit or affected facility used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Screwed (threaded) connector means a threaded pipe fitting where the threads are cut on the pipe wall and the fitting requires only two pieces to make the connection (i.e., the pipe and the fitting).

§ 63.1002 Compliance determination.

(a) *General procedures for compliance determination.* Compliance with this subpart will be determined by review of the records required by § 63.1017 and the reports required by § 63.1018, by review of performance test results, and by inspections.

(b) *Alternative means of emission limitation.* (1) An owner or operator may request a determination of alternative means of emission limitation to the requirements of §§ 63.1006 through 63.1015 as provided in paragraphs (b)(2) through (b)(6) of this section. If the Administrator makes a determination that an alternative means of emission limitation is a permissible alternative, the owner or operator shall comply with the alternative.

(2) Permission to use an alternative means of emission limitation shall be governed by the following procedures in paragraphs (b)(3) through (b)(6) of this section.

(3) Where the standard is an equipment, design, or operational requirement the criteria specified in paragraphs (b)(3)(i) and (b)(3)(ii) shall be met.

(i) Each owner or operator applying for permission to use an alternative means of emission limitation shall be responsible for collecting and verifying emission performance test data for an alternative means of emission limitation.

(ii) The Administrator will compare test data for the means of emission limitation to test data for the equipment, design, and operational requirements.

(4) Where the standard is a work practice the criteria specified in paragraphs (b)(4)(i) through (b)(4)(vi) shall be met.

(i) Each owner or operator applying for permission shall be responsible for collecting and verifying test data for an alternative means of emission limitation.

(ii) For each kind of equipment for which permission is requested, the emission reduction achieved by the required work practices shall be demonstrated for a minimum period of 12 months.

(iii) For each kind of equipment for which permission is requested, the emission reduction achieved by the alternative means of emission limitation shall be demonstrated.