ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9 and 63

[AD–FRL–5508–6]

RIN 2060–AE37

National Emissions Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) from existing and new plant sites that emit organic hazardous air pollutants (HAP) identified on the EPA's list of 189 HAP. The organic HAP are emitted during the manufacture of one or more of the following Group IV polymers and resins: acrylonitrile butadiene styrene resin (ABS), styrene acrylonitrile resin (SAN), methyl methacrylate acrylonitrile butadiene styrene resin (MABS), methyl methacrylate butadiene styrene resin (MBS), polystyrene resin, poly (ethylene terephthalate) resin (PET), and nitrile resin.

In the production of thermoplastics, a variety of organic HAP are used as monomers or are created as by-products. Some of these organic HAP are considered to be mutagens and carcinogens, and all can cause reversible or irreversible toxic effects following exposure. The potential toxic effects include eye, nose, throat, and skin irritation; liver and kidney toxicity, and neurotoxicity. There effects can range from mild to severe. The standards are estimated to reduce organic HAP emissions from existing affected sources by 3,550 megagrams per year (Mg/yr).

The intent of this rule is to protect the public by requiring the maximum degree of reduction in emissions of organic HAP from new and existing major sources. The emissions reductions achieved by these standards, when combined with the emission reductions achieved by other similar standards, will achieve the primary goal of the Clean Air Act (Act) as amended in 1990.

EFFECTIVE DATE: September 12, 1996. See the Supplementary Information section concerning judicial review.

ADDRESSES: *Docket.* Docket No. A–92–45, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8 a.m. and 5:30 p.m., Monday through Friday at the following address in room M–1500, Waterside Mall (ground floor) U.S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC–6102), 401 M Street SW., Washington, DC 20460; telephone: (202) 260–7549. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For information concerning applicability and rule determinations contact:

Region I—Greg Roscoe, Air Programs Compliance, Branch Chief, U.S. EPA, Region I, SEA, JFK Federal Building, Boston, MA 02203, (617) 565–3221.

Region II—Kenneth Eng, Air Compliance Branch Chief, U.S. EPA, Region II, 290 Broadway, New York, NY 10007–1866, (212) 637–4000.

Region III—Bernard Turlinski, Air Enforcement Branch Chief, U.S. EPA, Region III, 3AT10, 841 Chestnut Building, Philadelphia, PA 19107, (205) 597–3989.

Region IV—Jewell A. Harper, Air Enforcement Branch, U.S. EPA, Region IV, 345 Courtland Street, N.E., Atlanta, GA 30365, (404) 347–2904.

Region V—George T. Czerniak, Jr., Air Enforcement Branch Chief, U.S. EPA, Region V, 5AE–26, 77 West Jackson Street, Chicago, IL 60604, (312) 353–2088.

Region VI—John R. Hepola, Air Enforcement Branch Chief, U.S. EPA, Region VI, 1445 Ross Avenue, Suite 1200, Dallas, TX 75202–2733, (214) 665–7220.

Region VII—Donald Toensing, Chief, Air Permitting and Compliance Branch, U.S. EPA, Region VII, 726 Minnesota Avenue, Kansas City, KS 66101, (913) 551–7446.

Region VIII—Douglas M. Skie, Air and Technical Operations Branch Chief, U.S. EPA, Region VIII, 999 18th Street, Suite 500, Denver, CO 80202–2466, (303) 312–6432.

Region IX—Colleen W. McKaughan, Air Compliance Branch Chief, U.S. EPA, Region IX, 75 Hawthorne Street, San Francisco, CA 94105, (415) 744–1198.

Region X—Air and Radiation Branch Chief, U.S. EPA, Region X, AT–092, 1200 Sixth Avenue, Seattle, WA 98101, (206) 533–1152.

For information concerning the analyses performed in developing this rule, contact Mr. Robert Rosensteel at (919) 541–5410, organic Chemicals Group, Emission Standards Division (MD–13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by this action are those facilities which manufacture one or more of the 7 thermoplastic products identified in the rule and listed below:

Category	Examples of regulated entities
Industry	Facilities which manufacture acrylonitrile butadiene styrene resin, styrene acrylonitrile resin, methyl methacrylate acrylonitrile butadiene styrene resin, methyl methacrylate butadiene styrene resin, polystyrene resin, poly (ethylene terephthalate) resin, or nitrile resin.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should carefully examine the applicability criteria in § 63.1310 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Response to Comment Document

The response to comment document for the promulgated standards contains: (1) A summary of all the public comments made on the proposed rule and the Administrator's response to the comments; and (2) A summary of the changes made to the rule since proposal. The document may be obtained from the U.S. EPA Library (MD–35), Research Triangle Park, North Carolina 27711, telephone (919) 541–2777; or from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22151, telephone (703) 487–4650. Please refer to ''Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Basis and Purpose Document for Final Standards, Summary of Public Comments and Responses'' [EPA–453/R–96–001b; May 1996]. This document is also available for downloading from the Technology Transfer Network. The Technology Transfer Network is one of the EPA's electronic bulletin boards. The Technology Transfer Network provides information and technology exchange in various areas of air pollution control. The service is free except for the cost of a phone call. Dial (919) 541–5472 for up to a 14,400 bps modem. If more information on the Technology Transfer Network is needed, call the HELP line at (919) 541–5384.

Previous Background Documents

The following is a listing of background documents pertaining to this rulemaking. The complete title,

EPA publication number, publication date, docket number, and the abbreviated descriptive title used to refer to the document throughout this notice are included.

(1) Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Supplementary Information Document for Proposed Standards. EPA–453/R–95–003a. March 1995. Docket item A–92–45: II–A–9. Supplementary Information Document.

(2) Hazardous Air Pollutant Emissions from Process Units in the Thermoplastics Manufacturing Industry—Basis and Purpose Document for Proposed Standards. EPA–453/R–95–004a. March 1995. Docket item A–92–45: II–A–10. Basis and Purpose Document for Proposed Standards.

Judicial Review

National emission standards for organic HAP for Group IV polymers and resins were proposed in the Federal Register (FR) on March 29, 1995 (60 FR 16090). This Federal Register action announces the EPA's final decision on the rule. Under section 307(b)(1) of the Act, judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this final rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

The following outline is provided to aid in reading the preamble to the final rule.

I. Background

Section 112(b) of the Act lists 1989 HAP and directs the EPA to develop standards to control all major sources and some area sources emitting HAP. On July 16, 1992, the EPA published a list of major and area source categories for which NESHAP are to be promulgated (57 FR 3156). Six of the seven source categories regulated by this rule were included on that list as major source categories. The other source category, nitrile resins production, has since been added to the source category list. On December 3, 1993, the EPA published a schedule for promulgating standards for the listed major and area source categories (58 FR 83941). Standards for these seven major source categories were proposed on March 29, 1995, under this rulemaking.

II. Summary of Considerations Made in Developing These Standards

A. Purpose of Standards

The Act was created in part ''to protect and enhance the quality of the nation's air resources so as to promote the public health and welfare and the productive capacity of its population [the Act, section 101(b)(1)]. Title I of the Act establishes a control technology-based program to reduce stationary source emissions of HAP. The goal of the section 112(d) Maximum Achievable Control Technology standards (MACT) is to apply such control technology to reduce emissions and thereby reduce the hazard of pollutants emitted from stationary sources.

The Act strategy avoids dependence on a detailed and comprehensive risk assessment hampered by (but not limited to) the following caveats, as prerequisites for control of air toxics: (1) Some of the HAP emitted from stationary sources are unknown; and (2) Many of the HAP with emissions information have incomplete data in which to describe health hazard. In addition, these standards are not ''significant'' as defined by Executive Order 12866, and a specific benefits analysis is not required. Because of these issues, a detailed and intensive risk assessment of potential effects from the organic HAP emitted from stationary sources is not included in this rulemaking.

The EPA does recognize that the degree of adverse effects to health resulting from the most significant emissions identified can range from mild to severe. The extent to which the effects could be experienced is dependent upon the ambient concentrations and exposure time. The latter is further influenced by source-specific characteristics such as emission rates and local meteorological conditions. Human variability factors also influence the degree to which effects to health occur: genetics, age, pre-existing health conditions, and lifestyle.

The organic HAP listed in section 112(b)(1) of the Act emitted by the thermoplastic facilities covered by these standards include styrene, acrylonitrile, butadiene, ethylene glycol, methanol, acetaldehyde, and dioxane. Available emission date gathered, in conjunction with development of these MACT standards, show that these organic HAP are those which have the potential for reduction by the implementation of the standard.

Some of the effects of the pollutants whose emissions are reduced by these standards include central nervous system effects (e.g., drowsiness, dizziness, headaches, impairment of vision, peripheral nervous system effects expressed as numbness of the extremities, fatigue, and coma and death at lethal levels), respiratory irritation expressed as labored breathing and impaired lung function, eye irritation, reproductive and developmental effects, gastrointestinal effects, blood effects (e.g., anemia and leukocytosis), and liver and kidney toxicity. In addition, butadiene exposure to humans has been associated with increased risk of cardiovascular disease and effects on the blood. In regard to carcinogenicity, some of the organic HAP controlled under these standards are either probable (i.e., acetaldehyde, dioxane, acrylonitrile, and butadiene) or possible (i.e., styrene) human carcinogens.

These standards will result in a minimum organic HAP emission reduction of 3,550 Mg/yr for existing affected sources and 6,870 Mg/yr for new affected sources. The majority of the organic HAP regulated by these standards are also volatile organic compounds (VOC). In reducing emissions of organic HAP, emissions of VOC are also reduced. No other criteria pollutant ambient levels will be affected by these standards. The emission reductions achieved by these standards, when combined with the emission

reductions achieved by other standards mandated by the Act, will achieve the primary goal of the Clean Air Act.

B. Technical Basis of Regulation

National emission standards for sources of HAP established under section 112(d) of the Act reflect MACT:

> * * * the maximum degree of reduction in emissions of the HAP * * * that the Administrator, taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies * * * [42 U.S.C. § 7412(d)(2)].

The amended Clean Air Act contains requirements for the development of regulatory alternatives for sources of HAP emissions. The statute requires the standards to reflect the maximum degree of reduction in emissions of HAP that is achievable for new or existing sources. This control level is referred to as MACT. The amended Clean Air Act also provides guidance on determining the least stringent level allowed for a MACT standard; this level is termed the ''MACT floor.''

For new sources, the standards for a source category or subcategory ''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'' [section 112(d)(3) of the Act]. Existing source standards shall be no less stringent than the average emission limitation achieved by the best performing 12 percent of the existing sources for source categories and subcategories with 30 or more sources or the average emission limitation achieved by the best performing 5 sources for source categories or subcategories with fewer than 30 sources [section 12(d)(3) of the Act]. These two minimum levels of control define the MACT floor for new and existing sources.

Two interpretations have been evaluated by the EPA for representing the MACT floor for existing sources. One interpretation is that the MACT floor is represented by the 88th percentile source. The second interpretation is that the MACT floor is represented by the ''average emission limitation achieved'' by the best performing sources, where the ''average'' is based on a measure of central tendency, such as the arithmetic mean, median, or mode. This latter interpretation is referred to as the ''higher floor interpretation.'' In a June 6, 1994 Federal Register notice [59 FR 29196], the EPA presented its interpretation of the statutory language concerning the MACT floor for existing sources. Based on a review of the statute, legislative history, and public comments, the EPA believes that the ''higher floor interpretation'' is a better reading of the statutory language. The determination of the MACT floor for existing sources under the proposed and final rule followed the ''higher floor interpretation.''

The regulatory alternatives considered in the development of this rule, including those regulatory alternatives selected as standards for new and existing affected sources, are based on process and emissions data received from the existing plant sites known by the EPA to be in operation.

Regulatory alternatives more stringent than the MACT floor were selected when they were judged to be reasonable ''taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environmental impacts, and energy requirements'' (42 U.S.C. § 7412(d)(2)).

Potential regulatory alternatives were developed based on the Hazardous Organic NESHAP (HON) (i.e., subparts F, G, H, and I of 40 CFR part 63), the Polymer Manufacturing New Source Performance Standards (NSPS) (subpart DDD of 40 CFR part 60), and the Batch Processes Alternative Control Techniques (ACT) document [EPA 453/R–93–017; November 1993]. The HON was selected as a basis for regulatory alternatives because: (1) the characteristics of the emissions from storage vessels, continuous process vents, equipment leaks, and wastewater at Group IV thermoplastic facilities are similar or identical to those addressed by the HON; and (2) The levels of control required under the HON were already determined through extensive analyses to be reasonable from a cost and impact perspective.

The Polymer Manufacturing NSPS, which covers certain process emissions at polystyrene and PET facilities using a continuous process, and cooling tower emissions at PET facilities, was selected for the same basic reasons as the HON. Although the Polymer Manufacturing NSPS was developed under section 111 of the Clean Air Act and was targeted to control VOC emissions, the requirements for setting standards under section 111 are very similar to the requirements under section 112 of the Clean Air Act Amendments of 1990, and all of the organic HAP identified from polystyrene and PET affected sources are also VOC.

Finally, the Batch Processes ACT was selected to identify regulatory alternatives for batch process vents, which are not addressed by either the HON or Polymer Manufacturing NSPS. As with the Polymer Manufacturing NSPS, the Batch Processes ACT addresses the control of VOC emissions, and all of the organic HAP identified for the Group IV thermoplastics facilities are also VOC. Unlike the HON and Polymer Manufacturing NSPS, the Batch Processes ACT is not a regulation and, therefore, does not specify a level of control that must be met. Instead, the Batch Processes ACT provides information on emissions estimation techniques and potential levels of control and their environmental, energy, and cost impacts. Based on the review of the Batch Processes ACT, the EPA selected a level of control equivalent to 90 percent reduction for batch process vents. This level of control was selected for regulatory analysis purposes.

C. Stakeholder and Public Participation

In the development of these standards, numerous representatives of the thermoplastics industry were consulted. Industry representatives have included trade associations and thermoplastic producers responding to section 114 questionnaires and information collection requests (ICR). Representatives from other interested EPA offices, Regional offices, and State environmental agency personnel, participated in the regulatory development process as members of the Work Group. The Work Group is involved in the regulatory development process, and is given opportunities to review and comment on the standards before proposal and promulgation. Therefore, the EPA believes that the implication to order EPA offices and programs has been adequately considered during the development of these standards. In addition, the EPA has met with members of industry concerning these standards. Finally, industry representatives, regulatory authorities, and environmental groups had the opportunity to comment on the proposed standards and to provide additional information during the public comment period that followed the proposal.

The standards were proposed in the Federal Register on March 29, 1995 (60 FR 16090). The preamble to the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of proposal. To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal. However, the public did not request a hearing and, therefore, one

was not held. The public comment period was from March 29, 1995 to May 30, 1995. Twenty-seven comment letters were received. Commenters included industry representatives and State agencies. The comments were carefully considered, and changes were made in the proposed standards when determined by the EPA to be appropriate. A detailed discussion of these comments and responses can be found in the Basis and Purpose Document for Final Standards (EPA–453/R–96–001b; May 1996), which is referenced in the **ADDRESSES** section of this preamble. The summary of comments and responses in the Basis and Purpose Document for the Final Standards (EPA–453/R–96–001b; May 1996) serves as the basis for the revisions that have been made to the standards between proposal and promulgation. Section V of this preamble discusses these major changes.

III. Summary of Promulgated Standards

Emissions of specific organic HAP from the following types of emission points (i.e., emission source types) are being covered by the final standards: Storage vessels, continuous process vents, batch process vents, equipment leaks, wastewater operations, heat exchange systems, and some process contact cooling towers associated with the manufacture of PET. The organic HAP emitted and required to be controlled by these standards vary by subcategory. Each of the nineteen thermoplastic products constitutes a separate subcategory (i.e., affected source) that is regulated by these standards.

The existing affected source is defined as each group of one or more TPPUs that manufacture the same thermoplastic product as their primary product, and (1) are located at a major source plant site, (2) are not exempt, and (3) are not part of a new affected source. This means that each plant site will have only one existing affected source in any given subcategory.

New affected sources are created under various circumstances. If a plant site with an existing affected source producing thermoplastic A as its primary product constructs a new TPPU also producing thermoplastic A as its primary product, the new TPPU is a new affected source if the new TPPU has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of all HAP. In this situation, the plant site would have an existing affected source producing thermoplastic A and a new affected source producing thermoplastic A. Each subsequent new TPPU with potential HAP emissions above major source levels (i.e., 10/25 tons per year) would be a separate new affected source. New affected sources are also created when a TPPU is constructed at a major source plant site where the thermoplastic product was not previously produced, with no regard to the potential HAP emissions from the TPPU. This approach to defining new affected source was selected in order to make this subpart more consistent with the HON.

Another instance where a new affected source is created is if a new TPPU is constructed at a new plant site (i.e., green field site) that will be a major source. The final manner in which a new affected source is created is when an existing affected source undergoes reconstruction, thus making the previously existing affected source subject to new source standards.

This standard differs from the HON, however, in that it applies to multiple source categories. Thus, unlike the HON, a newly added TPPU at a facility is covered by this rule even if that TPPU is in a different source category from the existing TPPUs at the facility. It is the EPA's position that the addition of a process unit in a different source category is a new source and must meet the requirements for new sources even though the TPPU has the potential to emit less than 10 tons per year of a single HAP or 25 tons per year of all HAP. Indeed, if a source covered by another MACT standard (i.e., a different source category) were built at a HON facility, that source would be subject to new source requirements under that MACT standard.

Also, each affected source includes the following emission points and equipment that are associated with each group of TPPU: (1) Each wastewater stream; (2) each wastewater operation; (3) each heat exchange system; (4) each process contact cooling tower used in the manufacture of PET that is associated with a new affected source; and (5) each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

With relatively few exceptions, the final standards for storage vessels, continuous process vents, equipment leaks, wastewater streams, and heat exchange systems are the same as those promulgated for the corresponding types of emission points at facilities subject to the HON. As shown in Tables 1 and 2, some subcategories have requirements that differ from the HON; these cases are designated by ''MACT Floor.'' These different requirements are specified in the final standards.

As in the HON, if an emission point within an affected source meets the applicability criteria and is required to be controlled under the standards, it is referred to as a Group 1 emission point. If an emission point within the affected source is not required to apply controls, it is referred to as a Group 2 emission point.

TABLE 1.— SUMMARY OF FINAL STANDARDS FOR EXISTING AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT

Subcategory	Type of emission point				
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems
ABS, continuous emulsion.	HON	HON	HON	HON	HON.
ABS, continuous mass	HON	Continous process vents: HON batch process vents: 90 percent reduction or complaint flare.	HON	HON	HON.
ABS, batch emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ABS, batch suspension	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ABS, latex	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.

TABLE 1.— SUMMARY OF FINAL STANDARDS FOR EXISTING AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point				
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems
MABS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
MBS	HON	Continuous process vents: MACT floor batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
SAN, continuous	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
SAN, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
ASA/AMSAN	MACT floor	MACT floor	HON	No control	HON.
Polystyrene, continuous	MACT floor	Continuous process vents from material recovery sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Polystyrene, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Expandable polystyrene	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–TPA, continuous	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–TPA continuous high viscosity multiple end finisher.	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	No control	HON	HON.
PET–TPA, batch–DMT, batch.	HON	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
PET–DMT, continuous	HON	Continuous process vents from material recovery and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.
Nitrile	MACT floor	Continuous process vents: HON batch process vents: 90 percent reduction or compliant flare.	HON	HON	HON.

ASA/AMSAN = acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin.
TPA = terephthalic acid.
DMT = dimethyl terephthalate.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
ABS, continuous emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, continuous mass	Regulatory alternative 2 [1].	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, batch emulsion	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
ABS, batch suspension	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
ABS, Latex	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
MABS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
MBS	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
SAN, continuous	MACT floor.	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
SAN, batch	HON	MACT floor	HON	No control	HON	NA.
ASA/AMSAN	MACT floor.	MACT floor	HON	No control	HON	NA.
Polystyrene, continuous	MACT floor.	Continuous process vents from material recovery sections: same as polymer manufacturing NSPS, other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
Polystyrene, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
Expandable polystyrene	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.
PET–TPA, continuous	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as Polymer Manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
PET–TPA, continuous multiple end finisher.	HON	Continuous process vents from raw material preparation and polymerization reaction sections: same as Polymer Manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	No control	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
PET–TPA, batch –DMT, batch	HON	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.

TABLE. 2.—SUMMARY OF FINAL STANDARDS FOR NEW AFFECTED SOURCES IN RELATIONSHIP TO THE HON, THE POLYMER MANUFACTURING NSPS, AND THE BATCH PROCESSES ACT—Continued

Subcategory	Type of emission point					
	Storage vessels	Process vents	Equipment leaks	Wastewater	Heat exchange systems	Process contact cooling towers
PET–DMT, continuous	HON	Continuous process vents from material recovery and polymerization reaction sections: same as polymer manufacturing NSPS other continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	No contact condenser effluent associated with a vacuum system shall go to a process contact cooling tower.
Nitrile	MACT floor.	Continuous process vents: HON batch process vents: 90 percent reduction or a compliant flare.	HON	HON	HON	NA.

[1] The final standard is stringent than the MACT floor, which is more stringent than the HON.
NA = Not applicable, not part of affected source.
ASA/AMSAN = acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin.
TPA = terephthalic acid.
DMT = dimethyl terephthalate.

A. Storage Vessel Provisions

The standards require owners and operators to first determine whether or not a storage vessel is required to be controlled. For those storage vessels determined to require control, the standards specify the appropriate level of control.

For most existing and new storage vessels, the criteria for determining which storage vessels must be controlled are identical to the criteria in the HON storage vessel provisions and are based on storage vessel capacity and vapor pressure of the stored material. Typically, applicability criteria are different for existing and new affected sources.

For most storage vessels, the level of control required is either technical modification to the tank (e.g., the installation of an internal floating roof) or the use of a closed vent system and control device that is generally required to achieve at least 95 percent emission reduction.

Note: This is the same level of control as required under the HON.

As shown in Tables 1 and 2, some subcategories also have requirements that differ from the HON. These requirements are specified in the final standards. For those subcategories not applying the HON level of control, the level of control varies depending on the subcategory. For example, the standards may require 90 or 98 percent emission reduction, as opposed to the 95 percent emission reduction required by the HON. Finally, to simplify the final rule, some chemicals with extremely low vapor pressure (e.g., ethylene glycol) have been exempted from the storage vessel provisions.

B. Process Vent Provisions

Similar to the standards for storage vessels, the standards for process vents require owners and operators to first determine whether or not a process vent, or set of process vents, requires control and, if so, then specifies the level of control required. The standards regulate both continuous and batch process vents.

Except for certain PET and polystyrene continuous process vents, the group status of a continuous process vent is determined by comparing the total resource effectiveness (TRE) value for each continuous process vent to a TRE value. The TRE value is a reflection of the cost effectiveness of controlling an individual continuous process vent. There are different TRE coefficients for continuous process vents depending on whether the affected source is new or existing. The TRE equations for new and existing continuous process vents differ because the standards for new affected sources are more stringent than the standards for existing affected sources. With one exception, continuous process vents with TRE values of 1.0 or less are Group 1 continuous process vents. For continuous process vents at existing MBS facilities, the TRE value for each continuous process vent is compared to a TRE value of 3.7. The proposed and final standards refer to the procedures in the HON for determination of the TRE value.

For continuous process vents associated with the material recovery section from *existing* PET affected sources using a continuous dimethyl terephthalate (DMT) process, the set of continuous process vents are designated as Group 1 continuous process vents if the combined uncontrolled emission rate is greater than the threshold emission rate. For other sets of continuous process vents associated with the raw material preparation section or polymerization reaction section at existing and new polystyrene and PET facilities, there are no applicability criteria. These sets of continuous process vents are considered to be Group 1 and must meet the specified emission limits. Continuous process vents associated with the material recovery section at *new* PET affected sources using a continuous DMT process are also designated as Group 1 and must meet the specified emission limits.

The group determination procedure for batch process vents differs from the procedure used for continuous process vents. First, the estimated annual emissions for an individual batch process vent are entered into the flow rate regression equation and a calculated flow rate is determined. Second, the actual flow rate for the batch process vent is compared to the calculated flow rate. If the actual flow rate is less than the calculated flow rate, then the batch process vent is designated as Group 1 and control is required. The batch process vent group determination procedure is the same for existing and new batch process vents.

There are exceptions to the procedures described above. For new SAN affected sources using a batch process, the standards require an overall emission reduction of 84 percent from all process vents (i.e., continuous and batch process vents), and a group determination is not required. For new and existing acrylonitrile styrene acrylate resin/alpha methyl styrene acrylonitrile resin (ASA/AMSAN) affected sources, the standards require that emissions from all process vents (i.e., continuous and batch process vents) be controlled by 98 percent, and a group determination is not required.

Another exception concerns a batch process vent that is combined with a continuous process vent prior to a control or recovery device. Said batch process vent is not required to comply with the batch process vent provisions if there are no emissions to the atmosphere up until the point the batch process vent is combined with the continuous process vent. The combined vent stream would be required to comply with the continuous process vent provisions. The presence of a batch process vent in a continuous process vent emission stream would necessitate that all applicability tests and performance tests be conducted while the batch process vent is emitting (i.e., maximum operating conditions for the combined vent stream).

The level of control required for most continuous process vents is the same as the level of control required by the HON: 98 percent emission reduction or an organic HAP concentration limit of 20 ppmv. If a flare is used, it must meet the design and operating requirements of § 63.11(b) of subpart A of 40 CFR part 63. Exceptions to this level of control are described in the following paragraphs.

For continuous process vents associated with material recovery sections at polystyrene affected sources using a continuous process, raw material preparation sections and polymerization reaction sections at PET affected sources using a continuous terephthalic acid (TPA) process, and material recovery sections and polymerization reaction sections at PET affected sources using a continuous DMT process, the standards require continuous process vents associated with these process sections to meet emission limits expressed as kilogram organic HAP per megagram of product. Depending on the process section, the standards provide several compliance options including limiting the outlet gas temperature from each final condenser or reducing emissions from each process section by 98 weight percent or to an organic HAP concentration limit of 20 ppmv. These are the same control requirements as specified in the Polymer Manufacturing NSPS, which serve as the basis for these specific provisions.

For batch process vents, the standards require Group 1 batch process vents to achieve emission reductions of 90 percent or greater for the batch cycle.

There are three subcategories where the standards are based on the MACT floor. These subcategories are existing MBS affected sources, existing and new ASA/AMSAN affected sources, and new SAN affected sources using a batch process. As described earlier, the applicability criteria and level of control differ from the HON for all three subcategories.

For existing MBS affected sources, the standards require continuous process vents at affected sources to either: (1) meet an emission limit of 0.000590 kilogram of emissions per megagram of product for all continuous process vents associated with the affected source; or (2) control emissions from continuous process vents with a TRE of 3.7 or less by 98 percent. The development of the MACT floor level of control and applicability criteria for MBS existing affected sources is documented in Docket Item II–B–21 of A–92–45 and in the Supplementary Information Document (SID) for Proposed Standards [EPA–453/R–95–003a; March 1995].

For both existing and new ASA/AMSAN affected sources, the standards require all continuous and batch process vents to achieve emission reductions of 98 percent.

For new SAN affected sources using a batch process, the standards require an overall emission reduction of 84 percent for all process vent emissions.

C. Heat Exchange Provisions

The standards apply to each heat exchange system that is associated with the affected source. The standards require a monitoring program to detect leakage of organic HAP from the process into the cooling water. The standards refer to the monitoring program in the HON.

D. Process Contact Cooling Tower Provisions

The standards require that owners or operators of new affected sources manufacturing PET not send contact condenser effluent associated with a vacuum system to a process contact cooling tower. For existing PET affected sources using a continuous TPA high viscosity multiple end finisher process, the owner or operator is required to keep the concentration of ethylene glycol in the process contact cooling tower water to 4 percent or less by weight provided the TPPU is or has become subject to 40 CFR part 60, subpart DDD. Process contact cooling towers at existing PET affected sources using other processes (e.g., DMT process) are not regulated.

Note: The standards treat the contact condenser effluent at existing affected sources as wastewater.

E. Wastewater Provisions

Except for ASA/AMSAN affected sources, the standards require owners and operators to comply with the wastewater provisions in the HON. Owners and operators are required to make a group determination for each wastewater stream based on the applicability criteria in the HON: flow rate and organic HAP concentration. The level of control required for Group 1 wastewater streams is dependent upon the organic HAP constituents in the wastewater stream. The standards do not require control of wastewater emissions from existing or new ASA/AMSAN affected sources.

The standards also require owners and operators to comply with the maintenance wastewater requirements in § 63.105 of subpart F of this part. These provisions require owners and operators to include a description of procedures for managing wastewaters generated during maintenance in their start-up, shutdown, and malfunction plan.

F. Equipment Leak Provisions

Except for one subcategory, both existing and new affected sources are required to comply with the equipment leak standards specified in subpart H of 40 CFR part 63. For PET affected sources using a continuous TPA high viscosity multiple end finisher process, the final rule does not require an equipment leak program. The final rule also exempts from the equipment leak standards any PET TPPU in which all of the components are either in vacuum service or in heavy liquid service.

In general, subpart H requires owners and operators to implement a leak detection and repair (LDAR) program, including various work practice and equipment standards. The subpart H standards are applicable to equipment in volatile HAP service for 300 or more hours per year (hr/yr). The standards define ''in volatile HAP service'' as being in contact with or containing process fluid that contains a total of 5 percent or more total HAP. Equipment subject to the standards are: valves, pumps, compressors, connectors, pressure relief devices, open-ended

valves or lines, sampling connection systems, instrumentation systems, agitators, and closed-vent systems and control devices.

A few differences to the subpart H standards are contained in the final rule. These differences include: exempting indications of liquids dripping from bleed ports on pumps and agitators at facilities producing polystyrene resins from the definition of a leak; not requiring the submittal of an Initial Notification; and allowing 150 days, rather than 90 days, to submit the Notification of Compliance Status. In addition, PET facilities are not required to provide a list of identification numbers for components in heavy liquid service, pressure relief devices in liquid service, and instrumentation systems. The final rule also clarifies that for these components the presence of a leak is to be determined exclusively through the use of visual, audible, olfactory, or any other detection methods, but that Method 21 is not to be used. Finally, bottoms receivers and surge control vessels are not regulated under the equipment leak provisions, but instead are regulated as storage vessels.

Affected sources subject to this rule currently complying with the NESHAP for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks [40 CFR part 63, subpart I] or with the equipment leak provisions in § 60.562–2 of 40 CFR part 60, subpart DDD, are required to continue to comply with subpart I or subpart DDD, as applicable, until the compliance date of the final rule, at which point in time they must comply with this rule and are no longer subject to subpart I and subpart DDD. Further, affected sources complying with subpart I through a quality improvement program are allowed to continue these programs without interruption as part of complying with this rule. In other words, becoming subject to this rule does not restart or reset the ''compliance clock'' as it relates to reduced burden earned through a quality improvement program.

G. Emissions Averaging Provisions

The EPA is allowing emissions averaging among continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, and wastewater streams, within an existing affected source. New affected sources are not allowed to use emissions averaging. Emissions averaging is not allowed between subcategories; it is only allowed between emission points within the same affected source. Under emissions averaging, a system of ''credits'' and ''debits'' is used to determine whether an affected source is achieving the required emission reductions. Twenty emission points per plant site are allowed in the emissions averaging plan submitted for the plant site, with an additional 5 emission points allowed if pollution prevention measures are used.

H. Compliance and Performance Test Provisions and Monitoring Requirements

Compliance and performance test provisions and monitoring requirements contained in the standards are very similar to those found in the HON. Each type of emission point included in the standards is discussed briefly in the following paragraphs. Significant differences from the continuous parameter monitoring requirements found in the HON are discussed in Section 8.

1. Storage Vessels

Monitoring and compliance provisions for storage vessel improvements include periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections. If a control device is used, the owner or operator must identify the appropriate monitoring procedures to be followed in order to demonstrate compliance. Monitoring parameters and procedures for many of the control devices likely to be used are identified in the standards. Reports and records of inspections, repairs, and other information necessary to determine compliance are also required by the standards.

2. Continuous Process Vents

The standards for continuous process vents require the owner or operator to either calculate a TRE index value to determine the group status of each continuous process vent or to comply with the control requirements. The TRE index value is determined after the last recovery device in the process or prior to venting to the atmosphere. The TRE calculation involves an emissions test or engineering assessment and use of the TRE equations specified in the standards.

Performance test provisions are included for Group 1 continuous process vents to verify that control or recovery devices achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the standards.

Compliance provisions for continuous process vents at polystyrene and PET affected sources are included in the standards. For owners or operators electing to comply with a kilogram organic HAP per megagram of product emission limit, procedures to demonstrate compliance are provided.

3. Batch Process Vents

Similar to the provisions for continuous process vents, there is a procedure for determining the group status of batch process vents. This procedure is based on annual emissions and annual average flow rate of the batch process vent. Equations for estimating and procedures for measuring annual emissions and annual average flow rates are provided in the standards. The use of engineering assessment is also allowed under certain circumstances.

Performance test provisions are included for Group 1 batch process vents to verify that control devices achieve the required performance. Monitoring provisions necessary to demonstrate compliance are also included in the standard.

For Group 2 batch process vents, the standard requires owners and operators to establish a batch cycle limitation. The batch cycle limitation restricts the number and type of batch cycles that can be accomplished per year. This enforceable limitation ensures that a Group 2 batch process vent does not become a Group 1 batch process vent as a result of running more batch cycles than anticipated when the group determination was made. The determination of the batch cycle limitation is not tied to any previous production amounts. As affected source may set the batch cycle limitation at any level it desires as long as the batch process vent remains a Group 2 batch process vent. Alternatively, an owner or operator may declare any Group 2 batch process vent to be a Group 1 batch process vent. In such cases, control of the batch process vent is required.

Procedures are included in the standards to demonstrate compliance with the requirement to reduce overall process vent emissions (i.e., continuous and batch process vents) by 84 percent for new SAN affected sources using a batch process.

4. Heat Exchange Systems

Monitoring of cooling water is required to detect leaks in heat exchange systems. If a leak is detected, the heat exchange system must be repaired.

5. Process Contact Cooling Towers

Owners and operators of new affected sources manufacturing PET are prohibited from sending contact condenser effluent associated with a vacuum system to a process contact

cooling tower. Owners and operators of existing PET affected sources using a TPA continuous high viscosity multiple end finisher process are required to monitor ethylene glycol concentration in the cooling tower water and to ensure that the levels do not exceed 4 percent by weight. Procedures for sampling cooling tower water and measuring the ethylene glycol concentration are included in the standards.

6. Wastewater

For demonstrating compliance with the various requirements, the standards allow the owners or operators to either conduct performance tests or to document compliance using engineering calculations. Appropriate compliance and monitoring provisions are included in the standards.

7. Equipment Leaks

Except for certain components at PET affected sources, the final rule retains the use of Method 21 to detect leaks. Method 21 requires a portable organic vapor analyzer to monitor for leaks from equipment in use. A ''leak'' is a concentration specified in the regulation for the type of equipment being monitored and is based on the instrument response to methane (i.e., the calibration gas) in air. The rule allows the use of engineering assessment to determine that equipment is not in organic HAP service. If there is disagreement between an owner or operator and the Administrator, the rule specifies that Method 18 or Method 25A be used to determine the organic HAP or total organic compounds (TOC) content of a process stream. To test for leaks in a batch system, test procedures using either a gas or a liquid for pressure testing the batch system are specified.

8. Continuous Parameter Monitoring

The final standards require owners or operators to establish parameter monitoring levels. The standards provide the owner or operator the flexibility to establish the levels based on site-specific information. Site-specific levels can best accommodate variation in emission point characteristics and control device designs. Three procedures for establishing these levels are provided in the final standards. They are based on performance tests; performance tests, engineering assessments, and/or manufacturer's recommendations; and engineering assessments and/or manufacturer's recommendations. While the establishment of a level based solely on performance tests is preapproved by the Administrator, values determined using the last two procedures, which may or may not use the results of performance tests, must be approved by the Administrator for each individual case.

The final standards require the availability of at least 75 percent of monitoring data to constitute a valid days worth of data for continuous and batch process vents. Failure to have a valid day's worth of monitoring data is considered an excursion. The criteria for determining a valid day's or hour's worth of data are provided in the standards.

A certain number of excused excursions have been allowed in the final standards; these provisions are the same as the provisions in the HON. The standards allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, one excused excursion is allowed each semiannual reporting period. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other federal requirements and could choose not to allow the excused excursion provisions contained in these standards.

I. Recordkeeping and Reporting Provisions

The standards require owners or operators of affected sources to maintain required records and reports for a period of at least 5 years. The final standards require that the following reports be submitted, as applicable: (1) Precompliance Report, (2) Emissions Averaging Plan, (3) Notification of Compliance Status, (4) Periodic Reports, and (5) other reports (e.g., notifications of storage vessel internal inspections).

Specific recordkeeping and reporting requirements are specified in each section that addresses an individual emission point (e.g., 63.1321 for batch process vents). The recordkeeping and reporting provisions related to the affected source as a whole (e.g., Notification of Compliance Status) are found in § 63.1335. Requirements found in an individual emission point section and the requirements in § 63.1335 are complementary. For example, § 63.1326 requires an owner or operator to record the batch cycle limitation for each Group 2 batch process vent. § 63.1327 goes on to require the owner or operator to submit this information in the Notification of Compliance Status, as specified in § 63.1335. Finally, § 63.1335 requires submittal of the information specified in § 63.1327.

IV. Summary of Impacts

This section presents impacts resulting from the control of organic HAP emissions under these standards. Because many organic HAP are also VOC, a reduction in VOC emissions will also result from controls imposed by the standards. The standards are estimated to reduce organic HAP emissions from all existing affected sources by 3,520 Mg/yr from a baseline level of 18,120 Mg/yr. For new affected sources, the standards are estimated to reduce organic HAP emissions by 6,870 Mg/yr from a baseline level of 11,610 Mg/yr. At baseline, the EPA found that many affected sources already had some controls in place. These standards generally achieve an emission reduction by meeting the MACT floor level of control. [Note: Costs and other impacts are not considered when the selected standard is based on the MACT floor.] In some cases, these standards achieve additional emission reduction, beyond the floor, that was determined to be cost effective.

Under the final standards, energy use is expected to increase by approximately 29,800 barrels of oil per year for existing affected sources and 43,600 barrels of oil per year for new affected sources. The emissions of secondary air pollutants associated with this energy increase are 70 Mg/yr for existing affected sources and 80 Mg/yr for new affected sources. At the same time, energy credits attributable to the prevention of organic HAP emissions from equipment leaks are approximately 7,000 barrels of oil per year for existing affected sources and 3,800 barrels of oil per year for new affected sources. This results in a net increase in energy usage equivalent to approximately 22,500 barrels of oil per year for existing affected sources and 39,700 barrels of oil per year for new affected sources.

These figures are related to the control of process vents, wastewater operations, and equipment leaks. Energy impacts related to storage vessels were not estimated because many storage vessels would be controlled through the use of internal floating roofs which do not have any associated energy impacts. Data are not available for the EPA to estimate energy impacts for the elimination of emissions from process contact cooling towers for new PET affected sources or the control of ethylene glycol concentration in the process contact cooling tower water for existing PET affected sources using a continuous TPA high viscosity multiple end finisher process.

Cost impacts include the capital costs of new control equipment, the cost of energy (i.e., supplemental fuel, steam, and electricity) required to operate control equipment, operation and maintenance costs, and the cost savings generated by reducing the loss of valuable product in the form of emissions. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with the standards.

Under the standards, it is estimated that total capital costs for existing affected sources would be $10.7 million (1989 dollars), and total annual costs would be $3.3 million (1989 dollars) per year. Total capital costs for new affected sources would be $6.5 million (1989 dollars), and total annual costs would generate a savings of $5.2 million (1989 dollars) per year. It is expected that the actual compliance cost impacts of the standard would be less than presented because of the potential to use common control devices, upgrade existing control devices, use other less expensive control technologies, implement pollution prevention technologies, or use emissions averaging. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices would be utilized, it is not possible to quantify the amount by which actual compliance costs would be reduced.

The economic impact analysis for the selected regulatory alternatives at proposal showed that the estimated price increases for the affected chemicals ranged from 0.1 percent for nitrile to 2.8 percent for SAN. Estimated decreases in output ranged from 0.1 percent for polystyrene to 4.6 percent for SAN. Net annual exports (i.e., exports minus imports) were predicted to decrease by an average of 2.5 percent. These impacts were judged, at proposal, to be acceptable. Because estimated costs of the final standards have decreased, the economic impacts determined at proposal will decrease as well. Therefore, the EPA finds the economic impacts associated with the final standards are less than at proposal and are judged to be acceptable.

V. Significant Comments and Changes to the Proposed Standards

In response to comments received on the proposed standards, changes have been made to the final standards. While several of these changes are clarifications designed to make the EPA's intent clearer, a number of them are significant changes to the requirements of the proposed standards. A summary of the substantive comments and/or changes made since the proposal are described in the following sections. The rationale for these changes and detailed responses to public comments are included in the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996]. Additional information on the final standards is contained in the docket for this rulemaking (see **ADDRESSES** section of this preamble).

A. Applicability Provisions and Definitions

1. Designation of Affected Source and the Definition of TPPU

Commenters expressed confusion about the definitions of ''affected source'' and ''TPPU'' in the proposed standards. The EPA reviewed both definitions and agreed that they needed clarification. In response, the EPA has revised the language describing ''affected source'' and ''TPPU'' for the final standards.

The definition of ''affected source'' included in § 63.502 of the proposed standards was revised and the definition now references § 63.1310(a) of the final rule, and § 63.1310(a) describes the affected source. The provisions in § 63.1310(a), which at proposal were in § 63.500(a) and defined applicability in terms of the existence of one or more TPPUs, have been revised to define applicability in terms of the affected source. As part of this revision, the provisions in proposed § 63.500(b), which described the affected source, were removed. [Note: In the proposed standards, the definition of TPPU attempted to describe all the equipment and operations that would be included in an affected source. In the final standards, the description of what the affected source includes is contained in § 63.1310(a).]

As discussed in section II, an existing affected source is defined as each group of one or more TPPUs that manufacture the same thermoplastic product as their primary product, and (1) are located at a major source plant site, (2) are not exempt, and (3) are not part of a new affected source. A new affected source can be a single TPPU located at major source plant site or a group of TPPUs that manufacture the same thermoplastic product as their primary product at a major source plant site. The situations when a new affected source are created are discussed under A.3 of this section.

The affected source also includes the following emission points and equipment that are associated with each group of TPPU: (1) each wastewater stream; (2) each wastewater operation; (3) each heat exchange system; (4) each process contact cooling tower used in the manufacture of PET that is associated with a new affected source; and (5) each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

For the final standards, the number of existing affected sources present at a plant site will equal the number of thermoplastic products manufactured at that plant site. A plant site manufacturing 3 different thermoplastic products has 3 existing affected sources.

Note: Each different thermoplastic product represents a different subcategory, and each subcategory comprises a separate existing affected source.

The number of existing affected sources at a plant site could range from 1 to 19.

The definition of TPPU was revised and now includes a list of the collection of equipment that comprises a TPPU. This equipment includes process vents from process vessels, storage vessels, and equipment subject to the equipment leaks provisions. Because wastewater streams, wastewater operations, heat exchange systems, and process contact cooling towers are equipment that are often used by more than one TPPU, these items are not included as part of the definition of TPPU. Instead, said items are included in the definition of affected source. Because the portion of each wastewater stream attributable to an individual TPPU can be determined, each wastewater stream can be associated with an affected source. On the other hand, wastewater operations may service wastewater streams associated with more than one affected source, just as heat exchange systems and PET process contact cooling towers could service multiple affected sources. Therefore, for wastewater operations, heat exchange systems, and PET process contact cooling towers, the final rule requires that said emission points and equipment are subject to all applicable requirements associated with each affected source that said emission points and equipment may service. In a simple example, a heat exchange system is associated with two affected sources that are both subject to the final rule. The owner or operator must comply with the provisions for heat exchange systems contained in the final rule. In a more complex example, a piece of wastewater operations equipment services wastewater streams from two affected sources subject to the final rule and from one source subject to the HON.

This piece of wastewater operations equipment must comply with both the final rule and the HON.

2. Definition of Organic HAP

Numerous commenters recommended that the EPA restrict the list of organic HAP in the final standards to those that are used or are present in significant quantities at TPPUs or those that are listed in the HON, subpart F. Table 2. The EPA agreed with the commenters suggestion that a table providing a listing of the specific organic HAP expected to be regulated for each subcategory covered by the standards should be added to the final standards. Therefore, the definition of organic HAP was revised to specify those organic HAP that are known to be used or present in significant quantities for each subcategory, thereby restricting the organic HAP regulated by the final standards. This list is provided in Table 2 of the final standards.

The revised definition of organic HAP was developed using available process description information received from industry and gathered from available literature. Because there may be additional organic HAP present at an affected source, the final standards require owners or operators to identify the presence of any additional organic HAP based on the following criteria: (1) the organic HAP is knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as Title V or the Emergency Planning and Community Right-To-Know Act (EPCRA) Section 311, 312, or 313; and (2) the organic HAP is listed in Table 2 of subpart F.

3. Determining New Source Status

The EPA received comments regarding the procedure for determining if new or existing source requirements would apply to a particular TPPU. In response to those comments, the EPA has revised the provisions in the final standards.

Under the final standards, new affected sources are created under each of the following four situations: (1) if a plant site with an existing affected source producing a thermoplastic product as its primary product constructs a new TPPU also producing the same thermoplastic product as its primary product, the new TPPU is a new affected source if the new TPPU has the potential to emit more than 10 tons per year of a single HAP or 25 tons per year of all HAP; (2) when a TPPU is constructed at a major source plant site where the thermoplastic product was not previously produced as the primary product of an existing affected source; (3) if a new TPPU is constructed at a new plant site (i.e., green field site) that will be a major source; and (4) when an existing affected source undergoes reconstruction, thus making the previously existing affected source subject to new source standards.

These revisions reflect the EPA's intent that new source requirements apply if the added TPPU has the potential to emit major quantities, as in the HON, or the added TPPU is a new affected source. The HON applied to only one source category, and it was not possible to add a process unit subject to the HON that was in a new source category. Therefore, the only differentiation to be made under the HON was between process units emitting major quantities of organic HAP and those not emitting major quantities of organic HAP. On the other hand, the thermoplastics standards apply to multiple source categories/subcategories, and it is possible to add a TPPU subject to the thermoplastics standards that is in a new source category/subcategory. For this reason, if a TPPU is added to an existing plant site and said TPPU manufactures a thermoplastic product as its primary product not previously produced at the plant site as the primary product of an existing affected source, that TPPU, regardless of emissions, is a new affected source at that plant site.

4. Solid State PET Processes

Commenters contended that all PET solid state polymerization units, including collocated units, should be exempted from regulation. They stated that PET solid state polymerization units are a vastly different technology than DMT and TPA processes and have different emission characteristics. The EPA has concluded that PET solid state processes are distinct from DMT or TPA processes. The EPA did not collect data on PET solid state processes, and it was not possible to conduct the required analyses for regulating PET solid state processes. Therefore, the final standards do not regulate these processes. However, these processes may be regulated in a future standard.

5. Flexible Operation Units

The flexible operation unit provisions included in the proposed standards, which were modelled after the HON, have been retained in the final standards. Under these provisions, an owner or operator of a process unit that is designed and operated as a flexible operation unit will commit to being subject to this rule or not being subject to this rule based on a five-year projection of products to be manufactured and production quantities.

These provisions were modified to provide clarification of the EPA's intent and flexibility in complying with the provisions. Under the final rule, once an owner or operator commits to being subject to this rule, there are two options for complying. Under the first option, an owner or operator shall determine the group status (i.e., Group 1 or Group 2) of each emission point based on the production of the expected primary product (i.e., the thermoplastic product that convinced the owner or operator to commit to being subject to this rule). Once the group status of each emission point is determined, the owner or operator shall comply with the applicable emission standards for the primary product at all times, regardless of what product is being manufactured. Under the second option, an owner or operator shall determine the group status of each emission point each time a different product is being manufactured, regardless of whether or not said product is a thermoplastic product. Then, for each Group 1 emission point, the owner or operator shall comply with the applicable standards for the primary product. The EPA recognizes that neither option is an ideal situation. Under the first option, an owner or operator may find themselves operating a control device to control a Group 1 emission point that has none to negligible emissions when a different product is being manufactured. Under the second option, an owner or operator may find themselves performing multiple group determinations. Again, the EPA recognizes that neither option is an ideal situation, but believes the tradeoff between these inconveniences and flipping in and out of separate MACT standards is worthwhile.

As part of demonstrating compliance with the rule, an owner or operator required to operate a control device must establish parameter monitoring levels and conduct monitoring. Under either compliance option discussed above an owner or operator must establish parameter monitoring levels to reflect the manufacture of different products. These provisions allow an owner or operator to demonstrate that the parameter monitoring levels established for the primary product are appropriate for the manufacture of other products. If this is not the case, the provisions require that unique parameter monitoring levels be established.

6. Coordination With Other Clean Air Act Requirements

At proposal, the EPA has proposed to amend subpart DDD of 40 CFR part 60 by removing all references to polystyrene and PET facilities. This action was being taken because the proposed thermoplastics standards would supersede the requirements in subpart DDD for polystyrene and PET affected sources after the compliance date of the thermoplastics standards. Commenters also suggested that subpart I of 40 CFR part 63 be amended by removing all references to MBS and MABS affected sources after the compliance date of the thermoplastics standards. Other commenters requested that the EPA further clarify that after the compliance date of the thermoplastics standards, affected sources will no longer be subject to certain NSPS.

The EPA clarified the relationship between the thermoplastics standards and existing applicable standards in § 63.1311 of the final rule. The final rule was revised to state that affected sources subject to both the thermoplastics standards and another subpart are to comply with the provisions of the thermoplastic standards only after the compliance date for the thermoplastic standards, for those standards listed in § 63.1311 (g) through (l) of the final rule. Further, after the compliance date for these standards, these affected sources will no longer be subject to the other subparts. The EPA determined that a clear understanding can be provided in these standards without making modifications to other subparts. Thus, the proposed amendments to subpart DDD were not made as part of the final rulemaking, nor were the suggested amendments made to subpart I. For subpart DDD, the language in the final rule is more specific than for the other subparts. Because subpart DDD regulates multiple emission points (i.e., process vents, equipment leaks, and process contact cooling towers), the EPA needed to consider if it was desired or necessary to continue requiring portions of subpart DDD to apply. In fact, it is necessary to leave the provisions for controlling the ethylene glycol concentration in process contact cooling towers for the PET TPA continuous high viscosity multiple end finisher subcategory intact. This is because the provisions in the thermoplastics rule for the degree of control required for emissions from process contact cooling towers for this subcategory depend on whether or not an existing affected source is subject or becomes subject to subpart DDD for this emission point.

B. Continuous Process Vent Provisions

1. Reorganization of the Standards To Distinguish Between Continuous Process Vents Subject to Provisions From the HON and Continuous Process Vents Subject to Provisions Adapted From the Polymer Manufacturing NSPS

To better distinguish between the various requirements for continuous process vents, the proposed standards were reorganized. In the final standards, separate sections of the rule apply to the following subcategories: those required to comply with subpart G of the HON and those producing PET or polystyrene using a continuous process. In the final standards, § 63.1315 references subpart G; § 63.1316 through § 63.1320 apply to select continuous process vents at affected sources producing polystyrene and PET using a continuous process. Further, because not all process vents at affected sources producing polystyrene and PET using a continuous process are subject to § 63.1316 through § 63.1320, the provisions of § 63.1316 designate which process vents are subject to § 63.1316 through § 63.1320, which are subject to § 63.1315 (i.e., the HON), and which are subject to § 63.1321 (i.e., the batch process vent provisions). This reorganization is one way the EPA changed the standards to reduce complexity and eliminate potential confusion.

2. Applicability of the Polymer Manufacturing NSPS Adapted Provisions to the Collection of Process Sections at an Affected Source

Commenters stated that the regulatory construction of the proposed standards implied that the process vent emission limits adapted from the Polymer Manufacturing NSPS [proposed § 63.505 (b) and (c)] apply to each collection of material recovery sections, raw material preparation sections, and polymerization sections, respectively, within an affected source and not to each individual process section (e.g., material recovery section), as under the Polymer Manufacturing NSPS.

At proposal, the EPA has intended for each individual process section to meet the emission limits in proposed § 63.505 (b) and (c), as applicable. However, since proposal, the EPA has determined that revising the proposed standards to allow each collection of process sections within an affected source to meet the applicable emission limit would simplify compliance while achieving the same emission reductions. Therefore, the final standards apply the emission limits adapted from the Polymer Manufacturing NSPS to each collection of material recovery sections, raw material preparation sections, or polymerization reaction sections, as appropriate, within an affected source.

3. Clarification of Compliance Demonstration Provisions for Final Condenser Temperature Limits

Commenters suggested modifying the provisions adapted from the Polymer Manufacturing NSPS that provide for a demonstration of compliance by limiting the final condenser outlet temperature. Commenters explained that the reporting provisions in the Polymer Manufacturing NSPS state that the temperature limit is only exceeded when the average condenser outlet temperature for a 3-hour period is more than 6 °C above (i.e., warmer) the average operating temperature established during the most recent performance test at which compliance was demonstrated. Commenters requested that the final standards incorporate those monitoring, test method, and recordkeeping and reporting requirements from the Polymer Manufacturing NSPS that provide this flexibility (i.e, the six degree window).

The EPA intended for the proposed standards to be equivalent to the Polymer Manufacturing NSPS in this regard and have revised the final standards to provide the desired flexibility (i.e., the six degree window). In addition, the EPA has disassociated the six degree window from the results of the performance test and has instead associated it with the applicable temperature limit in the standard. The final standards allow all owners or operators complying with the final condenser operating temperature limits to be 6 °C warmer than the applicable temperature limit for the 3-hour averages. The EPA considered that the proposed provisions did not achieve an even-handed implementation of the requirements because some affected sources would be allowed to have 3-hour averages at warmer temperatures than others because their performance test results indicated a temperature closer to the applicable temperature limit.

C. Batch Process Vent Provisions

1. Exemption of Certain Batch Process Vents

Commenters supported the use of cutoffs for the group status determination for batch process vents as found in proposed § 63.506–2(d). Specifically, commenters agreed that low annual organic HAP emissions and low flow rate cutoffs are suitable. Commenters explained that batch

processes are, by nature, suited to low volume production and the manufacture of specialty products, and as such, low flow, low emitting process vents are likely in batch operations.

These provisions were retained in the final rule with one exception. The EPA removed the requirement to determine the volatility class (i.e., low, medium, or high) for batch process vents. As a result, there is a single minimum emission level cutoff in the final provisions of § 63.1323(d). In addition, the EPA chose to add a minimum emission level of 225 kilograms per year (kg/yr) to the definition of batch process vent. This modification made the batch process vent more consistent with the continuous process vent provisions which have a minimum organic HAP concentration level as part of the definition of continuous process vent. An emission point with emissions equal to or less than 225 kg/yr is not considered a batch process vent. At proposal, the 225 kg/yr level was part of the batch process vent group determination procedures; Group 2 batch process vents with annual emissions less than 225 kg/yr were subject to reporting requirements related to process changes.

2. Revisions to Group Determination Procedures

Commenters suggested changing the group determination provisions to only utilize emissions data from a TPPU's primary product. In addition, it was requested that batch process vent group determinations be performed on an annual basis instead of for every process change. Commenters stated that the proposed group determination provisions were considerably more complex than the continuous process vent group determination provisions. Commenters felt that, not only did the batch process vent group determination provisions require an owner or operator to obtain emissions data for every product that it manufactured, but even the most minor process changes (i.e., lengthening cycle times, altering process temperatures and pressures, etc.) triggered the need for a new group determination to be performed. Given the inherent process variability associated with batch operations, commenters contended that it would be very difficult to perform a group determination. Furthermore, because batch units often need to implement sudden process changes in response to customer demands, the proposed provisions could potentially require repeating the group determination exercise several times in a single year. Commenters explained that such a situation would not only serve to complicate a batch unit's compliance status, but could also adversely impact its ability to remain competitive in the marketplace.

Four issues related to the group determination procedures were reviewed by the EPA: (1) a request to perform the group determination on the primary product, (2) a request to perform the group determination on an annual basis, (3) an objection that the group determination procedures require a new group determination to be made whenever minor process changes occur, and (4) an objection to the requirement to perform the group determination when a sudden process change is required.

The EPA has considered the request to perform the group determination on the primary product and agrees that this would provide acceptable results from an environmental perspective while simplifying the compliance requirements for and improving the enforceability of the batch process vent standards. The final rule contains provisions allowing the owner or operator of an affected source to perform the group determination for batch process vents based on annualized production of a single product. To ensure protection to the environment, the final rule specifies that the highest organic HAP emitting product must be used when determining the group status based on a single product.

In addressing the request that the group determination be required on an annual basis instead of for every process change, the EPA believes the proposed rule was clear on this point. The proposed rule required that emissions and average flow rate be determined on an annual basis and describe how to account for the production of different products throughout the year. In this way, the group determination is done on an annual basis and can account for expected changes in the product being produced. The final rule does not reflect any changes related to this specific issue.

The third issue raised was an objection to the requirement that a new group determination be performed whenever minor process changes occur (e.g., lengthening cycle times, altering process temperatures and pressures, etc.). The proposed rule addressed the issue of minor process changes as they affect Group 2 batch process vents. If a process change affecting a Group 2 batch process vent occurs, a group determination must be made. However, the group determination provisions state that ''changes that are within the range on which the original group determination was based'' are not considered process changes. This allows an owner or operator to perform the initial group determination considering the potential for minor process changes. The EPA believes that the proposed provisions were clear that minor process changes (i.e., variations in operating conditions) do not require that a new group determination be performed. Addressing this concern as it relates to Group 1 batch process vents, the proposed provisions do not require a redetermination of group status for Group 1 batch process vents under any circumstances. Therefore, if minor process changes were to occur, the owner or operator would not be required to perform another group determination. The final rule does not reflect any changes related to this specific issue.

The fourth issue raised was an objection to the requirement to perform a new group determination when a sudden process change is required. In light of the third issue raised, EPA interpreted ''sudden process change'' to potentially mean (1) that a new product is being made, (2) that the same product is being made in a fundamentally different way (e.g., with different raw materials), or (3) that the same mix of products is being made but in a different proportion. In the first two cases, the EPA desires and intends that a new group determination be made. In the third case, the owner or operator has the flexibility to consider this situation when performing the initial group determination. If this situation was not considered, then a new group determination would be required. The EPA feels that these types of process changes warrant a new group determination to ensure that the emission standards are being met. The final rule does not reflect any changes related to this specific issue.

3. Emissions Testing and Performance Testing

Commenters requested that more flexibility should be allowed in designing an emissions testing scheme for batch process vents. Commenters cited an example, provided as part of the proposed definition of batch emission episode, where the charging of a vessel and the heating of the same vessel are considered two distinct batch emission episodes. In this example, the definition of batch emission episode would necessitate that separate emissions measurements be made for the charging and the heating of the vessel. This would require that a large number of samples be taken to characterize processes that have

multiple, short duration process steps. Commenters felt that the flexibility to test the emissions from several steps as a single batch emission episode would reduce testing costs without jeopardizing the quality of the emissions data. It was suggested that three or more batch cycles could be tested to obtain a representative average emission rate for the batch cycle.

After consideration of this comment, the EPA chose to leave the provisions related to emissions testing of batch process vents unchanged as they relate to this specific comment. The EPA felt adequate data were not presented to warrant changing these provisions. However, the emissions testing provisions in § 63.1323(b) and § 63.1325(c) have been modified to provide flexibility and reduce the burden of testing, while continuing to ensure that results are satisfactory for applicability determinations and performance tests. The final provisions allow an owner or operator to test just a portion of the batch emission episode selected to be controlled when the owner or operator can demonstrate that emissions during the period to be tested represent emissions for the entire batch emission episode or are greater than the average emission rate for the batch emission episode.

4. Flow Rate Estimation Procedures

Commenters asserted that the equations and test methods for calculating annual average flow rate in the proposed rule were not warranted. Commenters felt that the volumetric flow rate testing methods and the requirement to measure flow every 15 minutes specified in proposed § 63.506–2(e) were overly burdensome and would not always provide representative measurements. It was suggested that average flow rates for a batch emission episode are better defined by calculations of displacement volumes with respect to the durations of the displacement episodes or by other more simplified methods.

The EPA agrees that there are more simplified and potentially more accurate techniques for estimating flow rate for batch process vents. The final rule contains provisions that allow engineering assessment, as well as testing, to be used for estimating flow rate.

5. Emissions Estimation Procedures

Commenters recommended removing the emissions estimation equations in proposed § 63.506–2(b) from the rule. Commenters recommended that measurements or engineering estimates be allowed in place of the equations. It was felt the emissions estimation equations would not allow the flexibility necessary to account for differences in process technologies and operating methods.

Commenters also supported the provisions that allowed owners or operators to use direct measurement or engineering assessment to estimate emissions in cases where the emissions estimation equations are inappropriate for a particular type of operation or where, speaking to direct measurement, a more refined estimate of emissions is necessary. However, commenters objected to the requirement to demonstrate that the emissions estimation equations and direct measurement methods are not appropriate before engineering assessment can be used.

In response to the first issue raised, the emissions estimation equations have been retained in the final rule. The EPA found noting in the public comments that would warrant removing these procedures.

In response to the second issue, the EPA believes the data required to use the emissions estimation equations should be obtainable with reasonable effort. Further, specific comments regarding the inaccuracy or inappropriateness of the equations were not made. Given this, the EPA favors a more consistent estimation technique which is provided by the use of the emissions estimation equations, and the final rule requires the owner or operator to demonstrate that the emissions estimation equations are inappropriate before the use of engineering assessment is allowed.

However, independent of the comments provided, the EPA has concluded that direct measurement of emissions may prove to be difficult and may or may not provide an increased assurance of accuracy over the use of engineering assessment. Therefore, if an owner or operator can demonstrate that the emissions estimation equations are not appropriate, the final provisions allow the use of either direct measurement or engineering assessment.

6. Other Changes Resulting From EPA Review

In addition to changes made to the proposed rule as a result of public comment, changes were made as a result of EPA independently reviewing the rule between proposal and promulgation. Because the batch process vent provisions included in the rule are among the EPA's first attempts to regulate batch process vents, the EPA felt an ongoing, independent review of these provisions after proposal was warranted. Changes resulting from this review are listed below:

(1) Allow applicability determinations and compliance demonstrations (i.e., performance tests) to be based on TOC or organic HAP. Allow the use of Method 25A to compliment the use of TOC as a potential basis for applicability determinations and compliance demonstrations.

(2) Allow the establishment of parameter monitoring levels to be based on performance tests or a combination of performance tests and engineering assessment (discussed in more depth in Section H, Monitoring). To accommodate this change, modifications to the batch process vent testing provisions were required.

(3) Add provisions specifying how the batch cycle limitation is to be determined.

(4) Change the reporting requirement for batch cycle limitation records from quarterly to annually.

These changes are discussed in the paragraphs below.

In the final rule, the EPA has allowed the use of TOC as the basis for applicability and compliance demonstrations (i.e., performance tests) as an alternative to organic HAP. The EPA has done this to provide flexibility to the regulated community and to reduce the overall burden of the rule. The EPA considered the impacts of allowing TOC to serve as a surrogate for organic HAP in applicability and compliance demonstrations and did not find any negative impacts. Further, allowing the use of Method 25A as a complement to the use of TOC as a surrogate to organic HAP reduces the burden of implementing the final rule with little to no adverse impact on the measurement of pollutants in the regulated batch process vents. To the best of the EPA's knowledge, the batch process vents regulated by this rule are predominantly organic HAP. Also, with one exception (i.e., ethylene glycol), the regulated organic HAP, which are listed in the definition of organic HAP found in the final rule, have response factors to Method 25A adequate to ensure satisfactory measurement of TOC in the batch process vents. For certain emission points where the EPA considered the presence of ethylene glycol and its corresponding poor response factor to call into question the results that would be obtained using Method 25A, the use of Method 25A is not allowed. For all other emission points, the EPA has allowed the use of TOC for applicability and compliance demonstrations as an alternative to organic HAP in the final rule.

In the final rule, the EPA allows the establishment of parameter monitoring levels to be based on either performance tests, as in the proposed rule, or a combination of performance tests, engineering assessment, and manufacturer's recommendations. This change affects all emission points which are required to establish parameter monitoring levels, including batch process vents. The rationale for this change is discussed in detail in Section H, monitoring, of this document. For batch process vents, this change in the procedures for establishing parameter monitoring levels necessitated changes to the performance test provisions. When an owner or operator chooses to establish parameter monitoring levels based exclusively on performance tests, the final rule directs that the performance test must include the entire batch emission episode selected to be controlled. As discussed earlier, an owner or operator may choose to control just a portion of a batch emission episode; in such a scenario, the performance test must include the entire portion of the batch emission episode selected to be controlled. Alternatively, when an owner or operator chooses to establish parameter monitoring levels based on a combination of performance tests, engineering assessment, and manufacturer's recommendations, the final rule allows an owner or operator to test either the entire batch emission episode, or portion thereof, selected to be controlled or to test only the entire batch emission episode, or portion thereof, selected to be controlled.

Note: The flexibility to test a period of the batch emission episode that is less than the entire batch emission episode, or portion thereof, selected to be controlled is discussed earlier in this section.

The final rule includes provisions specifying how the batch cycle limitation, required for Group 2 batch process vents, is to be established. The EPA felt that the proposed rule was ambiguous concerning the establishment of the batch cycle limitation and added these provisions to make the rule complete. The added provisions provide additional description of the purpose of the batch cycle limitation and describe what documentation is required as part of establishing the batch cycle limitation.

In the final rule, the EPA changed the requirement for reporting the number and type of batch cycles accomplished for a Group 2 batch process vent from quarterly to annually. The EPA felt that quarterly reporting was unwarranted given that the compliance requirement (i.e., the batch cycle limitation) was on an annual basis.

D. Wastewater Provisions

1. Steam Stripping Styrene-Containing Wastewater Streams

Numerous commenters claimed that the selection of steam stripping as the basis of the standards for the treatment of styrene-containing wastewater streams was inappropriate due to polymerization problems. The EPA acknowledges that steam stripping styrene-containing wastewaters may prove to be impractical in some cases due to issues raised by the commenters. However, steam stripping is not required by the standards. Both the proposed and final wastewater provisions provide several options for complying with the standards. If the owner or operator judges steam stripping to be impractical for their process, one of the other wastewater compliance options may be used. The EPA considers one of these compliance options, the use of enclosed sewers to a biological treatment operation unit, a favorable option because styrene is highly biodegradable. Further, because the organic HAP emitted from the subcategories regulated by this rule are highly biodegradable, the EPA has determined that it is not necessary to require affected sources to demonstrate that 95 percent of the mass of organic HAP listed in Table 9 of the HON are removed when using a biological treatment unit, as required by the HON. Therefore, the final thermoplastic rule does not require an owner or operator to make this demonstration.

2. Elimination of Regulations Pertaining to Wastewater From Polystyrene Affected Sources

In addition to considering the comments made concerning the impracticality of steam stripping styrene-containing wastewaters, the EPA evaluated the need to regulate wastewater from polystyrene affected sources. Because the water solubility of styrene is limited to approximately 300 ppm and styrene is the only known organic HAP emitted during the production of polystyrene, it is not possible for a wastewater stream that only contains styrene to meet the Group 1 applicability criteria (i.e., 1,000 ppm minimum concentration). Therefore, because, to the best of EPA's knowledge, there can be no Group 1 wastewater streams at a polystyrene affected source, the final standards do not regulate wastewater from this subcategory.

E. Process Contact Cooling Tower Provisions

1. Ethylene Glycol Jet Retrofit for PET Existing Affected Sources

Commenters disagreed with the EPA's position that ethylene glycol jets are the vacuum systems technology of choice for a retrofit application and with the EPA determination that ethylene glycol jets are cost effective. Commenters contended that the EPA had failed to consider numerous costs factors and design considerations.

Note: While the proposed standards did not require the use of ethylene glycol jets, they were the technology on which the prohibition of process contact cooling towers was based.

Based on the data available at proposal, the costs and emission reductions achievable through the use of ethylene glycol jets in retrofit situations were acceptable. The EPA knew that the proposed standards for ethylene glycol jets were based on limited data and limited knowledge obtained from one manufacturer of PET. The EPA took special effort to make this clear and to solicit comments on the installation and operation of ethylene glycol jets in the preamble to the proposed standards (see pages 16104 and 16107 of the preamble). Based on the comments provided, the EPA agrees that ethylene glycol jets are not a suitable retrofit technology for existing affected sources, either technically or economically, for meeting the provisions of the proposed standards that prohibit the use of process contact cooling towers. These comments are presented and discussed in detail in the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996].

As explained in chapter 6.0 of the Basis and Purpose Document for the Final Standards [EPA–453/R–96–001b; May 1996], steam jet vacuum systems can be used to create a vacuum on the process vessels, contact condensers can be used to condense steam, and the contact condenser effluent can be recirculated to the process contact cooling tower. In the process contact cooling tower, stripping and drift may occur, resulting in organic HAP emissions to the atmosphere. Volatilization of organic HAP from the vacuum system may also occur. The following paragraphs describe some of the public comments on this issue and the EPA's responses.

Given that the EPA was convinced by the commenters' arguments that ethylene glycol jets are not a suitable retrofit technology for existing affected sources, the EPA considered alternate

options for controlling emissions from the vacuum system. Both volatile organic HAP (VOHAP) and ethylene glycol are emitted from the vacuum system, and the EPA chose to approach each of these emissions separately.

To address VOHAP emissions from the vacuum system at existing sources, the final standards treat the contact condenser effluent as wastewater and apply the same provisions to it as are applied to process wastewater. Contact condenser effluent is considered process wastewater based on the proposed wastewater provisions, and without any special provisions or specific mention, the wastewater provisions will apply. The EPA judged that treating the contact condenser effluent prior to any significant opportunity for volatilization protects the environment. Further, the HON wastewater provisions, which are the basis for the wastewater provisions in the proposed and final standards, have been judged to be environmentally effective and cost effective overall. Therefore, it the wasetwater provisions deem a wasterwater stream to be Group 2 (i.e., not requiring control), that means it is not cost effective to control any VOHAP that may be contained in that wastewater stream.

Addressing emissions from the process contact cooling tower was more complex.

Note: The HON did not specifically address process contact cooling towers because they are not used extensively in the synthetic organic chemical manufacturing industry (SOCMI).

Given that the emissions of VOHAP would be dealt with through the use of the wastewater provisions at existing affected sources, the key issue related to cooling towers became the emissions of ethylene glycol. Between proposal and promulgation, the EPA spent considerable effort gathering information on PET vacuum systems and their emissions. Much of this effort focused on emissions from the cooling towers, specifically emissions of ethylene glycol. In addition to gathering information on emissions, the EPA investigated control options aimed at reducing emissions of ethylene glycol from cooling towers. Possible control options, not considering ethylene glycol jets, included treating a slipstream of the cooling tower water to reduce the concentration of ethylene glycol or installing a large heat exchanger to isolate the cooling tower from the process. None of these control options were shown to be cost effective. All of the factors discussed above have led the EPA to conclude that, with one exception discussed below, specific provisions for controlling emissions from process contact cooling towers are not warranted for existing affected sources. Instead, the EPA is requiring that the wastewater provisions be applied to all vacuum system wastewater.

The one exception where it was found to be cost effective to control emissions from existing process contact cooling towers was for affected sources manufacturing PET using a continuous TPA high viscosity multiple end finisher process. Based on industry reported emissions, total ethylene glycol emissions for all PET subcategories are approximately 340 Mg/yr, and approximately 230 Mg/yr are being emitted from the single plant site that is part of this subcategory. This subcategory is required to keep the concentration of ethylene glycol in the process contact cooling tower water to 4 percent by weight or less.

As at proposal, the final standards require that owners or operators of new affected sources manufacturing PET not send contact condenser effluent associated with a vacuum system to a process contact cooling tower.

2. Vacuum System Wastewater

Many commenters objected to the proposed provision designating all contact condenser effluent as Group 1 wastewater streams. Commenters stated that the EPA had not provided adequate rationale explaining why the standards for contact condenser effluent were more stringent than the standards for other wastewater streams. Because the automatic designation of contact condenser effluent as Group 1 wastewater was done in an effort to make the use of noncontact condensers within steam-based vacuum systems equivalent to ethylene glycol jets, and that need no longer exists for existing affected sources, there is no longer a need or justification to designate all contact condenser effluent from existing PET affected sources as Group 1 wastewater. As a result, the EPA has changed the final standards to implement the group determination procedure (i.e., Group 1 or Group 2) for contact condenser effluent from existing PET affected sources.

On the other hand, the final standards continue to prohibit the use of process contact cooling towers for new PET affected sources.

Note: This requirement is equivalent to the MACT floor.

However, the provisions designating all contact condenser effluent streams from new PET affected sources as Group 1 wastewater have been dropped from the final standards. Like existing PET affected sources, the final standards implement the group determination procedure for contact condenser effluent from new PET affected sources. As described earlier, the purpose for designating all contact condenser effluent streams as Group 1 wastewater was to ensure equivalency between the use of ethylene glycol jets and the use of noncontact condensers. At the time of proposal, the EPA considered ethylene glycol jets to be pollution free because there was no wastewater stream produced. The automatic designation of all contact condenser effluent as Group 1 wastewater was meant to address the absence of wastewater when ethylene glycol jet systems are used. Since proposal, the EPA has come to understand that the use of ethylene glycol jets does not eliminate emissions because the additional loading to the glycol recovery unit can create additional emissions from process vents or wastewater streams or both.

Realizing that ethylene glycol jets are not pollution free, the EPA considered the additional emissions at the glycol recovery unit when ethylene glycol jets are used and the emissions from the contact condenser effluent when noncontact condensers are used.

Note: The use of ethylene glycol jets would still achieve more control than using steam jets and subjecting the contact condenser effluent to the wastewater provisions.

In either case, an equivalent quantity of VOHAP is introduced to the vacuum system from the process. Process vents and wastewater streams at the glycol recovery unit are subject to the appropriate provisions of the standards. For example, a wastewater stream at the glycol recovery unit would be subject to a group determination and, based on the results, would be controlled if required. The EPA judged that to require the same action for the contact condenser effluent from noncontact condensers would ensure equivalency between a new affected source using ethylene glycol jets and one using noncontact condensers.

F. Equipment Leak Provisions

1. Polystyrene

A number of commenters stated that the EPA had overestimated the emissions from equipment leaks at polystyrene affected sources in general and, in particular, from components containing styrene as the organic HAP. The commenters claimed that the use of the average SOCMI emission factors to estimate emissions was inappropriate because the vapor pressure of styrene at typical operating conditions in

polystyrene affected sources equates to a concentration of less than 10,000 ppm and no leaks would be detected using a leak definition of 10,000 ppm. The commenters also stated that the effect of using the average SOCMI emission factors was to justify the HON equipment leak program (i.e., subpart H) and that, if the EPA used a more realistic estimate of emissions (e.g., the emission factor for components with concentrations less than 10,000 ppm), a re-evaluation of the costs and emission reductions would likely result in a conclusion that the HON is not cost effective. The commenters recommended that if any program was to be implemented for polystyrene affected sources and especially for components in styrene service, it should either be a visual-only program or, at most, a program based on a State Reasonably Achievable Control Technology (RACT) program.

In response to these comments, the EPA re-evaluated the analysis that served as the basis for proposing the equipment leak provisions from the HON for polystyrene and other styrene-based resin affected sources.

Note: The results of this re-evaluation are contained in Item IV–B–2, Docket A–92–45.

In re-evaluating that analysis, the EPA determined the MACT floor for each subcategory. Because a MACT floor was determined to exist and the Clean Air Act does not allow the EPA to set a standard less stringent than the MACT floor, the EPA determined that some standard must be set for these subcategories.

The EPA agrees with the commenters that the average SOCMI emission factors are likely to overestimate emissions from components containing or contacting styrene. Therefore, the EPA lowered the emission factors used to estimate the emissions from these components. The EPA also adjusted leak rate factors based on additional data and comments from the industry. Adjustments to the emission factors and leak rates had the effect of reducing both the overall emission estimates and the emission reductions associated with the current industry programs, the MACT floor programs, and the HON program.

In addition, the EPA re-evaluated the costing program used to estimate the costs for the various equipment leak programs. Errors were discovered in the costing program. The net effect of correcting these errors was to lower the estimated costs for all of the various equipment leak programs. The incremental differences between the various programs decreased as well, but not by as much as the overall costs.

To determine whether or not the subpart H provisions were cost effective, the EPA examined the incremental costs and emission reductions between the HON program and the MACT floor program for each of the subcategories.

[Note: In the original analysis, the EPA examined the cost between the HON program and each facility's specific current program.]

Based on the incremental differences between the HON and the MACT floor programs, the EPA determined that the HON requirements are cost effective for each of the styrene-based resin subcategories, including the three polystyrene subcategories. Therefore, the EPA has retained the HON requirements in the final rule.

2. PET

Many commenters objected to the imposition of the HON equipment leak requirements on PET affected sources, especially those using the TPA process. These commenters stated that, due to the preponderance of components in heavy liquid service, no program should be imposed or, if a program is required, it should simply be a visual-only program. Some of the commenters referred to the rationale in the development of the Polymer Manufacturing NSPS [40 CFR part 60, subpart DDD], which exempted PET affected sources using a continuous TPA process from equipment leak regulation.

As was done for the styrene-based resin subcategories, the EPA re-evaluated the emission estimates and cost estimates for all of the PET subcategories. The results of this re-evaluation are found in Item IV–B–3, Docket A–92–45. The following actions were taken as part of the re-evaluation. First, the EPA lowered the emission factors used to estimate emissions from components in heavy liquid service to take into account the properties of ethylene glycol. Second, the EPA limited the re-evaluation of costs and emission reductions to only those facilities that provided specific component profiles (i.e., component counts and types of service). The results of the re-evaluation showed that, except for one PET subcategory, the HON requirements are cost effective. Thus, the final rule retains, for the most part, the HON requirements for the PET subcategories.

Note: Modifications to the HON requirements are discussed below.

The re-evaluation of the proposed equipment leak provisions showed that the provisions were not cost effective for PET affected sources using a continuous TPA high viscosity multiple end finisher process. Thus, this subcategory, which currently contains only one affected source, is exempt from the equipment leak requirements in the final rule.

With regard to exempting PET affected sources altogether based on the exemption contained in the Polymer Manufacturing NSPS, the EPA does not agree with the commenters. During the development of the Polymer Manufacturing NSPS, information available to the EPA indicated that all components at PET TPA continuous facilities were in heavy liquid service. Information provided by the industry during the development of this rulemaking, however, shows the presence of components in gas/vapor service and in light liquid service at some PET TPA facilities. The decision to require an equipment leak program for this rulemaking is based on this newer information. However, the EPA continues to agree that, if a PET TPPU consists solely of components in heavy liquid service, or in vacuum service, then said TPPU should be exempt from the equipment leak standards. The final rule contains this provision.

Many commenters were concerned about the recordkeeping and reporting requirements, especially for PET TPA affected sources where the vast majority of components are in heavy liquid service. While the EPA believes the original requirements were the minimum required to ensure compliance with the overall program, the EPA has reduced the burden of the recordkeeping and reporting requirements for these subcategories in light of the preponderance of components in heavy liquid service. The most significant change is the elimination of the requirement to initially list the identification numbers of components in heavy liquid service.

Finally, several commenters expressed concern with the use of Method 21 to detect leaks from components in ethylene glycol (i.e., heavy liquid) service, stating in part that Method 21 would not detect an ethylene glycol leak based on the properties of ethylene glycol and the operating conditions of the process. The EPA agrees that Method 21 is inappropriate for determining ethylene glycol leaks where the leaking component is in heavy liquid service. However, § 63.169 of subpart H does not require the use of Method 21; it is one of two alternatives for determining the presence of leaks from components in heavy liquid service. The other alternative is to use a sensory-based detection method. The final rule has been revised to clarify that leaks are to be determined exclusively through the use of visual, audible,

olfactory, and any other detection methods; Method 21 is not to be used to determine leaks from components in heavy liquid service at PET facilities.

G. Emissions Averaging Provisions

1. Number of Emission Points Allowed in Emissions Averaging

Numerous commenters requested that the number of emission points allowed in an emissions average be increased to 20 points from the 5 points allowed at proposal. If pollution prevention measures are used, commenters requested that an additional 5 emission points be allowed from the 3 emission points allowed at proposal. The commenters stated that this would be consistent with the HON.

In response to comments and to be more consistent with the HON and the proposed Group I Polymers and Resins NESHAP, the number of emission points allowed in emissions averaging at a plant site has been increased to 20 points, with an additional 5 points allowed if pollution prevention measures are used. These values (i.e., 20/25) are the maximum allowed for all emissions averages at a plant site, regardless of the number of affected sources present at a plant site or the number of emissions averaging programs implemented.

2. Including Batch Process Vents in Emissions Averaging

Several commenters requested that batch process vents be included in the emissions averaging provisions. The EPA had not allowed emissions averaging of batch process vents at proposal. The proposal preamble stated that the accuracy and consistency of emissions estimates needed for emissions averaging were considered to be greater than those needed for applicability determinations. However, upon review, the EPA has determined that having the same procedures to estimate emissions for applicability determinations and emissions averaging is reasonable. The final standards allow emissions averaging of existing batch process vents as well as aggregate batch vent streams.

H. Compliance and Performance Test Provisions and Monitoring Requirements

1. Excused Excursions

Many commenters requested that the proposed standards allow excused excursions in the same way that the HON allows excused excursions. In the final standards, the EPA included provisions to excuse a certain number of excursions for each reporting period. These provisions are identical to the HON provisions. The decision to include excused excursion provisions was based on data and information presented in public comments received on the proposed standards and received during industry meetings held after proposal. The commenters contended that by not allowing excused excursions in these standards, the EPA has made these standards more stringent than the HON, which the proposed standards and the costs of the proposed standards were modelled after. The commenters requested that the EPA justify the increased cost of imposing the more stringent ''no excused excursion'' provisions. The EPA agreed with the commenters that not allowing excused excursions could impose significant additional capital and operating costs on the affected source for only negligible corresponding reductions in air emissions. As is always the case, a State has the discretion to impose more stringent requirements than the requirements of NESHAP and other federal requirements and could choose not to allow the excused excursion provisions contained in these standards.

The EPA considered the number of excused excursions that would be most appropriate for these standards and determined that the number of excursions allowed in the HON is reasonable. Therefore, the final standards allow a maximum of 6 excused excursions for the first semiannual reporting period, decreasing by 1 excursion each semiannual reporting period. Starting with the sixth semiannual reporting period (i.e., the end of the third year of compliance) and thereafter, affected sources are allowed one excused excursion per semiannual reporting period.

2. Parameter Monitoring Levels

Commenters requested that more flexibility be permitted for establishing compliance levels for parameter monitoring. The commenters asked the EPA to allow the use of the HON range concept, which recognizes that a process or control device operates properly over a range of conditions.

The EPA revised the requirements for establishing parameter monitoring levels to incorporate the concepts included in the HON range concept.

Note: The final standards continue to use the term level.

Under the final rule, the owner or operator can choose between three procedures for establishing parameter monitoring levels. By providing the flexibility to establish parameter monitoring levels based on one of the three procedures, site-specific levels can be chosen which best accommodate variation in emission point characteristics and control device designs. These three procedures for establishing parameter monitoring levels are based on: (1) performance tests; (2) performance tests, engineering assessments, and/or manufacturer's recommendations; and (3) engineering assessments and/or manufacturer's recommendations. The establishment of a parameter monitoring level based solely on performance tests is preapproved by the Administrator; however, parameter monitoring values determined using the last two procedures, which may or may not use the results of performance tests, must be approved by the Administrator for each individual case.

3. Other Changes Resulting from EPA Review

In addition to changes made to the proposed rule as a result of public comment, changes were made as a result of EPA independently reviewing the rule between proposal and promulgation. In the final rule, the EPA has allowed the use of TOC, minus methane and ethane, as the basis for compliance demonstrations (i.e., performance tests) as an alternative to organic HAP for continuous process vents, batch process vents, storage vessels, and wastewater streams.

Note: The term ''TOC,'' as used in the remainder of this discussion and as defined in the final rule, denotes ''TOC, minus methane and ethane.''

The final rule also allows the use of TOC as an alternate basis for applicability determinations for batch process vents; TOC is not allowed as an alternate basis for applicability determinations for continuous process vents. In addition, the final rule allows the use of Method 25A to measure TOC in these instances were TOC serves as an alternative basis for compliance demonstrations or applicability determinations.

These changes were made to provide flexibility to the regulated community and to reduce the overall burden of the rule. The EPA considered the impacts of allowing TOC to serve as a surrogate for organic HAP in compliance demonstrations and did not find any adverse impacts. Further, in allowing the use of Method 25A as a complement to the use of TOC as a surrogate to organic HAP, the EPA judged that the burden of implementing the final rule would be reduced with no adverse impacts.

As proposed, the provisions concerning applicability determinations and compliance demonstrations allowed an owner or operator to measure total organic HAP *or* TOC; however, the proposed rule required Method 18 for measurement of organic compounds in both cases. In light of this, the major difference between the proposed and final rule is the flexibility to use Method 25A in measuring TOC. In deciding to allow the use of Method 25A, the EPA considered the composition of the emission streams and considered provisions that could be implemented to safeguard against inappropriate uses of Method 25A. To the best of the EPA's knowledge, the emission streams regulated by this rule are predominantly organic HAP. Also, with one exception (i.e., ethylene glycol), the regulated organic HAP, which are listed in the definition of organic HAP found in the final rule, have response factors to Method 25A adequate to ensure satisfactory emissions measurements. To safeguard against inadequate emissions measurements that might result from the inappropriate use of Method 25A, the final rule specifies the calibration gas to be used (i.e., the organic HAP representing the largest percent by volume) and what is an acceptable response for the calibration gas (i.e., 20 times the standard deviation of the response from the zero calibration gas).

In considering the use of TOC as an alternate basis for applicability determinations, and the complementary use of Method 25A to measure TOC, the EPA evaluated applicability determinations for continuous process vents and batch process vents.

[Note: The applicability determination procedures for storage vessels and wastewater streams do not use airborne organic HAP concentration values. Therefore, the use of Method 25A for these emission points is not applicable.]

The applicability determination procedure for continuous process vents (i.e., the TRE equation) requires an owner or operator to estimate the concentration and emission rate for both organic HAP and TOC. Because both of these values are required and were the basis for the original TRE analysis, the EPA judged that it was inappropriate to use TOC as an alternate basis to organic HAP for the applicability determinations for continuous process vents. On the other hand, the original analysis for batch process vents (i.e., the Batch Processes ACT) was based on the control of TOC; thus, the EPA considered the use of TOC as an alternate basis for the applicability determinations for batch process vents to be satisfactory.

I. Recordkeeping and Reporting

Several commenters stated that the recordkeeping and reporting requirements of the proposed standards were extremely burdensome. These commenters requested that the EPA reduce unnecessary recordkeeping and reporting requirements in the final standards. Commenters requested that the frequency with which records must be retained be reduced. The commenters also contended that records should only be required if an excursion has occurred. The commenters contended that records showing compliance with the standards were unnecessary.

The EPA has made every effort to reduce the recordkeeping requirements of the final thermoplastics rule. The EPA recognizes that unnecessary recordkeeping and reporting requirements would burden both the affected source and EPA enforcement agencies.

The EPA reviewed the recordkeeping required by the proposed rule and has made reductions in the amount of information that is required to be recorded. The final rule has been changed to require recording and retention of hourly average values of continuously monitored values. The proposal required that 15-minute averages be calculated and recorded. Under the proposal, if the daily average value was above the minimum or below the maximum established parameter monitoring levels (i.e., excess emissions occurred), the 15-minute values had to be retained; if the daily average value did not exceed the established parameter monitoring level, the 15-minute values could be converted to hourly averages, and the hourly averages could be retained instead of the 15-minute averages. Upon reconsideration, the EPA found that hourly average values provide a sufficient record to support the calculation of the daily average value. Therefore, to reduce the recordkeeping burden, the rule has been changed to specify that only hourly averages must be calculated and recorded. The rule no longer requires calculating or recording of 15-minute average values.

For emission points where continuous parameter monitoring is required, the value of the parameter must still be measured at least once every 15 minutes, but only the hourly average must be calculated and recorded. Many facilities already have computerized systems and monitor parameters more frequently than once every 15 minutes for process control purposes. The 15-minute monitoring frequency is consistent with the General Provisions and previous NSPS and NESHAP for emission points from similar industries.

In addition, the EPA added provisions [§ 63.1335(h)] that allow an owner or operator to implement a reduced recordkeeping program provided that certain criteria related to the monitoring system and the performance of the process, as it relates to maintaining compliance with the monitoring provisions, are met. Under these provisions it is possible for an owner or operator to retain only daily average values or, after a period of 6 consecutive months without an excursion, to retain no daily records.

The EPA believes that the recordkeeping requirements of the final rule are necessary to show compliance. The EPA will continue to require owners or operators to keep records, regardless of whether there was an excursion or not. These records are necessary to prove compliance when no excursion has occurred and are used to determine the severity of a violation, and, thus, how much of a penalty should be assessed once an excursion has occurred.

The EPA has made every effort to reduce the reporting requirements of the final rule. The EPA reviewed each report required at proposal, and determined that two of these reports, the Initial Notification and the Implementation Plan, contained many requirements that were duplicative with the existing operating permit program. For this reason, the EPA has removed the requirements for the Initial Notification and Implementation Plan from the final rule.

The EPA considers the recordkeeping and reporting requirements of the final rule to be the minimum necessary to ensure compliance.

Upon further review, the EPA decided to add a new report, the Precompliance Report, to the final rule to allow the owner or operator of an affected source to request an extension of compliance or to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, or alternative controls. At proposal, these items were submitted in the Implementation Plan. Overall, these changes, deleting the Initial Notification and the Implementation Plan and adding the Precompliance Report, result in a reduction of the reporting burden for the affected source.

VI. Administration Requirements

A. Docket

The docket is an organized and complete file of all the information submitted to or otherwise considered by the EPA in the development of the final standards. The principal purposes of the docket are:

(1) To allow interested parties to readily identify and locate 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 as provided for in section 307(d)(7)(A).

B. Executive Order 12866

Under Executive Order 12866 [58 FR 5173, October 4, 1993], the EPA must determine whether the regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in standards that may:

(1) Have an annual effect on 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 entitlement, 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 the Executive Order.

Pursuant to the terms of the Executive Order, the OMB has notified the EPA that it considers that a ''significant regulatory action'' within the meaning of the Executive Order. The EPA submitted this action to the OMB for review. Changes made in response to suggestions or recommendations from the OMB were documented and included in the public record.

C. Paperwork Reduction Act

The information collection requirements for this NESHAP 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. 1737.01), and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460, or by calling (202) 260–2740.

The public recordkeeping and reporting burden for this collection of information is estimated to average approximately 4,000 hours per respondent, at approximately 1,000 hours per response for 4 responses each, for each of the first 3 years following promulgation of the rule. These estimates include time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the reviewing the collection of information.

Sent comments regarding the recordkeeping and reporting burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.''

D. Regulatory Flexibility Act.

The Regulatory Flexibility Act (RFA) (Pub. L. 96–354, September 19, 1980) requires Federal agencies to give special consideration to the impact of regulation on small businesses. The RFA specifies that a final regulatory flexibility analysis must be prepared if a final regulation will have a significant economic impact on a substantial number of small entities. To determine whether a final RFA is required, a screening analysis, otherwise known as an initial RFA, is necessary.

Regulatory impacts are considered significant if:

(1) Annual compliance costs increase total costs of production by more than 5 percent, or

(2) Annual compliance costs as a percent of sales are at least 20 percent (percentage points) higher for small entities, or

(3) Capital cost of compliance represent a significant portion of capital available to small entities, or

(4) The requirements of the regulation are likely to result in closures of small entities.

A ''substantial number'' of small entities is generally considered to be more than 20 percent of the small entities in the affected industry.

Consistent with Small Business Administration (SBA) size standards, a thermoplastic producing firm is classified as a small entity if it has less than 750 employees and is unaffiliated with a larger entity. Based upon this criterion, only one firm, an MBS producer, employs less than 750 workers.

Data were available to examine two of the criteria; these were the potential for closure, and comparison of compliance costs as a percentage of sales.

For criterion one, the affected source is not expected to fall at risk of closure from the regulations, thus this criterion is not met. Also, the compliance costs were only 0.001 percent of total sales for the affected source, and this does not meet criterion two. Because the economics analysis lead to the conclusion that not MBS facilities at risk of closure, this criterion is not met.

In conclusion, and pursuant to section 605(b) of the RFA, the Administrator certifies that these standards will not have a significant economic impact on a substantial number of small entities. The basis for this certification is that the economic impacts for small entities do not meet or exceed the criteria in the Guidelines to the Regulatory Flexibility Act of 1980, as shown above. Further information on the initial RFA is available in the background information package (see **SUPPLEMENTARY INFORMATION** section).

E. Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA)

The SBREFA Subtitle D requires more rigorous regulatory flexibility analyses. It also requires the EPA to undertake a small entity stakeholder process involving the Small Business Administration (SBA) and the OMB prior to proposing a rule for which a regulatory flexibility analysis is required. In addition, it subjects agency compliance with many aspects of the amended Regulatory Flexibility Act (RFA) to judicial rule. Subtitle D of the SBREFA takes effect to rulemakings proposed as of June 28, 1996. Therefore, it does not apply to this rulemaking.

Subtitle E of SBREFA establishes opportunity for Congress to review and potentially disapprove nonmajor rules promulgated on or after March 29, 1996. With limited exceptions, it provides that no rule promulgated on or after March 29, 1996, may take effect until it is submitted to Congress and the Comptroller General along with specified supporting documentation. Different requirements apply to major rules. This rule, which is nonmajor, is being submitted to Congress in accordance with these requirements.

F. Unfunded Mandates

Under section 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22, 1995, the EPA must prepare a budgetary impact statement to accompany any proposed or final standards that include a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate, or to the private sector, of $100 million or more. Under section 205, the EPA must select the most cost effective and least burdensome alternative that achieves the objectives of the standards and is consistent with statutory requirements. Section 203 requires the EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the standards.

The EPA has determined that the final standards do not include a Federal mandate that may result in estimated costs of $100 million or more to either State, local, or tribal governments in the aggregate, or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this section.

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 63

Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: May 15, 1996.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, parts 9 and 63 of title 40, chapter I of the Code of Federal Regulations are amended as follows:

PART 9—[AMENDED]

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 et seq., 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 et seq., 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 et seq., 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. Section 9.1 is amended by adding the new entries to the table under the indicated heading in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories [3]	
63.1311	2060–0351
63.1314	2060–0351
63.1315	2060–0351
63.1319	2060–0351
63.1320	2060–0351
63.1325–1332	2060–0351
63.1335	2060–0351

[3] The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

* * * * *

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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 JJJ to read as follows:

Subpart JJJ—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

Secs.

Subpart JJJ—National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins

§ 63.1310 Applicability and designation of affected sources.

(a) *Definition of affected source.* The provisions of this subpart apply to each affected source. An affected source is either an existing affected source or a new affected source. Existing affected source is defined in paragraph (a)(6) of this section, and new affected source is defined in paragraph (a)(7) of this section. The affected source also includes the emission points and equipment specified in paragraphs (a)(1) through (a)(5) of this section that are associated with each group of TPPU.

(1) Each wastewater stream.

(2) Each wastewater operation.

(3) Each heat exchange system.

(4) Each process contact cooling tower used in the manufacture of PET that is associated with a new affected source.

(5) Each process contact cooling tower used in the manufacture of PET using a continuous terephthalic acid high viscosity multiple end finisher process that is associated with an existing affected source.

(6) Except as specified in paragraphs (b) through (d) of this section, an existing affected source is defined as each group of one or more thermoplastic product process units (TPPUs) that is not part of a new affected source as defined in paragraph (a)(7) of this section, that is manufacturing the same primary product, where each TPPU uses as a reactant, or uses as a process solvent, or produces as a by-product or co-product any organic hazardous air pollutant (organic HAP), and that is located at a plant site that is a major source.

(7) Except as specified in paragraphs (b) through (d) of this section, a new affected source is defined as a source meeting the criteria of paragraph (a)(7)(i), (a)(7)(ii), or (a)(7)(iii) of this section:

(i) At a plant site previously without HAP emissions points, each group of one or more TPPUs manufacturing the same primary product that is part of a major source on which construction commenced after March 29, 1995;

(ii) A TPPU meeting the criteria in paragraph (i)(1)(i) of this section; or

(iii) A reconstructed affected source meeting the criteria in paragraph (i)(2)(i) of this section.

(b) *TPPUs exempted from the affected source.* For a TPPU to be excluded from the designation of affected source due to the fact that it does not use as a reactant, or use as a process solvent, or produce as a by-product or co-product any organic HAP, the owner or operator shall comply with the requirements of paragraph (b)(1) of this section and shall comply with the requirements of paragraph (b)(2) of this section if requested to do so by the Administrator.

(1) Retain information, data, and analysis used to document the basis for the determination that the TPPU does not use as a reactant or use as a process solvent, or manufacture as a by-product or a co-product any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, or engineering calculations.

(2) When requested by the Administrator, demonstrate that the TPPU does not use as a reactant, or use as a process solvent, or manufacture as a by-product or co-product any organic HAP.

(c) *Emission points exempted from the affected source.* The affected source does not include the emission points listed in paragraphs (c)(1) through (c)(6) of this section:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems in segregated sewers;

(3) Spills;

(4) Water from safety showers;

(5) Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only; and

(6) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year.

(d) *Processes exempted from the affected source.* The processes specified in paragraphs (d)(1) through (d)(5) of this section are exempted from the affected source:

(1) Research and development facilities;

(2) Polymerization processes occurring in a mold;

(3) Processes which manufacture binder systems containing a thermoplastic product for paints, coatings, or adhesives;

(4) Finishing processes including equipment such as compounding units, spinning units, drawing units, extruding units, and other finishing steps; and

(5) Solid state polymerization processes.

(e) *Applicability determination of nonthermoplastic equipment included in a TPPU producing a thermoplastic product.* If a polymer that is not subject to this subpart is produced within the equipment (i.e., collocated) making up a TPPU and at least 50 percent of said polymer is used in the production of a thermoplastic product manufactured by said TPPU, the unit operations involved in the production of said polymer are considered part of the TPPU and are subject to this rule except as specified in this paragraph (e). If said unit operations are subject to another MACT standard regulating the same emission points, said unit operations are not subject to this subpart.

(f) *Primary product determination and applicability.* The primary product of a process unit shall be determined according to the procedures specified in paragraphs (f)(1) through (f)(2) of this section. Paragraphs (f)(3) through (f)(4) of this section describe whether or not a process unit is subject to this subpart. Paragraphs (f)(5) through (f)(7) of this section discuss compliance for those TPPUs operated as flexible operation units, as specified in paragraph (f)(2) of this section.

(1) If a process unit only manufactures one product, then that product shall represent the primary product of the process unit.

(2) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraphs (f)(2)(i) or (f)(2)(ii) of this section based on the anticipated operations for the 5 years following September 12, 1996 for existing affected sources and for the first 5 years after initial start-up for new affected sources.

(i) If the flexible operation unit will manufacture one product for the greatest operating time over the five year period, then that product shall represent the primary product of the flexible operation unit.

(ii) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest production on a mass basis over the five year period shall represent the primary product of the flexible operation unit.

(3) If the primary product of a process unit is a thermoplastic product, then said process unit is considered a TPPU. If said TPPU meets all the criteria of paragraph (a) of this section, it is either an affected source or is part of an affected source comprised of other TPPU subject to this rule at the same plant site with the same primary product. The status of a process unit as a TPPU and as an affected source or part of an affected source shall not change regardless of what products are produced in the future by said TPPU, with the exception noted in paragraph (f)(3)(i) of this section.

(i) If a process unit terminates the production of all thermoplastic products and does not anticipate the production of any thermoplastic product in the future, the process unit is no longer a TPPU and is not subject to this rule after notification is made as specified in paragraph (f)(3)(ii) of this section.

(ii) The owner or operator of a process unit that wishes to remove the TPPU designation from the process unit, as specified in paragraph (f)(3)(i) of this section, shall notify the Administrator. This notification shall be accompanied by rationale for why it is anticipated that no thermoplastic products will be produced in the process unit in the future.

(iii) If a process unit meeting the criteria of paragraph (f)(3)(i) of this section begins the production of a thermoplastic product in the future, the owner or operator shall use the procedures in paragraph (f)(4)(i) of this section to determine if the process unit is re-designated as a TPPU.

(4) If the primary product of a process unit is not a thermoplastic product, then said process unit is not an affected source nor is it part of any affected source subject to this rule. Said process unit is not subject to this rule at any time, regardless of what product is being produced. The status of a process unit as not being a TPPU, and therefore not an affected source nor part of an affected source subject to this subpart, shall not change regardless of what products are produced in the future by said TPPU, with the exception noted in paragraph (f)(4)(i) of this section.

(i) If, at any time beginning September 12, 2001, the owner or operator determines that a thermoplastic product is the primary product for the process unit based on actual production data for any preceding consecutive five-year period, then the process unit shall be designated as a TPPU. If said TPPU meets all the criteria of paragraph (a) of this section and is not subject to another subpart of 40 CFR part 63, it is either an affected source or part of an affected source and shall be subject to this rule.

(ii) If a process unit meets the criteria of paragraph (f)(4)(i) of this section, the

owner or operator shall notify the Administrator within 6 months of making this determination. The TPPU, as the entire affected source or part of an affected source, shall be in compliance with the provisions of this rule within 3 years from the date of such notification.

(iii) If a process unit is re-designated as a TPPU but does not meet all the criteria of paragraph (a) of this section, the owner or operator shall notify the Administrator within 6 months of making this determination. Said notification shall include documentation justifying the TPPU's status as not being an affected source or not being part of an affected source.

(5) Once the primary product of a process unit has been determined to be a thermoplastic product and it has been determined that all the criteria of paragraph (a) of this section are met for said TPPU, the owner or operator of the affected source shall comply with the standards for the primary product. Owners or operators of flexible operation units shall comply with the standards for the primary product as specified in either paragraph (f)(5)(i) or (f)(5)(ii) of this section, except as specified in paragraph (f)(5)(iii) of this section.

(i) Each owner or operator shall determine the group status of each emission point that is part of said flexible operation unit based on emission point characteristics when the primary product is being manufactured. Based on this finding, the owner or operator shall comply with the applicable standards for the primary product for each emission point, as appropriate, at all times, regardless of what product is being produced.

(ii) Alternatively, each owner or operator shall determine the group status of each emission point that is part of said flexible operation unit based on the emission point characteristics when each product produced by the flexible operation unit is manufactured, regardless of whether said product is a thermoplastic product or not. Based on these findings, the owner or operator shall comply with the applicable standards for the primary product for each emission point, as appropriate, regardless of what product is being produced.

Note: Under this scenario it is possible that the group status, and therefore the requirement to achieve emission reductions, for an emission point may change depending on the product being produced.

(iii) Whenever a flexible operation unit manufactures a product that meets the criteria of paragraph (b) of this section (i.e., does not use or produce any organic HAP), all activities associated with the manufacture of said product shall be exempt from the requirements of this rule, to include the operation and monitoring of control or recovery devices.

(6) The determination of the primary product for a process unit, to include the determination of applicability of this subpart to process units that are designed and operated as flexible operation units, shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5) when the primary product is determined to be a thermoplastic product. The Notification of Compliance Status shall include the information specified in either paragraph (f)(6)(i) or (f)(6)(ii) of this section. If the primary product is determined to be something other than a thermoplastic product, the owner or operator shall retain information, data, and analysis used to document the basis for the determination that the primary product is not a thermoplastic product.

(i) If the TPPU manufactures only one thermoplastic product, identification of said thermoplastic product.

(ii) If the TPPU is designed and operated as a flexible operation unit, the information specified in paragraphs (f)(6)(ii)(A) through (f)(6)(ii)(C) of this section, as appropriate.

(A) Identification of the primary product.

(B) Information concerning operating time and/or production mass for each product that was used to make the determination of the primary product under paragraph (f)(2)(i) or (f)(2)(ii) of this section.

(C) Identification of which compliance option, either paragraph (f)(5)(i) or (f)(5)(ii) of this section, has been selected by the owner or operator.

(7) To demonstrate compliance with the rule during those periods when a flexible operation unit that is subject to this subpart is producing a product other than a thermoplastic product or is producing a thermoplastic product that is not the primary product, the owner or operator shall comply with either paragraphs (f)(7)(i) through (f)(7)(ii) or paragraph (f)(7)(iii) of this section.

(i) Establish parameter monitoring levels, as specified in § 63.1334, for those emission points designated as Group 1, as appropriate.

(ii) Submit the parameter monitoring levels developed under paragraph (f)(7)(i) of this section and the basis for them in the Notification of Compliance Status report as specified in § 63.1335(e)(5).

(iii) Demonstrate that the parameter monitoring levels established for the primary product are also appropriate for those periods when products other than the primary product are being produced. Material demonstrating this finding shall be submitted in the Notification of Compliance Status report as specified in § 63.1335(e)(5).

(g) *Storage vessel ownership determination*. The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(8) of this section to determine to which process unit a storage vessel shall belong.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on September 12, 1996, said storage vessel shall belong to the process unit subject to the other subpart.

(2) If a storage vessel is dedicated to a single process unit, the storage vessel shall belong to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall belong to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., said process unit has the predominant use of the storage vessel).

(4) If predominant use cannot be determined for a storage vessel that is shared among process units and if one of those process units is a TPPU subject to this subpart, the storage vessel shall belong to said TPPU.

(5) If predominant use cannot be determined for a storage vessel that is shared among process units and if more than one of the process units are TPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the storage vessel to any one of the said TPPUs.

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 12, 1996 or based on the expected utilization for the 5 years following September 12, 1996 for existing affected sources, whichever is more representative of the expected operations for said storage vessel, and based on the first 5 years after initial start-up for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If the storage vessel begins receiving material from (or sending material to) another process unit; or ceasing to receive material from (or send material to) a process unit; or if the

applicability of this subpart to a storage vessel has been determined according to the provisions of paragraphs (g)(1) through (g)(6) of this section and there is a significant change in the use of the storage vessel that could reasonably change the predominant use, the owner or operator shall reevaluate the applicability of this subpart to the storage vessel.

(8) Where a storage vessel is located at a major source that includes one or more process units which place material into, or receive materials from the storage vessel, but the storage vessel is located in a tank farm, the applicability of this subpart shall be determined according to the provisions in paragraphs (g)(8)(i) through (g)(8)(iv) of this section.

(i) The storage vessel may only be assigned to a process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw materials, as appropriate). With respect to any process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, this subpart does not apply to the storage vessel.

(iii) If there is only one process unit at the major source that meets the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that process unit.

(iv) If there are two or more process units at the major source that meet the criteria of paragraph (g)(8)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraph (g)(7) of this section. The predominant use shall be determined among only those thermoplastic product process units that meet the criteria of paragraph (g)(8)(i) of this section.

(h) *Recovery operation equipment ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (h)(1) through (h)(7) of this section to determine to which process unit recovery operation equipment shall belong.

(1) If recovery operation equipment is already subject to another subpart of 40 CFR part 63 on September 12, 1996, said recovery operation equipment shall belong to the process unit subject to the other subpart.

(2) If recovery operation equipment is used exclusively by a single process unit, the recovery operation shall belong to that process unit.

(3) If recovery operation equipment is shared among process units, then the recovery operation equipment shall belong to that process unit located on the same plant site as the recovery operation equipment that has the greatest input into or output from the recovery operation equipment (i.e., said process unit has the predominant use of the recovery operation equipment).

(4) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if one of those process units is a TPPU subject to this subpart, the recovery operation equipment shall belong to said TPPU.

(5) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if more than one of the process units are TPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the recovery operation equipment to any one of said TPPUs.

(6) If the predominant use of recovery operation equipment varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 12, 1996 or based on the expected utilization for the 5 years following September 12, 1996 for existing affected sources, whichever is the more representative of the expected operations for said recovery operations equipment, and based on the first 5 years after initial start-up for new affected sources. This determination shall be reported in the Notification of Compliance Status required by § 63.1335(e)(5). If the predominant use changes, the redetermination of predominant use shall be reported in the next Periodic Report.

(7) If there is an unexpected change in the utilization of recovery operation equipment that could reasonably change the predominant use, the owner or operator shall redetermine to which process unit the recovery operation belongs by reperforming the procedures specified in paragraphs (h)(2) through (h)(6) of this section.

(i) *Changes or additions to plant sites.* The provisions of paragraphs (i)(1) through (i)(4) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (i)(5) of this section provides examples of what are and are not considered process changes for purposes of paragraph (i) of this section.

(1) *Adding a TPPU to a plant site.* The provisions of paragraphs (i)(1)(i) through (i)(1)(ii) of this section apply to owners or operators that add TPPUs to a plant site.

(i) If a TPPU is added to a plant site, said addition shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by September 12, 1996, whichever is later, if said addition meets the criteria specified in paragraphs (i)(1)(i)(A) through (i)(1)(i)(B) and either (i)(1)(i)(C) or (i)(1)(i)(D) of this section:

(A) Said addition meets the definition of construction in § 63.2;

(B) Such construction commenced after March 29, 1995; and

(C) Said addition has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP, and the primary product of said addition is currently produced at the plant site as the primary product of an affected source; or

(D) The primary product of said addition is not currently produced at the plant site as the primary product of an affected source and the plant site meets, or after the addition is completed will meet, the definition of major source.

(ii) If a TPPU is added to a plant site, said addition shall be subject to the requirements for an existing affected source in this subpart upon initial start-up or by 3 years after September 12, 1996, whichever is later, if said addition does not meet the criteria specified in paragraph (i)(1)(i) of this section and the plant site meets, or after the addition is completed will meet, the definition of major source.

(2) *Adding emission points or making process changes to existing affected sources.* The provisions of paragraphs (i)(2)(i) through (i)(2)(ii) of this section apply to owners or operators that add emission points or make process changes to an existing affected source.

(i) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source, said affected source shall be a new affected source and shall be subject to the requirements for a new affected source in this subpart upon initial start-up or by September 12, 1996, whichever is later, if said process change or addition meets the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section:

(A) Said process change or addition meets the definition of reconstruction in § 63.2; and

(B) Such reconstruction commenced after March 29, 1995.

(ii) If any process change is made or emission point is added to an existing affected source, or if a process change creating one or more additional Group 1 emission point(s) is made to an existing affected source and said process change or addition does not meet the criteria specified in paragraphs (i)(2)(i)(A) through (i)(2)(i)(B) of this section, the resulting emission point(s) shall be subject to the requirements for an existing affected source in this subpart. Said emission point(s) shall be in compliance upon initial start-up or by 3 years after September 12, 1996, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making said process change or addition. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(iii) To establish a compliance date for an emission point or points specified in paragraph (i)(2)(ii) of this section, the procedures specified in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section shall be followed.

(A) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(B) The compliance schedule shall be submitted within 180 days after the process change or addition is made or the information regarding said change or addition is known to the owner or operator, unless the compliance schedule has been previously submitted to the permitting authority. The compliance schedule may be submitted in the next Periodic Report if the process change or addition is made after the date the Notification of Compliance Status report is due.

(C) The Administrator shall approve the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification.

(3) *Existing source requirements for Group 2 emission points that become Group 1 emission points.* If a process change or addition that does not meet the criteria in paragraph (i)(1) or (i)(2) of this section is made to an existing plant site or existing affected source, and the change causes a Group 2 emission point to become a Group 1 emission point, for said emission point, the owner or operator shall comply with the requirements of this subpart for existing Group 1 emission points. Compliance shall be achieved as expeditiously as practicable, but in no event later than 3 years after said emission point becomes a Group 1 emission point.

(4) *Existing source requirements for some emission points that become subject to the requirements of subpart H of this part.* If a compressor becomes subject to § 63.164, the owner or operator shall be in compliance upon initial start-up or by 3 years after September 12, 1996, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (i)(2)(iii)(A) through (i)(2)(iii)(C) of this section to establish a compliance date.

(5) *Determining what are and are not process changes.* For purposes of paragraph (i) of this section, examples of process changes include, but are not limited to, changes in production capacity, feedstock type, or catalyst type, or whenever there is a replacement, removal, or the addition of recovery equipment. For purposes of paragraph (i) of this section, process changes do not include: process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by § 63.1335(e)(5).

(j) *Applicability of this subpart except during periods of start-up, shutdown, and malfunction.* Each provision set forth in this subpart or referred to in this subpart shall apply at all times except during periods of start-up, shutdown, and malfunction if the start-up, shutdown, or malfunction precludes the ability of a particular emission point of an affected source to comply with one or more specific provisions to which it is subject. Start-up, shutdown, and malfunction is defined in § 63.1312 for all emission points except equipment leaks subject to subpart H of this part, which shall follow the provisions for periods of start-up, malfunction, and process unit shutdown, as defined in § 63.161. Only then shall an emission point not be required to comply with all applicable provisions of this subpart.

§ 63.1311 Compliance schedule and relationship to existing applicable rules.

(a) Affected sources are required to achieve compliance on or before the dates specified in paragraphs (b) through (d) of this section. Paragraph (e) of this section provides information on requesting compliance extensions. Paragraphs (f) through (l) of this section discuss the relationship of this subpart to subpart A of this part and to other applicable rules. Where an override of another authority of the Act is indicated in this subpart, only compliance with the provisions of this subpart is required. Paragraph (m) of this section specifies the meaning of time periods.

(b) New affected sources that commence construction or reconstruction after March 29, 1995 shall be in compliance with this subpart upon initial start-up or September 12, 1996, whichever is later, as provided in § 63.6(b).

(c) Existing affected sources shall be in compliance with this subpart (except for § 63.1331 for which compliance is covered by paragraph (d) of this section) no later than 3 years after September 12, 1996, as provided in § 63.6(c), unless an extension has been granted as specified in paragraph (e) of this section.

(d) Except as provided for in paragraphs (d)(1) through (d)(5) of this section, existing affected sources shall be in compliance with § 63.1331 no later than March 12, 1997 unless a request for a compliance extension is granted pursuant to Section 112(i)(3)(B) of the Act, as discussed in § 63.182(a)(6).

(1) Compliance with the compressor provisions of § 63.164 shall occur no later than September 12, 1997 for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iii) of this section if the work can be accomplished without a process unit shutdown, as defined in § 63.161:

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed; or

(iii) A new barrier fluid will be utilized which requires changes to the existing barrier fluid system.

(2) Compliance with the compressor provisions of § 63.164 shall occur no later than February 12, 1998 for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (d)(2)(ii) of this section:

(i) The compressor meets one or more of the criteria specified in paragraphs (d)(1)(i)(A) through (d)(1)(i)(B) of this section:

(A) The work can be accomplished without a process unit shutdown as defined in § 63.161; or

(B) The additional time is actually necessary due to the unavailability of parts beyond the control of the owner or operator.

(ii) The owner or operator submits the request for a compliance extension to the Environmental Protection Agency

(EPA) Regional Office at the addresses listed in § 63.13 no later than 45 calendar days before March 12, 1997. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i) (A), (B), and (D). Unless the EPA Regional Office objects to the request for a compliance extension within 30 calendar days after receipt of the request, the request shall be deemed approved.

(3) If compliance with the compressor provisions of § 63.164 cannot reasonably be achieved without a process unit shutdown, as defined in § 63.161, the owner or operator shall achieve compliance no later than September 14, 1998. The owner or operator who elects to use this provision shall submit a request for a compliance extension in accordance with the requirements of paragraph (d)(2)(ii) of this section.

(4) If compliance with the compressor provisions of § 63.164 cannot be achieved without replacing the compressor or recasting the distance piece, the owner or operator shall achieve compliance no later than September 13, 1999. The owner or operator who elects to use this provision shall submit a request for a compliance extension in accordance with the requirements of paragraph (d)(2)(ii) of this section.

(5) Compliance with the provisions of § 63.170 shall occur no later than September 13, 1999.

(e) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing source up to 1 additional year to comply with section 112(d) standards. For purposes of this subpart, a request for an extension shall be submitted to the operating permit authority as part of the operating permit application or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than the date the Precompliance Report is required to be submitted in § 63.1335(e)(3)(i). The dates specified in § 63.6(i) for submittal of requests for extensions shall not apply to this subpart.

(1) A request for an extension of compliance shall include the data described in § 63.6(i)(6)(i) (A),(B), and (D).

(2) The requirements in § 63.6(i)(8) through § 63.6(i)(14) shall govern the review and approval of requests for extensions of compliance with this subpart.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(g)(1) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of subpart I of this part, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said affected source shall no longer be subject to subpart I of this part.

(2) Said affected sources that elected to comply with subpart I of this part through a quality improvement program, as specified in § 63.175 or § 63.176 or both, may elect to continue these programs without interruption as a means of complying with this subpart. In other words, becoming subject to this subpart does not restart or reset the ''compliance clock'' as it relates to reduced burden earned through a quality improvement program.

(h) After the compliance dates specified in this section, a storage vessel that belongs to an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(i)(1) Except as provided in paragraph (i)(2) of this section, after the compliance dates specified in this section, affected sources producing PET using a continuous terephthalic acid process, producing PET using a continuous dimethyl terephthalate process, or producing polystyrene resin using a continuous process subject to this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, are required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said sources shall no longer be subject to 40 CFR part 60, subpart DDD.

(2) Existing affected sources producing PET using a continuous terephthalic acid high viscosity multiple end finisher process shall continue to be subject to 40 CFR 60.562–1(c)(2)(ii)(C). Once said affected source becomes subject to and achieves compliance with § 63.1329(c) of this subpart, said affected source is no longer subject to the provisions of 40 CFR part 60, subpart DDD.

(j) Affected sources subject to this subpart that are also subject to the provisions of subpart Q of this part shall comply with both subparts.

(k) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart VV, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said source shall no longer be subject to 40 CFR part 60, subpart VV.

(l) After the compliance dates specified in this section, a distillation operation that belongs to an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart NNN, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, said distillation operation shall no longer be subject to 40 CFR part 60, subpart NNN.

(m) All terms in this subpart that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods.

(1) Notwithstanding time periods specified in this subpart for completion of required tasks, such time periods may be changed by mutual agreement between the owner or operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or another date, rather than on the first day of the standard calendar period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(2) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraphs (m)(i) or (m)(ii) of this section, as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance deadline occurs.

(3) In all instances where a provision of this subpart requires completion of a task during each multiple successive period, an owner or operator may perform the required task at any time during the specified period, provided

that the task is conducted at a reasonable interval after completion of the task during the previous period.

§ 63.1312 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in § 63.2, § 63.101, § 63.111, and § 63.161 as specified after each term:
Act (§ 63.2)
Administrator (§ 63.2)
Automated monitoring and recording system (§ 63.111)
Average concentration (§ 63.111)
Boiler (§ 63.111)
Bottoms receiver (§ 63.161)
By compound (§ 63.111)
By-product (§ 63.101)
Car-seal (§ 63.111)
Chemical manufacturing process unit (§ 63.101)
Closed-vent system (§ 63.111)
Co-product (§ 63.101)
Combustion device (§ 63.111)
Commenced (§ 63.2)
Compliance date (§ 63.2)
Compliance schedule (§ 63.2)
Connector (§ 63.161)
Construction (§ 63.2)
Continuous monitoring system (§ 63.2)
Continuous record (§ 63.111)
Continuous recorder (§ 63.111)
Cover (§ 63.111)
Distillation unit (§ 63.111)
Emission standard (§ 63.2)
Emissions averaging (§ 63.2)
EPA (§ 63.2)
Equipment (§ 63.161)
Equipment leak (§ 63.101)
Existing source (§ 63.2)
External floating roof (§ 63.111)
Fill (§ 63.111)
Fixed roof (§ 63.111)
Flame zone (§ 63.111)
Flexible operation unit (§ 63.101)
Floating roof (§ 63.111)
Flow indicator (§ 63.111)
Group 1 wastewater streams (§ 63.111)
Group 2 wastewater streams (§ 63.111)
Halogens and hydrogen halides (§ 63.111)
Hazardous air pollutant (§ 63.2)
Impurity (§ 63.101)
In organic hazardous air pollutant service (§ 63.161)
Incinerator (§ 63.111)
Instrumentation system (§ 63.161)
Internal floating roof (§ 63.111)
Lesser quantity (§ 63.2)
Major source (§ 63.2)
Malfunction (§ 63.2)
Mass flow rate (§ 63.111)
Maximum true vapor pressure (§ 63.111)
New source (§ 63.2)
Open-ended valve or line (§ 63.161)
Operating permit (§ 63.101)
Organic HAP service (§ 63.161)
Organic monitoring device (§ 63.111)
Owner or operator (§ 63.2)
Performance evaluation (§ 63.2)
Performance test (§ 63.2)
Permitting authority (§ 63.2)
Plant site (§ 63.101)
Point of generation (§ 63.111)
Potential to emit (§ 63.2)
Primary fuel (§ 63.111)
Process heater (§ 63.111)
Process unit shutdown (§ 63.161)
Process wastewater (§ 63.101)
Process wastewater stream (§ 63.111)
Product separator (§ 63.111)
Reactor (§ 63.111)
Reconstruction (§ 63.2)
Recovery device (§ 63.111)
Reference control technology for process vents (§ 63.111)
Reference control technology for storage vessels (§ 63.111)
Reference control technology for wastewater (§ 63.111)
Relief valve (§ 63.111)
Research and development facility (§ 63.101)
Residual (§ 63.111)
Run (§ 63.2)
Secondary fuel (§ 63.111)
Sensor (§ 63.161)
Shutdown (§ 63.2)
Specific gravity monitoring device (§ 63.111)
Start-up (§ 63.2)
Start-up, shutdown, and malfunction plan (§ 63.101)
State (§ 63.2)
Surge control vessel (§ 63.161)
Temperature monitoring device (§ 63.111)
Test method (§ 63.2)
Total resource effectiveness index value (§ 63.111)
Treatment process (§ 63.111)
Unit operation (§ 63.101)
Visible emission (§ 63.2)
Waste management unit (§ 63.111)
Wastewater (§ 63.101)
Wastewater stream (§ 63.111)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in §§ 63.2, 63.101, 63.111, or 63.161 and in this section, it shall have the meaning given in this section for purposes of this subpart.

Acrylonitrile butadiene styrene latex resin (ABS latex) means ABS produced through an emulsion process, however the product is not coagulated or dried as typically occurs in an emulsion process.

Acrylonitrile butadiene styrene resin (ABS) means styrenic terpolymers consisting primarily of acrylonitrile, 1,3-butadiene, and styrene monomer units. ABS is usually composed of a styrene-acrylonitrile copolymer continuous phase with dispersed butadiene derived rubber.

Acrylonitrile styrene acrylate resin (ASA) means a resin formed using acrylic ester-based elastomers to impact-modify styrene acrylonitrile resin matrices.

Aggregate batch vent stream means a gaseous emission stream containing only the exhausts from two or more batch process vents that are ducted together before being routed to a control device that is in continuous operation.

Affected source is defined in § 63.1310(a).

Alpha methyl styrene acrylonitrile resin (AMSAN) means copolymers consisting primarily of alpha methyl styrene and acrylonitrile.

Average flow rate, as used in conjunction with wastewater provisions, is determined by the specifications in § 63.144(c); or, as used in conjunction with batch process vent provisions, is determined by the specifications in § 63.1323(e).

Batch cycle means the operational step or steps, from start to finish, that occur as part of a batch unit operation. Batch cycle limitation means an enforceable restriction on the number of batch cycles that can be performed in a year for an individual batch process vent.

Batch emission episode means a discrete emission venting episode associated with a single batch unit operation. Multiple batch emission episodes may occur from a single batch unit operation.

Batch process means a discontinuous process involving the bulk movement of material through sequential manufacturing steps. Mass, temperature, concentration, and other properties of the process vary with time. Addition of raw material and withdrawal of product do not typically occur simultaneously in a batch process. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Batch process vent means a point of emission from a batch unit operation having a gaseous emission stream with annual organic HAP emissions greater than 225 kilograms per year. Batch process vents exclude relief valve discharges and leaks from equipment regulated under § 63.1331.

Batch unit operation means a unit operation operated in a batch process mode.

Compounding unit means a unit operation which blends, melts, and resolidifies solid polymers for the purpose of incorporating additives, colorants, or stabilizers into the final thermoplastic product. A unit operation whose primary purpose is to remove residual monomers from polymers is not a compounding unit.

Continuous process means a process where the inputs and outputs flow continuously through sequential manufacturing steps throughout the duration of the process. Continuous processes typically approach steady-state conditions. Continuous processes typically involve the simultaneous addition of raw material and withdrawal of product. For the purposes of this subpart, a process producing polymers is characterized as continuous or batch based on the operation of the polymerization reactors.

Continuous process vent means a point of emission from a continuous unit operation within an affected source having a gaseous emission stream containing greater than 0.005 weight percent total organic HAP. Continuous process vents exclude relief valve discharges and leaks from equipment regulated under § 63.1331.

Continuous unit operation means a unit operation operated in a continuous process mode.

Control device is defined in § 63.111, except that the term ''process vents'' shall be replaced with the term ''continuous process vents subject to § 63.1315'' for the purpose of this subpart.

Drawing unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then pulling it through an orifice to create a continuously extruded product.

Emission point means an individual continuous process vent, batch process vent, storage vessel, wastewater stream, equipment leak, heat exchange system, or process contact cooling tower.

Emulsion process means a process carried out with the reactants in an emulsified form (e.g., polymerization reaction).

Expandable polystyrene resin (EPS) means a polystyrene bead to which a blowing agent has been added using either an in-situ suspension process or a post-impregnation suspension process.

Extruding unit means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then forcing it through an orifice to create a continuously extruded product.

Group 1 batch process vent means a batch process vent releasing annual organic HAP emissions greater than the level specified in § 63.1323(d) and with a cutoff flow rate, calculated in accordance with § 63.1323(f), greater than or equal to the annual average flow rate.

Group 2 batch process vent means a batch process vent that does not fall within the definition of a Group 1 batch process vent.

Group 1 continuous process vent means a continuous process vent releasing a gaseous emission stream that has a total resource effectiveness index value, calculated according to § 63.115, less than or equal to 1.0 unless the continuous process vent is associated with existing thermoplastic product process units that produce methyl methacrylate butadiene styrene resin, then said vent falls within the Group 1 definition if the released emission stream has a total resource effectiveness index value less than or equal to 3.7.

Group 2 continuous process vent means a continuous process vent that does not fall within the definition of a Group 1 continuous process vent.

Group 1 storage vessel means a storage vessel at an existing affected source that meets the applicability criteria specified in Table 2 or Table 3 of this subpart, or a storage vessel at a new affected source that meets the applicability criteria specified in Table 4 or Table 5 of this subpart.

Group 2 storage vessel means a storage vessel that does not fall within the definition of a Group 1 storage vessel.

Halogenated aggregate batch vent stream means an aggregate batch vent stream determined to have a total mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated batch process vent means a batch process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 3,750 kilograms per year or greater determined by the procedures specified in § 63.1323(h).

Halogenated continuous process vent means a continuous process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures specified in § 63.115(d)(2)(v).

Heat exchange system means any cooling tower system or once-through cooling water system (e.g., river or pond water) designed and operated to not allow contact between the cooling medium and process fluid or gases (i.e., a noncontact system). A heat exchange system can include more than one heat exchanger and can include recirculating or once-through cooling systems.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the TPPU into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewater include descaling of heat exchanger tubing bundles, cleaning distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, reactor and equipment washdown, and draining of portions of the TPPU for repair.

Mass process means a process carried out through the use of thermal energy (e.g., polymerization reaction). Mass processes do not utilize emulsifying or suspending agents, but can utilize catalysts or other additives.

Material recovery section means the equipment that recovers unreacted or by-product materials from any process section for return to the TPPU, off-site purification or treatment, or sale. Equipment used to store recovered materials are not included. Equipment designed to separate unreacted or by-product material from the polymer product are to be included in this process section, provided that at the time of initial compliance some of the material is recovered for reuse in the process, off-site purification or treatment, or sale. Otherwise, such equipment are to be assigned to one of the other process sections, as appropriate. If equipment are used to recover unreacted or by-product material and return it directly to the same piece of process equipment from which it was emitted, then said recovery equipment are considered part of the process section that contains the process equipment. On the other hand, if equipment are used to recover unreacted or by-product material and return it to a different piece of process equipment in the same process section, said recovery equipment are considered part of a material recovery section. Equipment that treats recovered materials are to be included in this process section, but equipment that also treats raw materials are not to be included in this process section. The latter equipment are to be included in the raw materials preparation section. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are not included in the material recovery section; they are to be included in the polymerization reaction section. Equipment used for the on-site recovery of ethylene glycol *and* other materials (e.g., methanol) from PET plants are not included in the material recovery section; these equipment are to be included in the polymerization reaction section.

Methyl methacrylate acrylonitrile butadiene styrene resin (MABS) means

styrenic polymers containing methyl methacrylate, acrylonitrile, butadiene, and styrene. MABS is prepared by dissolving or dispersing polybutadiene rubber in a mixture of methyl methacrylate-acrylonitrile-styrene and butadiene monomer. The graft polymerization is carried out by a bulk or a suspension process.

Methyl methacrylate butadiene styrene resin (MBS) means styrenic polymers containing methyl methacrylate, butadiene, and styrene. Production of MBS is achieved using an emulsion process in which methyl methacrylate and styrene are grafted onto a styrene-butadiene rubber.

Nitrile resin means a resin produced through the polymerization of acrylonitrile, methyl acrylate, and butadiene latex using an emulsion process.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 6 of this subpart or any other chemical which is:

(1) Knowingly introduced into the manufacturing process other than as an impurity, or has been or will be reported under any Federal or State program, such as Title V or the Emergency Planning and Community Right-To-Know Act section 311, 312, or 313; and

(2) Listed in Table 2 of subpart F of this part.

PET using a dimethyl terephthalate process means the manufacturing of PET based on the esterification of dimethyl terephthalate with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

PET using a terephthalic acid process means the manufacturing of PET based on the esterification reaction of terephthalic acid with ethylene glycol to form the intermediate monomer bis-(2-hydroxyethyl)-terephthalate that is subsequently polymerized to form PET.

Poly(ethylene terephthalate) resin (PET) means a polymer or copolymer comprised of at least 50 percent bis-(2-hydroxyethyl)-terephthalate by weight.

Polymerization reaction section means the equipment designed to cause monomer(s) to react to form polymers, including equipment designed primarily to cause the formation of short polymer chains (e.g., oligomers or low polymers), but not including equipment designed to prepare raw materials for polymerization (e.g., esterification vessels). For the purposes of these standards, the polymerization reaction section begins with the equipment used to transfer the materials from the raw materials preparation section and ends with the last vessel in which polymerization occurs. Equipment used for the on-site recovery of ethylene glycol from PET plants, however, are included in this process section, rather than in the material recovery process section.

Polystyrene resin means a thermoplastic polymer or copolymer comprised of at least 80 percent styrene or para-methylstyrene by weight.

Primary product is defined in and determined by the procedures specified in § 63.1310(f).

Process contact cooling tower system means a cooling tower system that is designed and operated to allow contact between the cooling medium and process fluid or gases.

Process section means the equipment designed to accomplish a general but well-defined task in polymers production. Process sections include, but are not limited to, raw materials preparation, polymerization reaction, and material recovery. A process section may be dedicated to a single TPPU or common to more than one TPPU.

Process unit means a collection of equipment assembled and connected by pipes or ducts to process raw materials and to manufacture a product.

Process vent means a point of emission from a unit operation having a gaseous emission stream. Typical process vents include condenser vents, dryer vents, vacuum pumps, steam ejectors, and atmospheric vents from reactors and other process vessels, but do not include pressure relief valves.

Product means a compound or material which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

Raw materials preparation section means the equipment at a polymer manufacturing plant designed to prepare raw materials, such as monomers and solvents, for polymerization. For the purposes of these standards, this process section begins with the equipment used to transfer raw materials from storage and/or the equipment used to transfer recovered material from the material recovery process sections, and ends with the last piece of equipment that prepares the material for polymerization. The raw materials preparation section may include equipment that is used to purify, dry, or otherwise treat raw materials or raw and recovered materials together; to activate catalysts; and to promote esterification including the formation of some short polymer chains (oligomers). The raw materials preparation section does not include equipment that is designed primarily to accomplish the formation of oligomers, the treatment of recovered materials alone, or the storage of raw materials.

Recovery operations equipment means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation unit, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

Solid state polymerization unit means a unit operation which, through the application of heat, furthers the polymerization (i.e., increases the intrinsic viscosity) of polymer chips.

Steady-state conditions means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values can occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP and that has been assigned, according to the procedures in § 63.1310(g), to a TPPU that is subject to this subpart. Storage vessels do not include:

(1) vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) pressure vessels designed to operate in excess of 204.9 kilopascals and without breathing or working losses to the atmosphere;

(3) vessels with capacities smaller than 38 cubic meters;

(4) vessels and equipment storing and/or handling material that contains no organic HAP and/or organic HAP as impurities only; and

(5) wastewater storage tanks.

Styrene acrylonitrile resin (SAN) means copolymers consisting primarily of styrene and acrylonitrile monomer units.

Suspension process means a process carried out with the reactants in a state of suspension, typically achieved through the use of water and/or suspending agents (e.g., polymerization reaction).

Thermoplastic product means one of the following types of products:

(1) ABS latex;

(2) ABS using a batch emulsion process;

(3) ABS using a batch suspension process;

(4) ABS using a continuous emulsion process;

(5) ABS using a continuous mass process;

(6) ASA/AMSAN;

(7) EPS;

(8) MABS;

(9) MBS;

(10) nitrile resin;
(11) PET using a batch dimethyl terephthalate process;
(12) PET using a batch terephthalic acid process;
(13) PET using a continuous dimethyl terephthalate process;
(14) PET using a continuous terephthalic acid process;
(15) PET using a continuous terephthalic acid high viscosity multiple end finisher process;
(16) polystyrene resin using a batch process;
(17) polystyrene resin using a continuous process;
(18) SAN using a batch process; or
(19) SAN using a continuous process.

Thermoplastic product process unit (TPPU) means a collection of equipment assembled and connected by process pipes or ducts, excluding gas, sanitary sewage, water (i.e., not wastewater), and steam connections, used to process raw materials and to manufacture a thermoplastic product as its primary product. This collection of equipment includes process vents from process vessels; storage vessels, as determined in § 63.1310(g); and the equipment (i.e., pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are associated with the thermoplastic product process unit) that are subject to the equipment leak provisions as specified in § 63.1331.

Total organic compounds (TOC) means those compounds excluding methane and ethane measured according to the procedures of Method 18 or Method 25A, 40 CFR part 60, appendix A.

Year means any consecutive 12-month period or 365 rolling days. For the purposes of emissions averaging, the term year applies to any 12-month period selected by the facility and defined in its Emissions Averaging Plan. For the purposes of batch cycle limitations, the term year applies to the 12-month period defined by the facility in its Notification of Compliance Status.

§ 63.1313 Emission standards.

(a) Except as allowed under paragraphs (b) and (c) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:
(1) Section 63.1314 for storage vessels;
(2) Sections 63.1315 or 63.1316 through 63.1320, as appropriate, for continuous process vents;
(3) Section 63.1321 for batch process vents;
(4) Section 63.1328 for heat exchange systems;
(5) Section 63.1329 for process contact cooling towers;
(6) Section 63.1330 for wastewater;
(7) Section 63.1331 for equipment leaks;
(8) Section 63.1333 for additional test methods and procedures;
(9) Section 63.1334 for parameter monitoring levels and excursions; and
(10) Section 63.1335 for general recordkeeping and reporting requirements.

(b) Instead of complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, batch process vents, continuous process vents, and wastewater streams within the affected source to different levels using an emissions averaging compliance approach that uses the procedures specified in § 63.1332. An owner or operator electing to use emissions averaging must still comply with the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330 for affected source emission points not included in the emissions average.

(c) A State may decide not to allow the use of the emissions averaging compliance approach specified in paragraph (b) of this section.

§ 63.1314 Storage vessel provisions.

(a) This section applies to each storage vessel that belongs to an affected source, as determined by § 63.1310(g). Except as provided in paragraphs (b) through (d) of this section, the owner or operator of said storage vessels shall comply with the requirements of §§ 63.119 through 63.123 and 63.148, with the differences noted in paragraphs (a)(1) through (a)(16) of this section for the purposes of this subpart.

(1) When the term ''storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(2) When the term ''Group 1 storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(3) When the term ''Group 2 storage vessel'' is used in §§ 63.119 through 63.123 and 63.148, the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(4) When the emissions averaging provisions of § 63.150 are referred to in §§ 63.119 and 63.123, the emissions averaging provisions contained in § 63.1332 shall apply for the purposes of this subpart.

(5) When December 31, 1992, is referred to in § 63.119, March 29, 1995 shall apply instead, for the purposes of this subpart.

(6) When April 22, 1994, is referred to in § 63.119, September 12, 1996 shall apply instead, for the purposes of this subpart.

(7) Each owner or operator shall comply with this paragraph (a)(7) instead of § 63.120(d)(1)(ii) for the purposes of this subpart. If the control device used to comply with this section is also used to comply with §§ 63.1315 through 63.1330, the performance test required for these sections is acceptable for demonstrating compliance with § 63.119(e) for the purposes of this subpart. The owner or operator is not required to prepare a design evaluation for the control device as described in § 63.120(d)(1)(i) for the purposes of this subpart if the performance test meets the criteria specified in § 63.120 (d)(1)(ii)(A) and (d)(1)(ii)(B).

(8) When the term ''operating range'' is used in § 63.120(d)(3), the term ''level'' shall apply instead, for the purposes of this subpart. This level shall be established using the procedures specified in § 63.1334.

(9) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.120, 63.122, and 63.123, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(10) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.120, 63.122, and 63.123, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(11) When other reports as required in § 63.152(d) are referred to in § 63.122, the reporting requirements contained in § 63.1335(e)(7) shall apply for the purposes of this subpart.

(12) When the Implementation Plan requirements contained in § 63.151(c) are referred to in § 63.120 and § 63.122, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(13) When the Initial Notification Plan requirements contained in § 63.151(b) are referred to in § 63.122, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(14) When the determination of equivalence criteria in § 63.102(b) is referred to in § 63.121(a), the provisions in § 63.6(g) shall apply for the purposes of this subpart.

(15) When a performance test is required under the provisions of § 63.120(d)(1)(ii), the use of Method 18 or Method 25A, 40 CFR part 60, appendix A is allowed for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(15)(i) and (a)(15)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(16) The compliance date for storage vessels at affected sources subject to the provisions of this section is specified in § 63.1311.

(b) Owners or operators of Group 1 storage vessels that belong to a new affected source producing SAN using a continuous process shall control emissions to the levels indicated in paragraphs (b)(1) and (b)(2) of this section.

(1) For storage vessels with capacities greater than or equal to 2,271 cubic meters (m^3) containing a liquid mixture having a vapor pressure greater than or equal to 0.5 kilopascal (kPa) but less than 0.7 kPa, emissions shall be controlled by at least 90 percent relative to uncontrolled emissions.

(2) For storage vessels with capacities less than 151 m^3 containing a liquid mixture having a vapor pressure greater than or equal to 10 kPa, emissions shall be controlled by at least 98 percent relative to uncontrolled emissions.

(c) Owners or operators of Group 1 storage vessels that belong to a new or existing affected source producing ASA/AMSAN shall control emissions by at least 98 percent relative to uncontrolled emissions.

(d) The provisions of this subpart do not apply to storage vessels containing ethylene glycol at existing or new affected sources and storage vessels containing styrene at existing affected sources.

§ 63.1315 Continuous process vents provisions.

(a) Except as provided in paragraphs (b) through (d) of this section, the owner or operator of continuous process vents shall comply with the requirements of §§ 63.113 through 63.118, with the differences noted in paragraphs (a)(1) through (a)(15) of this section for the purposes of this subpart.

(1) When the term ''process vent'' is used in §§ 63.113 through 63.118, apply the term ''continuous process vent,'' and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(2) When the term ''Group 1 process vent'' is used in §§ 63.113 through 63.118, apply the term ''Group 1 continuous process vent,'' and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(3) When the term ''Group 2 process vent'' is used in §§ 63.113 through 63.118, apply the term ''Group 2 continuous process vent,'' and the definition of this term in § 63.1312 shall apply for the purposes of this subpart.

(4) When December 31, 1992, (i.e., subpart G of this part proposal date) is referred to in § 63.113, apply the date March 29, 1995 (i.e., proposal date for this subpart) for the purposes of this subpart.

(5) When § 63.151(f), alternative monitoring parameters, and § 63.152(e), submission of an operating permit, are referred to in §§ 63.114(c) and 63.117(e), § 63.1335(f), alternative monitoring parameters, and § 63.1335(e)(8), submission of an operating permit, respectively, shall apply for the purposes of this subpart.

(6) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.114, 63.117, and 63.118, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(7) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.117 and 63.118, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(8) When the definition of excursion in § 63.152(c)(2)(ii)(A) is referred to in § 63.118(f)(2), the definition of excursion in § 63.1334(f) of this subpart shall apply for the purposes of this subpart.

(9) Owners and operators shall comply with § 63.1334, parameter monitoring levels and excursions, instead of § 63.114(e) for the purposes of this subpart. When the term ''range'' is used in §§ 63.117 and 63.118, the term ''level'' shall be used instead for the purposes of this subpart. This level is determined in accordance with § 63.1334.

(10) If a batch process vent is combined with a continuous process vent prior to being routed to a control device, the combined vent stream shall comply with either paragraph (a)(10)(i) or (a)(10)(ii) of this section, as appropriate.

(i) If the continuous process vent is a Group 1 continuous process vent, the combined vent stream shall comply with all requirements for a Group 1 continuous process vent stream in §§ 63.113 through 63.118, with the differences noted in paragraphs (a)(1) through (a)(9) of this section, for the purposes of this subpart.

(ii) If the continuous process vent is a Group 2 continuous process vent, the total resource effectiveness (TRE) index value for the combined vent stream shall be calculated at the exit of any recovery device and prior to the control device at maximum representative operating conditions. For combined vent streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the control device, resulting in the highest concentration of organic HAP in the combined vent stream.

(11) If a batch process vent is combined with a continuous process vent prior to being routed to a recovery device, the TRE index value for the combined vent stream shall be calculated at the exit of the recovery device at maximum representative operating conditions for the purposes of this subpart. For combined vent streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the recovery device, resulting in the highest concentration of organic HAP in the combined vent stream.

(12) When reports of process changes are required under § 63.118 (g), (h), (i), and (j), paragraphs (a)(12)(i) through (a)(12)(iv) of this section shall apply for the purposes of this subpart.

(i) For the purposes of this subpart, whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous process vent to become a Group 1 continuous process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(ii) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(iii) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 process vent with a flow rate less than 0.005 standard cubic meter per minute to become a Group 2 process vent with a flow rate of 0.005 standard cubic meter per minute or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(iv) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 process vent with an organic HAP concentration less than 50 parts per million by volume to become a Group 2 process vent with an organic HAP concentration of 50 parts per million by volume or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(A) A description of the process change; and

(B) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(13) When the provisions of § 63.116 (c)(3) and (c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(13)(i) and (a)(13)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(14) When the provisions of § 63.116(b) identify conditions under which a performance test is not required, for purposes of this subpart, the exemption in paragraph (a)(14)(i) shall also apply. Further, if a performance test meeting the conditions specified in paragraph (a)(14)(ii) of this section has been conducted by the owner or operator, the results of said performance test may be submitted and a performance test, as required by this section, is not required.

(i) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(ii) Performance tests done for other subparts in 40 CFR part 60 or part 63 where total organic HAP or TOC was measured, provided the owner or operator can demonstrate that operating conditions for the process and control or recovery device during the performance test are representative of current operating conditions.

(15) The compliance date for continuous process vents subject to the provisions of this section is specified in § 63.1311.

(b) Existing affected sources producing MBS shall comply with either paragraph (b)(1) or (b)(2) of this section.

(1) Comply with paragraph (a) of this section, as specified in paragraphs (b)(1)(i) and (b)(1)(ii).

(i) As specified in § 63.1312, Group 1 continuous process vents at MBS existing affected sources are those with a total resource effectiveness value less than or equal to 3.7.

(ii) When complying with this paragraph (b), the term ''TRE of 4.0'', or related terms indicating a TRE value of 4.0, referred to in § 63.113 through § 63.118 shall be replaced with ''TRE of 6.7,'' for the purposes of this subpart. The TRE range of 3.7 to 6.7 for continuous process vents at existing affected sources producing MBS corresponds to the TRE range of 1.0 to 4.0 for other continuous process vents, as it applies to monitoring, recordkeeping, and reporting.

(2) Not allow organic HAP emissions from the collection of continuous process vents at the affected source to be greater than 0.000590 kg organic HAP/Mg of product. Compliance with this paragraph (b)(2) shall be determined using the procedures specified in § 63.1333(b).

(c) New affected sources producing SAN using a batch process shall comply with the applicable requirements in § 63.1321.

(d) Affected sources producing PET or polystyrene using a continuous process are subject to the emissions control provisions of § 63.1316, the monitoring provisions of § 63.1317, the testing and compliance demonstration provisions of § 63.1318, the recordkeeping provisions of § 63.1319, and the reporting provisions of § 63.1320.

§ 63.1316 PET and polystyrene continuous process affected sources—emissions control provisions.

(a) The owner or operator of an affected source producing PET using a continuous process shall comply with paragraph (b) of this section. The owner or operator of an affected source producing polystyrene using a continuous process shall comply with paragraph (c) of this section.

(b) Each owner or operator of an affected source producing PET using a continuous process shall comply with the requirements specified in paragraphs (b)(1) or (b)(2) of this section, as appropriate, and not with any of the requirements specified in 40 CFR part 60, subpart DDD. Compliance can be based on either organic HAP or TOC.

(1) Each owner or operator of an affected source producing PET using a continuous dimethyl terephthalate process shall comply with paragraphs (b)(1)(i) through (b)(1)(iv) of this section.

(i) For existing affected sources with organic HAP emissions from continuous process vents in the collection of material recovery sections (i.e., methanol recovery) within the affected source greater than 0.12 kg organic HAP/Mg of product, as determined by the procedure specified in § 63.1318(b) and for all new affected sources, limit organic HAP emissions from continuous process vents in the collection of material recovery sections within the affected source by complying with one of the following:

(A) Not allow emissions to be greater than 0.018 kg organic HAP/Mg of product; or

(B) Not allow the outlet gas stream temperature from each final condenser in a material recovery section to exceed +3° C (+37° F).

(ii) Limit organic HAP emissions from the continuous process vents in the collection of polymerization reaction sections within the affected source (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) to 0.02 kg organic HAP/Mg of product or less.

(iii) Limit organic HAP emissions from continuous process vents not included in a material recovery section, as specified in paragraph (b)(1)(i) of this section, or not included in a polymerization reaction section, as specified in paragraph (b)(1)(ii) of this section, by complying with § 63.1315.

(iv) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

(2) Each owner or operator of an affected source producing PET using a continuous terephthalic acid process shall comply with paragraphs (b)(2)(i) through (b)(2)(iv) of this section.

(i) Limit organic HAP emissions from the continuous process vents associated with the esterification vessels in the collection of raw materials preparation sections within the affected source to 0.04 kg organic HAP/Mg of product or less. Limit organic HAP emissions associated with other continuous process vents in the collection of raw materials preparation sections within the affected source by complying with § 63.1315.

(ii) Limit organic HAP emissions from the continuous process vents in the collection of polymerization reaction sections within the affected source (including emissions from any equipment used to further recover ethylene glycol, but excluding emissions from process contact cooling towers) to 0.02 kg organic HAP/Mg of product or less.

(iii) Limit organic HAP emissions from continuous process vents not included in a raw materials preparation section, as specified in paragraphs (b)(2)(i) of this section, or not included in a polymerization reaction section, as specified in paragraph (b)(2)(ii) of this section, by complying with § 63.1315.

(iv) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

(c) Each owner or operator of an affected source producing polystyrene resin using a continuous process shall comply with the requirements specified in paragraphs (c)(1) through (c)(3) of this section, as appropriate, and not with any of the requirements specified in 40 CFR part 60, subpart DDD. Compliance can be based on either organic HAP or TOC.

(1) Limit organic HAP emissions from continuous process vents in the collection of material recovery sections within the affected source by complying with one of the following:

(i) Not allow emissions to be greater than 0.0036 kg organic HAP/Mg of product;

(ii) Not allow the outlet gas stream temperature from each final condenser in a material recovery section to exceed −25°C (−13°F); or

(iii) Comply with one of the following:

(A) Reduce emissions by 98 weight percent or to a concentration of 20 parts per million by volume (ppmv) on a dry basis, whichever is less stringent. If an owner or operator elects to comply with the 20 ppmv standard, the concentration shall include a correction to 3 percent oxygen only when supplemental combustion air is used to combust the emissions;

(B) Combust the emissions in a boiler or process heater with a design heat input capacity of 150 million Btu/hr or greater by introducing the emissions into the flame zone of the boiler or process heater; or

(C) Combust the emissions in a flare that complies with the requirements of § 63.11(b).

(2) Limit organic HAP emissions from continuous process vents not included in a material recovery section, as specified in paragraph (c)(1)(i) of this section, by complying with § 63.1315.

(3) Limit organic HAP emissions from all batch process vents by complying with § 63.1321.

§ 63.1317 PET and polystyrene continuous process affected sources—monitoring provisions.

Continuous process vents using a control or recovery device to comply with § 63.1316 shall comply with the applicable monitoring provisions specified for continuous process vents in § 63.1315(a), except as specified in paragraphs (a) and (b) of this section.

(a) For the purposes of paragraph (a) of this section, owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) The monitoring period for condenser exit temperature when complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall be each consecutive 3-hour continuous period (e.g., 6 am to 9 am, 9 am to 12 pm). Each owner or operator shall designate said monitoring period in the Notification of Compliance Status required by § 63.1335(e)(5).

§ 63.1318 PET and polystyrene continuous process affected sources—testing and compliance demonstration provisions.

(a) Except as specified in paragraphs (b) through (d) of this section, continuous process vents using a control or recovery device to comply with § 63.1316 shall comply with the applicable testing and compliance provisions for continuous process vents specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determination (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *PET Affected Sources Using a Dimethyl Terephthalate Process—Applicability Determination Procedure.* Owners or operators shall calculate organic HAP emissions from the collection of material recovery sections at an existing affected source producing PET using a continuous dimethyl terephthalate process to determine whether § 63.1316(a)(1)(i) is applicable using the procedures specified in either paragraph (b)(1) or (b)(2) of this section.

(1) Use Equation 1 of this subpart to determine mass emissions per mass product as specified in paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

$$ER = \sum_{i=1}^{n} \frac{E_i}{\left(0.001\ P_p\right)} \qquad \text{[Eq. 1]}$$

where:

ER=Emission rate of total organic HAP or TOC, kg/Mg product.

E_i=Emission rate of total organic HAP or TOC in continuous process vent i, kg/hr.

P_p=The rate of polymer produced, kg/hr.

n=Number of continuous process vents in the collection of material recovery sections at the affected source.

0.001=Conversion factor, kg to Mg.

(i) The mass emission rate for each continuous process vent, E_i, shall be determined according to the procedures specified in § 63.116(c)(4). The sampling site for determining whether § 63.1316(a)(1)(i) is applicable shall be before any add-on control devices (i.e., those required by regulation) and after those recovery devices installed as part of operating the material recovery section. When the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of

Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) of this section.

(A) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(B) The use of Method 25A, 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.

(ii) The rate of polymer produced, P_p (kg/hr), shall be determined by dividing the weight (kg) of polymer pulled from the process line during the performance test by the number of hours taken to perform the performance test. The weight of polymer pulled shall be determined by direct measurement or by an alternate methodology, such as materials balance. If an alternate methodology is used, a description of the methodology, including all procedures, data, and assumptions shall be submitted as part of the Notification of Compliance Status required by § 63.1335(e)(5).

(2) Use engineering assessment, as described in § 63.1323(b)(6)(i), to demonstrate that mass emissions per mass product are less than or equal to 0.07 kg organic HAP/Mg product. If engineering assessment shows that mass emissions per mass product are greater than 0.07 kg organic HAP/Mg product and the owner or operator wishes to demonstrate that mass emissions per mass product are less than the threshold emission rate of 0.12 kg organic HAP/Mg product, the owner or operator shall use the procedures specified in paragraph (b)(1) of this section.

(c) *Compliance with Mass Emissions per Mass Product Standards.* Owners or operators complying with § 63.1316 (b)(1)(i)(A), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), and (c)(1)(i) shall demonstrate compliance with the mass emissions per mass product requirements using the procedures specified in paragraph (b)(1) of this section, except that the sampling site specified in paragraph (b)(1)(i) of this section shall be at the outlet of the last control or recovery device.

(d) *Compliance with Temperature Limits for Final Condensers.* Owners or operators complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall perform an initial performance test as specified in paragraph (d)(1) of this section to demonstrate initial compliance with the temperature limit requirements and shall demonstrate continuous compliance as specified in paragraph (d)(2) of this section.

(1) Using the temperature monitoring device specified by the applicable monitoring provisions specified for continuous process vents in § 63.1315, an average exit temperature shall be determined based on the average exit temperature for three performance tests. The average exit temperature for each 3-hour performance test shall be based on measurements taken at least every 15 minutes for 3 hours of continuous operation under maximum representative operating conditions for the process. For emissions streams containing continuous and batch process vents, the maximum representative operating conditions shall be during periods when batch emission episodes are venting to the control device resulting in the highest concentration of organic HAP in the emissions stream.

(2) As specified in § 63.1317(b), continuous compliance shall be determined based on an average exit temperature determined for each consecutive 3-hour continuous period. Each 3-hour period where the average exit temperature is more than 6 °C (10 °F) above the applicable specified temperature limit shall be considered an exceedance of the monitoring provisions.

§ 63.1319 PET and polystyrene continuous process affected sources—recordkeeping provisions.

(a) Except as specified in paragraphs (b) and (c) of this section, owners or operators using a control or recovery device to comply with § 63.1316 shall comply with the applicable recordkeeping provisions specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *Records Demonstrating Compliance With the Applicability Determination Procedure for PET Affected Sources Using a Dimethyl Terephthalate Process.* Each owner or operator, as appropriate, shall keep the following data, as appropriate, up-to-date and readily accessible:

(1) Results of the mass emissions per mass product calculation specified in § 63.1318(b).

(2) If complying with § 63.1316 by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(a)(1)(i), the information specified in paragraphs (b)(2)(i) and (b)(2)(ii) of this section.

(i) Each process operation variable (e.g., pressure, temperature, type of catalyst) that may result in an increase in the mass emissions per mass product should said variable be changed.

(ii) Records of any change in process operation that increases the mass emissions per mass product.

(c) *Records Demonstrating Compliance with Temperature Limits for Final Condensers.* Owners or operators of continuous process vents complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall keep the following data, as appropriate, up-to-date and readily accessible:

(1) Records of monitoring data as specified in § 63.1315, except that the monitoring period shall be each consecutive 3-hour continuous period.

(2) Results of the performance test specified in § 63.1318(d)(1) and any other performance test that may be subsequently required.

§ 63.1320 PET and polystyrene continuous process affected sources—reporting provisions.

(a) Except as specified in paragraphs (b) and (c) of this section, owners and operators using a control or recovery device to comply with § 63.1316 shall comply with the applicable reporting provisions specified in § 63.1315, except that, for the purposes of this paragraph (a), owners or operators shall ignore references to group determinations (i.e., total resource effectiveness) and are not required to comply with § 63.113.

(b) *Reporting for PET Affected Sources Using a Dimethyl Terephthalate Process.* Each owner or operator complying with § 63.1316 by demonstrating that mass emissions per mass product are less than or equal to the level specified in § 63.1316(a)(1)(i) shall comply with paragraphs (b)(1) through (b)(3) of this section.

(1) Include the information specified in § 63.1319(b)(2)(ii) in each Periodic Report, required by § 63.1335(e)(6), as appropriate.

(2) Include the information specified in § 63.1319 (b)(1) or (b)(2) in the Notification of Compliance Status, required by § 63.1335(e)(5), for the initial determination and in the appropriate Periodic Report, required by § 63.1335(e)(6), for any subsequent determinations that may be required.

(3) Whenever a process change, as defined in § 63.115(e), is made that causes emissions from continuous process vents in the collection of material recovery sections (i.e., methanol recovery) within the affected source to be greater than 0.12 kg organic HAP/Mg of product, the owner or operator shall submit a report within

180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of this subpart, as required under § 63.1335(e)(6)(iii(D)(*2*).

(c) *Reporting for Affected Sources Complying With Temperature Limits for Final Condensers.* Each owner or operator complying with § 63.1316(b)(1)(i)(B) or § 63.1316(c)(1)(ii) shall comply with paragraphs (c)(1) and (c)(2) of this section.

(1) Report periods when the 3-hour average exit temperature is more than 6° C (10° F) above the applicable specified temperature limit in each Periodic Report, required by § 63.1335(e)(6), as appropriate.

(2) Include the information specified in § 63.1319(c)(2) in the Notification of Compliance Status, required by § 63.1335(e)(5), for the initial performance test and in the appropriate Periodic Report, required by § 63.1335(e)(6), for any subsequent performance tests that may be required.

(3) Include the information specified in § 63.1317(b) in the Notification of Compliance Status, required by § 63.1335(e)(5).

§ 63.1321 Batch process vents provisions.

(a) *Batch process vents.* Except as specified in paragraphs (b) and (c) of this section, owners and operators of new and existing affected sources with batch process vents shall comply with the requirements in §§ 63.1322 through 63.1327. The batch process vent group status shall be determined in accordance with § 63.1323. Batch process vents classified as Group 1 shall comply with the reference control technology requirements for Group 1 batch process vents in § 63.1322, the monitoring requirements in § 63.1324, the performance test methods and procedures to determine compliance requirements in § 63.1325, the recordkeeping requirements in § 63.1326, and the reporting requirements in § 63.1327. All Group 2 batch process vents shall comply with the applicable reference control technology requirements in § 63.1322, the recordkeeping requirements in § 63.1326, and the reporting requirements in § 63.1327.

(b) *New SAN batch affected sources.* Owners and operators of new SAN affected sources using a batch process shall comply with the requirements of § 63.1322 through § 63.1327 for batch process vents and aggregate batch vent streams except as specified in paragraphs (b)(1) through (b)(2) of this section. For continuous process vents, owners and operators shall comply with the requirements of § 63.1322 through § 63.1327 except as specified in paragraph (b)(3) of this section.

(1) For batch process vents, the determination of group status (i.e., Group 1/Group 2) under § 63.1323 is not required.

(2) For batch process vents and aggregate batch vent streams, the control requirements for individual batch process vents or aggregate batch vent streams (e.g., 90 percent emission reduction) as specified in § 63.1322(a)(1), (a)(2), (b)(1), and (b)(2) shall not apply.

(3) Continuous process vents using a control or recovery device to comply with § 63.1322(a)(3) are subject to the applicable requirements in § 63.1315(a), as appropriate, except as specified in paragraphs (b)(3)(i) and (b)(3)(ii) of this section.

(i) Said continuous process vents are not subject to the group determination procedures of § 63.115 for the purposes of this subpart.

(ii) Said continuous process vents are not subject to the reference control technology provisions of § 63.113 for the purposes of this subpart.

(c) *Aggregate batch vent streams.* Aggregate batch vent streams, as defined in § 63.1312, are subject to the control requirements for individual batch process vents, as specified in § 63.1322(b), as well as the monitoring, testing, recordkeeping, and reporting requirements specified in § 63.1324 through § 63.1327.

§ 63.1322 Batch process vents—reference control technology.

(a) *Batch process vents.* The owner or operator of a Group 1 batch process vent, as determined using the procedures in § 63.1323, shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section, except as provided for in paragraph (a)(3) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each batch process vent, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b).

(ii) Halogenated batch process vents, as defined in § 63.1312, shall not be vented to a flare.

(2) For each batch process vent, reduce organic HAP emissions for the batch cycle by 90 weight percent using a control device. Owners or operators may achieve compliance with this paragraph (a)(2) through the control of selected batch emission episodes or the control of portions of selected batch emission episodes. Documentation demonstrating how the 90 weight percent emission reduction is achieved is required by § 63.1325(c)(2).

(3) The owner or operator of a new affected source producing SAN using a batch process shall reduce organic HAP emissions from the collection of batch process vents, aggregate batch vent streams, and continuous process vents by 84 weight percent. Compliance with this paragraph (a)(3) shall be demonstrated using the procedures specified in § 63.1333(c).

(b) *Aggregate batch vent streams.* The owner or operator of an aggregate batch vent stream that contains one or more Group 1 batch process vents shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section, except as provided for in paragraph (b)(3) of this section. Compliance can be based on either organic HAP or TOC.

(1) For each aggregate batch vent stream, reduce organic HAP emissions using a flare.

(i) The flare shall comply with the requirements of § 63.11(b).

(ii) Halogenated aggregate batch vent streams, as defined in § 63.1312, shall not be vented to a flare.

(2) For each aggregate batch vent stream, reduce organic HAP emissions by 90 weight percent on a continuous basis using a control device.

(3) The owner or operator of a new affected source producing SAN using a batch process shall comply with paragraph (a)(3) of this section.

(c) *Halogenated emissions.* Halogenated Group 1 batch process vents, halogenated aggregate batch vent streams, and halogenated continuous process vents that are combusted as part of complying with paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section, as appropriate, shall be controlled according to either paragraph (c)(1) or (c)(2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section for a halogenated batch process vent, halogenated aggregate batch vent stream, or halogenated continuous process vent, said emissions shall be ducted from the combustion device to an additional control device that reduces overall emissions of hydrogen halides and halogens by 99 percent before said emissions are discharged to the atmosphere.

(2) A control device may be used to reduce the halogen atom mass emission

rate of said emissions to less than 3,750 kg/yr for batch process vents or aggregate batch vent streams and to less than 0.45 kilograms per hour for continuous process vents prior to venting to any combustion control device, and thus make the batch process vent, aggregate batch vent stream, or continuous process vent nonhalogenated. The nonhalogenated batch process vent, aggregate batch vent stream, or continuous process vent must then comply with the requirements of either paragraph (a) or (b) of this section, as appropriate.

(d) If a boiler or process heater is used to comply with the percent reduction requirement specified in paragraph (a)(2), (a)(3), (b)(2), or (b)(3) of this section, the batch process vent, aggregate batch vent stream, or continuous process vent shall be introduced into the flame zone of such a device.

(e) *Combination of batch process vents or aggregate batch vent streams with continuous process vents.* A batch process vent or aggregate batch vent stream combined with a continuous process vent is not subject to the provisions of §§ 63.1323 through 63.1327, providing the requirements of paragraphs (e)(1), (e)(2), and either (e)(3) or (e)(4) of this section are met.

(1) The batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to routing the continuous process vent to a control or recovery device. In this paragraph (e)(1), the definitions of control device and recovery device as they relate to continuous process vents shall be used.

(2) The only emissions to the atmosphere from the batch process vent or aggregate batch vent stream prior to being combined with the continuous process vent are from equipment subject to and in compliance with § 63.1331.

(3) If the batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to being routed to a control device, the combined vent stream shall comply with the requirements in § 63.1315(a)(10). In this paragraph (e)(3), the definition of control device as it relates to continuous process vents shall be used.

(4) If the batch process vent or aggregate batch vent stream is combined with a continuous process vent prior to being routed to a recovery device, the combined vent stream shall comply with the requirements in § 63.1315(a)(11). In this paragraph (e)(4), the definition of recovery device as it relates to continuous process vents shall be used.

(f) *Group 2 batch process vents with annual emissions greater than or equal to the level specified in § 63.1323(d).* The owner or operator of a Group 2 batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d) shall comply with the provisions of (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures the Group 2 batch process vent does not become a Group 1 batch process vent.

(2) Comply with the recordkeeping requirements in § 63.1326(d)(2), and the reporting requirements in § 63.1327 (a)(3) and (b).

(g) *Group 2 batch process vents with annual emissions less than the level specified in § 63.1323(d).* The owner or operator of a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) shall comply with either paragraphs (g)(1) and (g)(2) of this section or with paragraphs (f)(1) and (f)(2) of this section.

(1) Establish a batch cycle limitation that ensures emissions do not exceed the level specified in § 63.1323(d).

(2) Comply with the recordkeeping requirements in § 63.1326(d)(1), and the reporting requirements in § 63.1327 (a)(2), (b), and (c).

§ 63.1323 Batch process vents—methods and procedures for group determination.

(a) *General requirements.* Except as provided in paragraph (a)(3) of this section and in § 63.1321(b)(1), the owner or operator of batch process vents at affected sources shall determine the group status of each batch process vent in accordance with the provisions of this section. This determination may be based on either organic HAP or TOC emissions.

(1) The procedures specified in paragraphs (b) through (h) of this section shall be followed for the expected mix of products for a given batch process vent, as specified in paragraph (a)(1)(i) of this section, or for the worst-case HAP emitting product, as specified in paragraphs (a)(1)(ii) through (a)(1)(iv) of this section. ''Worst-case HAP emitting product'' is defined in paragraph (a)(1)(iii) of this section.

(i) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (h) of this section for the expected mix of products, an identification of the different products and the number of batch cycles accomplished for each is required as part of the group determination documentation, as specified in § 63.1326(a)(1).

(ii) If an owner or operator chooses to follow the procedures specified in paragraphs (b) through (h) of this section for the worst-case HAP emitting product, documentation identifying the worst-case HAP emitting product is required as part of the group determination documentation, as specified in § 63.1326(a)(1).

(iii) Except as specified in paragraph (a)(1)(iii)(B) of this section, the worst-case HAP emitting product is as defined in paragraph (a)(1)(iii)(A) of this section.

(A) The worst-case HAP emitting product is the one with the highest mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle.

(B) Alternatively, when one product is produced more than 75 percent of the time, accounts for more than 75 percent of the annual mass of product, and the owner or operator can show that the mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle can reasonably be expected to be similar to the mass emission rate for other products having emissions from the same batch process vent, said product may be considered the worst-case HAP emitting product.

(C) An owner or operator shall determine the worst-case HAP emitting product for a batch process vent as specified in paragraphs (a)(1)(iii)(C)(*1*) through (a)(1)(iii)(C)(*3*) of this section.

(*1*) The emissions per batch emission episode shall be determined using any of the procedures specified in paragraph (b) of this section. The mass emission rate (kg organic HAP per hour) averaged over the entire time period of the batch cycle shall be determined by summing the emissions for each batch emission episode making up a complete batch cycle and dividing by the total duration in hours of the batch cycle.

(*2*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(A) of this section, the mass emission rate for each product shall be determined and compared.

(*3*) To determine the worst-case HAP emitting product as specified under paragraph (a)(1)(iii)(B) of this section, the mass emission rate for the product meeting the time and mass criteria of paragraph (a)(1)(iii)(B) of this section shall be determined, and the owner or operator shall provide adequate information to demonstrate that the mass emission rate for said product is similar to the mass emission rates for the other products having emissions from the same batch process vent. In addition, the owner or operator shall provide information demonstrating that the selected product meets the time and

mass criteria of paragraph (a)(1)(iii)(B) of this section.

(iv) The annual production of the worst-case HAP emitting product shall be determined by ratioing the production time of said product up to a 12 month period of actual production. It is not necessary to ratio up to a maximum production rate (i.e., 8,760 hours per year at maximum design production).

(2) The annual uncontrolled organic HAP or TOC emissions and average flow rate shall be determined at the exit from the batch unit operation. For the purposes of these determinations, the primary condenser operating as a reflux condenser on a distillation column, the primary condenser recovering monomer or solvent from a batch stripping operation, and the primary condenser recovering monomer or solvent from a batch distillation operation shall be considered part of the batch unit operation. All other devices that recover or oxidize organic HAP or TOC vapors shall be considered control devices as defined in § 63.1312.

(3) The owner or operator of a batch process vent complying with the flare provisions in § 63.1322(a)(1) or § 63.1322(b)(1) or routing the batch process vent to a control device to comply with the requirements in § 63.1322(a)(2) or § 63.1322(b)(2) is not required to perform the batch process vent group determination described in this section, but shall comply with all requirements applicable to Group 1 batch process vents for said batch process vent.

(b) *Determination of annual emissions.* The owner or operator shall calculate annual uncontrolled TOC or organic HAP emissions for each batch process vent using the methods described in paragraphs (b)(1) through (b)(8) of this section. Paragraphs (b)(1) through (b)(4) of this section present procedures that can be used to calculate the emissions from individual batch emission episodes. Emissions from batch processes involving multicomponent systems are to be calculated using the procedures in paragraphs (b)(1) through (b)(4) of this section. Individual HAP partial pressures in multicomponent systems shall be determined by the following methods: If the components are miscible in one another, use Raoult's law to calculate the partial pressures; if the solution is a dilute aqueous mixture use Henry's law constants to calculate partial pressures; if Raoult's law or Henry's law are not appropriate (or available) use experimentally obtained activity coefficients, Henry's law constants, or solubility data; if Raoult's law or Henry's law are not appropriate use models, such as the group-contribution models, to predict activity coefficients; and if Raoult's law or Henry's law are not appropriate assume the components of the system behave independently and use the summation of all vapor pressures from the HAP's as the total HAP partial pressure. Chemical property data can be obtained from standard reference texts. Paragraph (b)(5) of this section describes how direct measurement can be used to estimate emissions. If the owner or operator can demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions from a batch emission episode, emissions may be estimated using engineering assessment, as described in paragraph (b)(6) of this section. Owners or operators are not required to demonstrate that direct measurement is not appropriate before utilizing engineering assessment. Paragraph (b)(6)(ii) of this section describes how an owner or operator shall demonstrate that the procedures in paragraphs (b)(1) through (b)(4) of this section are not appropriate. Emissions from a batch cycle shall be calculated in accordance with paragraph (b)(7) of this section, and annual emissions from the batch process vent shall be calculated in accordance with paragraph (b)(8) of this section.

(1) TOC or organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 2 of this subpart. Equation 2 of this subpart does not take into account evaporation of any residual liquid in the vessel.

$$E_{episode} = \frac{(V_{ves})(P)(MW_{wavg})}{RT}\left(1 - 0.37^{m}\right) \qquad \text{[Eq. 2]}$$

where:

$E_{episode}$=Emissions, kg/episode.

V_{ves}=Volume of vessel, m^3.

P=TOC or total organic HAP partial pressure, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

m=Number of volumes of purge gas used.

(2) TOC or organic HAP emissions from the purging of a filled vessel shall be calculated using Equation 3 of this subpart.

$$E_{episode} = \frac{(y)(V_{dr})(P^2)(MW_{wavg})}{RT\left(P - \sum_{i=1}^{n} P_i x_i\right)}(T_m) \qquad \text{[Eq. 3]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V_{dr}=Volumetric gas displacement rate, m^3/min.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(iii) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

P_i=Vapor pressure of TOC or individual organic HAP i, kPa.

x_i=Mole fraction of TOC or organic HAP i in the liquid.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated.

T_m=Minutes/episode.

(3) Emissions from vapor displacement due to transfer of material into or out of a vessel shall be calculated using Equation 4 of this subpart.

$$E_{episode} = \frac{(y)(V)(P)(MW_{wavg})}{RT} \qquad [Eq. 4]$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V=Volume of gas displaced from the vessel, m^3.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of vessel vapor space, K.

(4) Emissions caused by the heating of a vessel shall be calculated using the procedures in either paragraphs (b)(4)(i), (b)(4)(ii), or (b)(4)(iii) of this section, as appropriate.

(i) If the final temperature to which the vessel contents is heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using the equations in paragraphs (b)(4)(i)(A) through (b)(4)(i)(D) of this section.

(A) Emissions caused by heating of a vessel shall be calculated using Equation 5 of this subpart. The assumptions made for this calculation are atmospheric pressure of 760 millimeters of mercury (mm Hg) and the displaced gas is always saturated with volatile organic compounds (VOC) vapor in equilibrium with the liquid mixture.

$$E_{episode} = \left[\frac{\sum_{i=1}^{n} (P_i)_{T1}}{101.325 - \sum_{i=1}^{n} (P_i)_{T1}} + \frac{\sum_{i=1}^{n} (P_i)_{T2}}{101.325 - \sum_{i=1}^{n} (P_i)_{T2}} \right] \frac{(\Delta^n)(MW_{wavg})}{2} \qquad [Eq. 5]$$

where:

$E_{episode}$=Emissions, kg/episode.

$(P_i)T1$, $(P_i)T2$=Partial pressure (kPa) of TOC or each organic HAP i in the vessel headspace at initial (T1) and final (T2) temperature.

n=Number of organic HAP in stream. Note: Summation not required if TOC emissions are being estimated.

Δ^n=Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (b)(4)(i)(B) of this section.

101.325=Constant, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.

(B) The moles of gas displaced, Δ^n, is calculated using Equation 6 of this subpart.

$$\Delta^n = \frac{V_{fs}}{R}\left[\left(\frac{Pa_1}{T_1}\right) - \left(\frac{Pa_2}{T_2}\right)\right] \qquad [Eq. 6]$$

where:

Δ^n=Number of kg-moles of gas displaced.

V_{fs}=Volume of free space in the vessel, m^3.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

Pa_1=Initial noncondensible gas pressure in the vessel, kPa.

Pa_2=Final noncondensible gas pressure, kPa.

T_1=Initial temperature of vessel, K.

T_2=Final temperature of vessel, K.

(C) The initial and final pressure of the noncondensible gas in the vessel shall be calculated using Equation 7 of this subpart.

$$Pa = 101.325 - \sum_{i=1}^{n} (P_i)_T \qquad [Eq. 7]$$

where:

Pa=Initial or final partial pressure of noncondensible gas in the vessel headspace, kPa.

101.325=Constant, kPa.

$(P_i)T$=Partial pressure of TOC or each organic HAP i in the vessel headspace, kPa, at the initial or final temperature (T1 or T2).

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated.

(D) The weighted average molecular weight of TOC or organic HAP in the displaced gas, MW_{wavg}, shall be calculated using Equation 8 of this subpart.

$$MW_{wavg} = \frac{\sum_{i=1}^{n} (\text{mass of C})_i \, (\text{molecular weight of C})_i}{\sum_{i=1}^{n} (\text{mass of C})_i} \qquad [Eq. 8]$$

where:

C=TOC or organic HAP component

n=Number of TOC or organic HAP components in stream.

(ii) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from

the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (b)(4)(ii)(A) and (b)(4)(ii)(B) of this section.

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 5 of this subpart, where T_2 is the temperature 50 K below the boiling point.

(B) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emissions for each increment shall be calculated using Equation 5 of this subpart.

(*1*) If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature for the heatup, even if the last increment is less than 5 K.

(*2*) If the final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(*3*) If the vessel contents are heated to the boiling point and the vessel is not operating with a condenser, the final temperature for the final increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(iii) If the vessel is operating with a condenser, and the vessel contents are heated to the boiling point, the primary condenser, as specified in paragraph (a)(2) of this section, is considered part of the process. Emissions shall be calculated as the sum of emissions calculated using Equation 5 of this subpart, which calculates emissions due to heating the vessel contents to the temperature of the gas existing the condenser, and emissions calculated using Equation 4 of this subpart, which calculates emissions due to the displacement of the remaining saturated noncondensible gas in the vessel. The final temperature in Equation 5 of this subpart shall be set equal to the exit gas temperature of the condenser. Equation 4 of this subpart shall be used as written below in Equation 4a of this subpart, using free space volume, and T is set equal to the condenser exit gas temperature.

$$E_{episode} = \frac{(y)(V_{fs})(P)(MW_{wavg})}{RT} \quad \text{[Eq. 4a]}$$

where:

$E_{episode}$=Emissions, kg/episode.

y=Saturated mole fraction of all TOC or organic HAP in vapor phase.

V_{fs}=Volume of the free space in the vessel, m^3.

P=Pressure in vessel vapor space, kPa.

MW_{wavg}=Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section, kg/kmol.

R=Ideal gas constant, 8.314 m^3•kPa/kmol•K.

T=Temperature of condenser exit stream, K.

(5) The owner or operator may estimate annual emissions for a batch emission episode by direct measurement. If direct measurement is used, the owner or operator shall either perform a test for the duration of a representative batch emission episode or perform a test during only those periods of the batch emission episode for which the emission rate for the entire episode can be determined or for which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions. Performance tests shall follow the procedures specified in paragraphs (b)(5)(i) through (b)(5)(iii) of this section. The procedures in either paragraph (b)(5)(iv) or (b)(5)(v) of this section shall be used to calculate the emissions per batch emission episode.

(i) Method 1 or 1A, 40 CFR part 60, appendix A as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in paragraph (e) of this section.

(iii) Method 18 or Method 25A, 40 CFR part 60, appendix A, shall be used to determine the concentration of TOC or organic HAP, as appropriate. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (b)(5)(iii)(A) and (b)(5)(iii)(B) of this section.

(A) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(B) The use of Method 25A, 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.

(iv) If an integrated sample is taken over the entire batch emission episode to determine TOC or average total organic HAP concentration, emissions shall be calculated using Equation 9 of this subpart.

$$E_{episode} = K\left[\sum_{j=1}^{n}(C_j)(M_j)\right]AFR(T_h) \quad \text{[Eq. 9]}$$

where:

$E_{episode}$=Emissions, kg/episode.

K=Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

C_j=Average concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j=Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

AFR=Average flow rate of gas stream, dry basis, scmm.

T_h=Hours/episode.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(v) If grab samples are taken to determine TOC or average total organic HAP concentration, emissions shall be calculated according to paragraphs (b)(5)(v)(A) and (b)(5)(v)(B) of this section.

(A) For each measurement point, the emission rate shall be calculated using Equation 10 of this subpart.

$$E_{point} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR \qquad [Eq. 10]$$

where:

E_{point}=Emission rate for individual measurement point, kg/hr.

K=Constant, $2.494 \times 10{-}6$ $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

C_j=Concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j=Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

FR=Flow rate of gas stream for the measurement point, dry basis, scmm.

n=Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equation 11 of this subpart.

$$E_{episode} = (DUR)\left[\sum_{i=1}^{n} \frac{E_i}{n}\right] \qquad [Eq. 11]$$

where:

$E_{episode}$=Emissions, kg/episode.

DUR=Duration of the batch emission episode, hr/episode.

E_i=Emissions for measurement point i, kg/hr.

n=Number of measurements.

(6) If the owner or operator can demonstrate that the methods in paragraphs (b)(1) through (b)(4) of this section are not appropriate to estimate emissions for a batch emissions episode, the owner or operator may use engineering assessment to estimate emissions as specified in paragraphs (b)(6)(i) and (b)(6)(ii) of this section. All data, assumptions, and procedures used in an engineering assessment shall be documented.

(i) Engineering assessment includes, but is not limited to, the following:

(A) Previous test results, provided the tests are representative of current operating practices;

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions;

(C) Flow rate, TOC emission rate, or organic HAP emission rate specified or implied within a permit limit applicable to the batch process vent; and

(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(*1*) Use of material balances;

(*2*) Estimation of flow rate based on physical equipment design such as pump or blower capacities; and

(*3*) Estimation of TOC or organic HAP concentrations based on saturation conditions.

(ii) The emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section shall be considered inappropriate for estimating emissions for a given batch emissions episode if one or more of the criteria in paragraphs (b)(6)(ii)(A) through (b)(6)(ii)(B) of this section are met.

(A) Previous test data are available that show a greater than 20 percent discrepancy between the test value and the estimated value.

(B) The owner or operator can demonstrate to the Administrator that the emissions estimation equations are not appropriate for a given batch emissions episode.

(C) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(A) of this section shall be reported in the Notification of Compliance Status, as required in § 63.1335(e)(5).

(D) Data or other information supporting a finding that the emissions estimation equations are inappropriate as specified under paragraph (b)(6)(ii)(B) of this section shall be reported in the Precompliance Report, as required in § 63.1335(e)(3).

(7) For each batch process vent, the TOC or organic HAP emissions associated with a single batch cycle shall be calculated using Equation 12 of this subpart.

$$E_{cycle} = \sum_{i=1}^{n} E_{episode_i} \qquad [Eq. 12]$$

where:

where:

E_{cycle}=Emissions for an individual batch cycle, kg/batch cycle

$E_{episode\ i}$=Emissions from batch emission episode i, kg/episode

n=Number of batch emission episodes for the batch cycle

(8) Annual TOC or organic HAP emissions from a batch process vent shall be calculated using Equation 13 of this subpart.

$$AE = \sum_{i=1}^{n} (N_i)\left(E_{cycle_i}\right) \qquad [Eq. 13]$$

where:

AE=Annual emissions from a batch process vent, kg/yr.

N_i=Number of type i batch cycles performed annually, cycles/year

$E_{cycle\ i}$=Emissions from the batch process vent associated with a single type i batch cycle, as determined in paragraph (b)(7) of this section, kg/batch cycle

n=Number of different types of batch cycles that cause the emission of TOC or organic HAP from the batch process vent

(c) (Reserved)

(d) *Minimum emission level exemption.* A batch process vent with annual emissions less than 11,800 kg/yr is considered a Group 2 batch process vent and the owner or operator of said batch process vent shall comply with the requirements in § 63.1322 (f) or (g). The owner or operator of said batch process vent is not required to comply with the provisions in paragraphs (e) through (g) of this section.

(e) *Determination of average flow rate.* The owner or operator shall determine the average flow rate for each batch emission episode in accordance with one of the procedures provided in paragraphs (e)(1) through (e)(2) of this section. The annual average flow rate for a batch process vent shall be calculated as specified in paragraph (e)(3) of this section.

(1) Determination of the average flow rate for a batch emission episode by direct measurement shall be made using the procedures specified in paragraphs (e)(1)(i) through (e)(1)(iii) of this section.

(i) The volumetric flow rate for a batch emission episode, in standard cubic meters per minute (scmm) at 20° C, shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

(ii) The volumetric flow rate of a representative batch emission episode shall be measured every 15 minutes.

(iii) The average flow rate for a batch emission episode shall be calculated using Equation 14 of this subpart.

$$AFR_{episode} = \frac{\sum_{i=1}^{n} FR_i}{n} \quad [Eq. 14]$$

where:

$AFR_{episode}$ = Average flow rate for the batch emission episode, scmm.

FR_i = Flow rate for individual measurement i, scmm.

n = Number of flow rate measurements taken during the batch emission episode.

(2) The average flow rate for a batch emission episode may be determined by engineering assessment, as defined in paragraph (b)(6)(i) of this section. All data, assumptions, and procedures used shall be documented.

(3) The annual average flow rate for a batch process vent shall be calculated using Equation 15 of this subpart.

$$AFR = \frac{\sum_{i=1}^{n} (DUR_i)(AFR_{episode,i})}{\sum_{i=1}^{n} (DUR_i)} \quad [Eq. 15]$$

where:

AFR = Annual average flow rate for the batch process vent, scmm.

DUR_i = Duration of type i batch emission episodes annually, hrs/yr.

$AFR_{episode, i}$ = Average flow rate for type i batch emission episode, scmm.

n = Number of types of batch emission episodes venting from the batch process vent.

(f) *Determination of cutoff flow rate.* For each batch process vent, the owner or operator shall calculate the cutoff flow rate using Equation 16 of this subpart.

$$CFR = (0.00437)(AE) - 51.6 \quad [Eq. 16]$$

where:

CFR = Cutoff flow rate, scmm.

AE = Annual TOC or organic HAP emissions, as determined in paragraph (b)(8) of this section, kg/yr.

(g) *Group 1/Group 2 status determination.* The owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (f) of this section, with the annual average flow rate, determined in accordance with paragraph (e)(4) of this section. The group determination status for each batch process vent shall be made using the criteria specified in paragraphs (g)(1) and (g)(2) of this section.

(1) If the cutoff flow rate is greater than or equal to the annual average flow rate of the stream, the batch process vent is classified as a Group 1 batch process vent.

(2) If the cutoff flow rate is less than the annual average flow rate of the stream, the batch process vent is classified as a Group 2 batch process vent.

(h) *Determination of halogenation status.* To determine whether a batch process vent or an aggregate batch vent stream is halogenated, the annual mass emission rate of halogen atoms contained in organic compounds shall be calculated using the procedures specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The concentration of each organic compound containing halogen atoms (ppmv, by compound) for each batch emission episode shall be determined based on any one of the following procedures:

(i) Process knowledge that no halogens or hydrogen halides are present in the process may be used to demonstrate that a batch emission episode is nonhalogenated. Halogens or hydrogen halides that are unintentionally introduced into the process shall not be considered in making a finding that a batch emission episode is nonhalogenated.

(ii) Engineering assessment as discussed in paragraph (b)(6)(i) of this section.

(iii) Concentration of organic compounds containing halogens and hydrogen halides as measured by Method 26 or 26A, 40 CFR part 60, appendix A.

(iv) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(2) The annual mass emissions of halogen atoms for a batch process vent shall be calculated using Equation 17 of this subpart.

$$E_{halogen} = K\left[\sum_{j=1}^{n}\sum_{i=1}^{m}(C_{avgj})(L_{j,i})(M_{j,i})\right]AFR \quad [Eq. 17]$$

where:

$E_{halogen}$ = Mass of halogen atoms, dry basis, kg/yr.

K = Constant, 0.022 $(ppmv)^{-1}$ (kg-mole per scm) (minute/yr), where standard temperature is 20°C.

AFR = Annual average flow rate of the batch process vent, determined according to paragraph (e) of this section, scmm.

$M_{j, i}$ = Molecular weight of halogen atom i in compound j, kg/kg-mole.

$L_{j, i}$ = Number of atoms of halogen i in compound j.

n = Number of halogenated compounds j in the batch process vent.

m = Number of different halogens i in each compound j of the batch process vent.

C_{avgj} = Average annual concentration of halogenated compound j in the batch process vent as determined by using Equation 18 of this subpart, dry basis, ppmv.

$$C_{avg_j} = \frac{\sum_{i=1}^{n} (DUR_i)(C_i)}{\sum_{i=1}^{n} (DUR_i)} \quad [Eq. 18]$$

where:

DUR_i = Duration of type i batch emission episodes annually, hrs/yr.

C_i = Average concentration of halogenated compound j in type i batch emission episode, ppmv.

n = Number of types of batch emission episodes venting from the batch process vent.

(3) The annual mass emissions of halogen atoms for an aggregate batch vent stream shall be the sum of the annual mass emissions of halogen atoms for all batch process vents included in the aggregate batch vent stream.

(i) *Process changes affecting Group 2 batch process vents.* Whenever process changes, as described in paragraph (i)(1)

of this section, are made that affect one or more Group 2 batch process vents, the owner or operator shall comply with paragraphs (i) (2) and (3) of this section.

(1) Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type; or whenever there is replacement, removal, or modification of recovery equipment considered part of the batch unit operation as specified in paragraph (a)(2) of this section. An increase in the annual number of batch cycles beyond the batch cycle limitation constitutes a process change. For purposes of this paragraph (i), process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the margin of variation on which the original group determination was based.

(2) For each batch process vent affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (g) of this section, as applicable; alternatively, engineering assessment, as described in paragraph (b)(6)(i) of this section, can be used to determine the effects of the process change.

(3) Based on the results from paragraph (i)(2) of this section, owners or operators shall comply with either paragraph (i)(3) (i), (ii), or (iii) of this section.

(i) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent has become a Group 1 batch process vent as a result of the process change, the owner or operator shall submit a report as specified in § 63.1327(b) and shall comply with the Group 1 provisions in § 63.1322 through § 63.1327 in accordance with the compliance schedule described in § 63.1335(e)(6)(iii)(D)(*2*).

(ii) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch process vent with annual emissions less than the level specified in paragraph (d) of this section, that is in compliance with § 63.1322(g), now has annual emissions greater than or equal to the level specified in paragraph (d) of this section but remains a Group 2 batch process vent, the owner or operator shall submit a report as specified in § 63.1327(c) and shall comply with § 63.1322(f) in accordance with the compliance schedule required by § 63.1335(e)(6)(iii)(D)(*2*).

(iii) If the redetermination described in paragraph (i)(2) of this section indicates no change in group status or no change in the relation of annual emissions to the levels specified in paragraph (d) of this section, the owner or operator is not required to submit a report, as described in § 63.1327(e).

(j) *Process changes to new SAN affected sources using a batch process.* Whenever process changes, as described in paragraph (j)(1) of this section, are made to a new affected source producing SAN using a batch process, the owner or operator shall comply with paragraphs (j) (2) and (3) of this section.

(1) Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or catalyst type; replacement, removal, or addition of recovery equipment considered part of a batch unit operation, as specified in paragraph (a)(1) of this section; replacement, removal, or addition of control equipment associated with a continuous or batch process vent or an aggregate batch vent stream. For purposes of this paragraph (j)(1), process changes do not include process upsets or unintentional, temporary process changes.

(2) The owner or operator shall redetermine the percent emission reduction achieved using the procedures specified in § 63.1333(c). If engineering assessment, as described in paragraph (b)(6)(i) of this section, can demonstrate that the process change did not cause the percent emission reduction to decrease, it may be used in lieu of redetermining the percent reduction using the procedures specified in § 63.1333(c).

(3) Where the redetermined percent reduction is less than 84 percent, the owner or operator shall submit a report as specified in § 63.1327(d) and shall comply with § 63.1322(a)(3) and all associated provisions in accordance with the compliance schedule described in § 63.1335(e)(6)(iii)(D)(*2*).

§ 63.1324 Batch process vents—monitoring provisions.

(a) *General requirements.* Each owner or operator of a batch process vent or aggregate batch vent stream that uses a control device to comply with the requirements in § 63.1322(a) or § 63.1322(b), shall install the monitoring equipment specified in paragraph (c) of this section.

(1) This monitoring equipment shall be in operation at all times when batch emission episodes, or portions thereof, that the owner or operator has selected to control are vented to the control device, or at all times when an aggregate batch vent stream is vented to the control device.

(2) The owner or operator shall operate control devices such that monitored parameters remain above the minimum level or below the maximum level, as appropriate, established as specified in paragraph (f) of this section.

(b) *Continuous process vents.* Each owner or operator of a continuous process vent that uses a control device or recovery device to comply with the requirements in § 63.1322(a)(3) shall comply with the applicable requirements of § 63.1315(a) as specified in § 63.1321(b).

(c) *Batch process vent and aggregate batch vent stream monitoring parameters.* The monitoring equipment specified in paragraphs (c)(1) through (c)(8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 7 of this subpart.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox 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) Where a flare is used, a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all batch process vents or aggregate batch vent streams are introduced with the primary fuel or are used as the primary fuel is exempt from this requirement.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in concert with the combustion of halogenated batch process vents or halogenated aggregate batch vent streams, the following monitoring equipment is required for the scrubber.

(i) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent.

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent to monitor the scrubber liquid flow rate.

(5) Where an absorber is used, a scrubbing liquid temperature

monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(6) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is required.

(7) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of ±10 percent, capable of recording the total regeneration stream mass 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 are required.

(8) As an alternate to paragraphs (c)(5) through (c)(7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(d) *Alternative monitoring parameters.* An owner or operator of a batch process vent or aggregate batch vent stream may request approval to monitor parameters other than those required by paragraph (c) of this section. The request shall be submitted according to the procedures specified in § 63.1335(f). Approval shall be requested if the owner or operator:

(1) Uses a control device other than those included in paragraph (c) of this section; or

(2) Uses one of the control devices included in paragraph (c) of this section, but seeks to monitor a parameter other than those specified in Table 7 of this subpart and paragraph (c) of this section.

(e) *Monitoring of bypass lines.* Owners or operators of a batch process vent or aggregate batch vent stream using a vent system that contains bypass lines that could divert emissions away from a control device used to comply with § 63.1322(a) or § 63.1322(b) shall comply with either paragraph (d)(1), (d)(2), or (d)(3) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph (e).

(1) 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 § 63.1326(e)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device and to the atmosphere; or

(2) 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 that the valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in § 63.1326(e)(4).

(3) Continuously monitor the bypass line valve position using computer monitoring and record any periods when the position of the bypass line valve has changed as specified in § 63.1326(e)(4).

(f) *Establishment of parameter monitoring levels.* Parameter monitoring levels for batch process vents and aggregate batch vent streams shall be established as specified in paragraphs (f)(1) through (f)(3) of this section. For continuous process vents complying with § 63.1322(a)(3), parameter monitoring levels shall be established as specified in § 63.1315(a), except as specified in paragraph (f)(4) of this section.

(1) For each parameter monitored under paragraph (c) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 8 of this subpart, that indicates proper operation of the control device. The level shall be established in accordance with the procedures specified in § 63.1334.

(i) For batch process vents using a control device to comply with § 63.1322(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with § 63.1322(b)(2), the established level shall reflect the control efficiency requirement specified in § 63.1322(b)(2).

(iii) For batch process vents and aggregate batch vent streams using a control device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

(2) The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application as required in § 63.1335(e)(5) or § 63.1335(e)(8), respectively.

(3) The operating day shall be defined as part of establishing the parameter monitoring level and shall be submitted with the information in paragraph (f)(2) of this section. The definition of operating day shall specify the times at which an operating day begins and ends. The operating day shall not exceed 24 hours.

(4) For continuous process vents using a control or recovery device to comply with § 63.1322(a)(3), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in § 63.1325(f)(4).

§ 63.1325 Batch process vents—performance test methods and procedures to determine compliance.

(a) *Use of a flare.* When a flare is used to comply with §§ 63.1322 (a)(1), (a)(3), (b)(1), or (b)(3), the owner or operator shall comply with the flare provisions in § 63.11(b).

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a control device specified in paragraphs (b)(1) through (b)(5) of this section is used to comply with § 63.1322 (a)(2) or (a)(3). Further, if a performance test meeting the conditions specified in paragraph (b)(6) of this section has been conducted by the owner or operator, the results of said performance test may be submitted and a performance test, as required by this section, is not required.

(1) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) A boiler or process heater where the vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A control device for which a performance test was conducted for determining compliance with a New Source Performance Standard (NSPS) and the test was conducted using the same procedures specified in this section and no process changes have been made since the test. Recovery devices used for controlling emissions from continuous process vents complying with § 63.1322(a)(3) are also eligible for the exemption described in this paragraph (b)(3).

(4) A boiler or process heater burning hazardous waste for which the owner or operator:

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(5) An incinerator burning hazardous waste for which the owner or operator complies with the requirements of 40 CFR part 264, subpart O.

(6) Performance tests done for other subparts in 40 CFR part 60 or part 63 where total organic HAP or TOC was measured, provided the owner or

operator can demonstrate that operating conditions for the process and control device during the performance test are representative of current operating conditions.

(c) *Batch process vent testing and procedures for compliance with § 63.1322(a)(2).* Except as provided in paragraph (b) of this section, an owner or operator using a control device to comply with § 63.1322(a)(2) shall conduct a performance test using the procedures specified in paragraph (c)(1) of this section in order to determine the control efficiency of the control device. An owner or operator shall determine the percent reduction for the batch cycle using the control efficiency of the control device as specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section and the procedures specified in paragraph (c)(2) of this section. Compliance may be based on either total organic HAP or TOC. For purposes of this paragraph (c) and all paragraphs that are part of this paragraph (c), the term ''batch emission episode'' shall have the meaning ''period of the batch emission episode selected for control,'' which may be the entire batch emission episode or may only be a portion of the batch emission episode.

(1) Performance tests shall be conducted as specified in paragraphs (c)(1)(i) through (c)(1)(v) of this section.

(i) Except as specified in paragraph (c)(1)(i)(A) of this section, a test shall be performed for the entire period of each batch emission episode in the batch cycle that the owner or operator selects to control as part of achieving the required 90 percent emission reduction for the batch cycle specified in § 63.1322(a)(2). Only one test is required for each batch emission episode selected by the owner or operator for control. The owner or operator shall follow the procedures listed in paragraphs (c)(1)(i)(B) through (c)(1)(i)(D) of this section.

(A) Alternatively, an owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire episode can be determined or during which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options must develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch process vent conditions.

(B) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate. Inlet sampling sites shall be located as specified in paragraphs (c)(1)(i)(B)(*1*) and (c)(1)(i)(B)(*2*) of this section. Outlet sampling sites shall be located at the outlet of the control device prior to release to the atmosphere.

(*1*) The control device inlet sampling site shall be located at the exit from the batch unit operation before any control device. § 63.1323(a)(2) describes those recovery devices considered part of the unit operation. Inlet sampling sites would be after these specified recovery devices.

(*2*) If a batch process vent 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 HAP or TOC (minus methane and ethane) concentrations in all batch process vents and primary and secondary fuels introduced into the boiler or process heater.

(C) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.1323(e).

(D) Method 18 or Method 25A, 40 CFR part 60, appendix A shall be used to determine the concentration of organic HAP or TOC, as appropriate. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part may be used. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (c)(1)(i)(D)(*1*) and (c)(1)(i)(D)(*2*) of this section.

(*1*) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(*2*) The use of Method 25A, 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.

(ii) If an integrated sample is taken over the entire test period to determine TOC or average total organic HAP concentration, emissions per batch emission episode shall be calculated using Equations 19 and 20 of this subpart.

$$E_{episode,inlet} = K\left[\sum_{j=1}^{n}\left(C_{j,inlet}\right)\left(M_j\right)\right]\left(AFR_{inlet}\right)\left(T_h\right) \qquad [Eq.\ 19]$$

$$E_{episode,outlet} = K\left[\sum_{j=1}^{n}\left(C_{j,outlet}\right)\left(M_j\right)\right]\left(AFR_{outlet}\right)\left(T_h\right) \qquad [Eq.\ 20]$$

where:

$E_{episode}$ = Inlet or outlet emissions, kg/episode.

K = Constant, 2.494×10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j = Average inlet or outlet concentration of TOC or sample component j of the gas stream for the batch emission episode, dry basis, ppmv.

M_j = Molecular weight of TOC or sample component j of the gas stream, gm/gm-mole.

AFR = Average inlet or outlet flow rate of gas stream for the batch emission episode, dry basis, scmm.

T_h = Hours/episode

n = Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(iii) If grab samples are taken to determine TOC or total organic HAP concentration, emissions shall be calculated according to paragraphs (c)(1)(iii) (A) and (B) of this section.

(A) For each measurement point, the emission rates shall be calculated using Equations 21 and 22 of this subpart.

$$E_{point,inlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{inlet} \qquad [Eq. 21]$$

$$E_{point,outlet} = K\left[\sum_{j=1}^{n} C_j M_j\right] FR_{outlet} \qquad [Eq. 22]$$

where:

E_{point} = Inlet or outlet emission rate for the measurement point, kg/hr.

K = Constant, 2.494 x 10^{-6} $(ppmv)^{-1}$ (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20°C.

C_j = Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.

M_j = Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.

FR = Inlet or outlet flow rate of gas stream for the measurement point, dry basis, scmm.

n = Number of organic HAP in stream.

Note: Summation not required if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equations 23 and 24 of this subpart.

$$E_{episode,inlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,inlet,i}}{n}\right] \qquad [Eq. 23]$$

$$E_{episode,outlet} = (DUR)\left[\sum_{i=1}^{n} \frac{E_{point,outlet,i}}{n}\right] \qquad [Eq. 24]$$

where:

$E_{episode}$ = Inlet or outlet emissions, kg/episode.

DUR = Duration of the batch emission episode, hr/episode.

$E_{point,\ i}$ = Inlet or outlet emissions for measurement point i, kg/hr.

n = Number of measurements.

(iv) The control efficiency for the control device shall be calculated using Equation 25 of this subpart.

$$R = \frac{\sum_{i=1}^{n} E_{inlet,i} - \sum_{i=1}^{n} E_{outlet,i}}{\sum_{i=1}^{n} E_{inlet,i}}(100) \qquad [Eq. 25]$$

where:

R = Control efficiency of control device, percent.

E_{inlet} = Mass rate of TOC or total organic HAP for batch emission episode i at the inlet to the control device as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

E_{outlet} = Mass rate of TOC or total organic HAP for batch emission episode i at the outlet of the control device, as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.

n = Number of batch emission episodes in the batch cycle selected to be controlled.

(v) If the batch process vent 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 HAP or TOC across the device shall be determined by comparing the TOC or total organic HAP

in all combusted batch process vents and primary and secondary fuels with the TOC or total organic HAP exiting the combustion device, respectively.

(2) The percent reduction for the batch cycle shall be determined using Equation 26 of this subpart and the control device efficiencies specified in paragraphs (c)(2)(i) through (c)(2)(iii) of this section. All information used to calculate the batch cycle percent reduction, including a definition of the batch cycle identifying all batch emission episodes, must be recorded as specified in § 63.1326(b)(2). This information shall include identification of those batch emission episodes, or portions thereof, selected for control.

$$PR = \frac{\sum_{i=1}^{n} E_{unc} \sum_{i=1}^{n} E_{inlet,con} - (1-R)\sum_{i=1}^{n} E_{inlet,con}}{\sum_{i=1}^{n} E_{unc} + \sum_{i=1}^{n} E_{inlet,con}}(100) \quad [Eq. 26]$$

where:

PR = Percent reduction

E_{unc} = Mass rate of TOC or total organic HAP for uncontrolled batch emission episode i, kg/hr.

$E_{inlet,con}$ = Mass rate of TOC or total organic HAP for controlled batch emission episode i at the inlet to the control device, kg/hr.

R = Control efficiency of control device as specified in paragraphs (c)(2) (i) through (c) (2)(iii) of this section.

n = Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of n is not necessarily the same for these three items.

(i) If a performance test is required by paragraph (c) of this section, the control efficiency of the control device shall be as determined in paragraph (c)(1)(iv) of this section.

(ii) If a performance test is not required by paragraph (c) of this section for a combustion control device, as specified in paragraph (b) of this section, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(iii) If a performance test is not required by paragraph (c) of this section for a noncombustion control device, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(d) *Batch process vent and aggregate batch vent stream testing for compliance with § 63.1322(c) [halogenated emission streams].* An owner or operator controlling halogenated emissions in compliance with § 63.1322(c) shall conduct a performance test to determine compliance with the control efficiency specified in § 63.1322(c)(1) or the emission limit specified in § 63.1322(c)(2) for hydrogen halides and halogens.

(1) Sampling sites shall be located at the inlet and outlet of the scrubber or other control device used to reduce halogen emissions in complying with § 63.1322(c)(1) or at the outlet of the control device used to reduce halogen emissions in complying with § 63.1322(c)(2).

(2) The mass emissions of each hydrogen halide and halogen compound for the batch cycle or aggregate batch vent stream shall be calculated from the measured concentrations and the gas stream flow rate(s) determined by the procedures specified in paragraphs (d)(2)(i) and (d)(2)(ii) of this section except as specified in paragraph (d)(5) of this section.

(i) Method 26 or Method 26A, 40 CFR part 60, appendix A, shall be used to determine the concentration, in Mg per dry scm, of total hydrogen halides and halogens present in the emissions stream.

(ii) Gas stream volumetric flow rate and/or average flow rate shall be determined as specified in § 63.1323(e).

(3) To determine compliance with the percent reduction specified in § 63.1322(c)(1), the mass emissions for any hydrogen halides and halogens present at the inlet of the scrubber or other control device shall be summed together. The mass emissions of any hydrogen halides or halogens present at the outlet of the scrubber or other control device shall be summed together. Percent reduction shall be determined by subtracting the outlet mass emissions from the inlet mass emissions and then dividing the result by the inlet mass emissions.

(4) To determine compliance with the emission limit specified in § 63.1322(c)(2), the annual mass emissions for any hydrogen halides and halogens present at the outlet of the control device and prior to any combustion device shall be summed together and compared to the emission limit specified in § 63.1322(c)(2).

(5) The owner or operator may use any other method to demonstrate compliance if the method or data has been validated according to the applicable procedures of Method 301 of appendix A of this part.

(e) *Aggregate batch vent stream testing for compliance with § 63.1322 (b)(2) or (b)(3).* Owners or operators of aggregate batch vent streams complying with § 63.1322 (b)(2) or (b)(3) shall conduct a performance test using the performance testing procedures for continuous process vents in § 63.116(c). For the purposes of this subpart, when the provisions of § 63.116(c) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (e)(1) and (e)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(2) The use of Method 25A, 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.

(f) *Compliance with § 63.1322(a)(3) [new SAN batch affected sources].* Except as provided in paragraph (b) of this section, an owner or operator using a control or recovery device to comply with the percent reduction requirement in § 63.1322(a)(3) shall conduct performance tests as specified in either paragraph (f)(1), (f)(2), or (f)(3) of this section, as applicable. Compliance with § 63.1322(a)(3) shall be determined as specified in paragraph (f)(4) of this section.

(1) For batch process vents, performance tests shall be conducted using the procedures specified in paragraph (c) of this section, except that the owner or operator is not required to determine the percent reduction for the batch cycle as specified in paragraph (c)(2) of this section.

(2) For continuous process vents, performance tests shall be conducted as required by the applicable requirements

of § 63.1315(a) as specified in § 63.1321(b).

(3) For aggregate batch vent streams, performance tests shall be conducted as specified in paragraph (e) of this section.

(4) Compliance with the percent reduction requirement of § 63.1322(a)(3) shall be demonstrated using the procedures specified in § 63.1333(c) and the control device efficiencies specified in either paragraph (f)(4)(i) or (f)(4)(ii) of this section. Emissions for uncontrolled continuous process vents and aggregate batch vent streams shall be determined based on the direct measurement procedures specified in paragraph (f)(2) and (f)(3) of this section, respectively, or based on engineering assessment, as specified in § 63.1323(b)(6)(i). At the discretion of the owner or operator, emissions for uncontrolled batch process vents shall be determined based on any of the procedures in § 63.1323(b).

(i) For noncombustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required by paragraph (c) of this section, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(ii) For combustion devices, the control efficiency shall be as determined by the performance test required by paragraph (f)(1), (f)(2), or (f)(3) of this section. Alternatively, if a performance test is not required, the control efficiency shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(g) *Batch cycle limitation.* The batch cycle limitation required by § 63.1322 (f) and (g) shall be established as specified in paragraph (g)(1) of this section and shall include the elements specified in paragraph (g)(2) of this section.

(1) The batch cycle limitation shall be determined by the owner or operator such that annual emissions for the batch process vent remain less than the level specified in § 63.1323(d) when complying with § 63.1322(g). Alternatively, when complying with § 63.1322(f), the batch cycle limitation shall ensure that annual emissions remain at a level such that said batch process vent remains a Group 2 batch process vent, given the actual annual flow rate for said batch process vent determined according to the procedures specified in § 63.1323(e). The batch cycle limitation shall be determined using the same basis, as described in § 63.1323(a)(1), used to make the group determination (i.e., expected mix of products or worst-case HAP emitting product). The establishment of the batch cycle limitation is not dependent upon any past production or activity level.

(i) If the expected mix of products serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that any foreseeable combination of products which the owner or operator desires the flexibility to manufacture shall be allowed. Combinations of products not accounted for in the documentation required by paragraph (g)(2)(iv) of this section shall not be allowed within the restrictions of the batch cycle limitation.

(ii) If, for a batch process vent with more than one product, a single worst-case HAP emitting product serves as the basis for the batch cycle limitation, the batch cycle limitation shall be determined such that the maximum number of batch cycles the owner or operator desires the flexibility to accomplish, using the worst-case HAP emitting product and ensuring that the batch process vent remains a Group 2 batch process vent or that emissions remain less than the level specified in § 63.1323(d), shall be allowed. This value shall be the total number of batch cycles allowed within the restrictions of the batch cycle limitation regardless of which products are manufactured.

(2) Documentation supporting the establishment of the batch cycle limitation shall include the information specified in paragraphs (g)(2)(i) through (g)(2)(v) of this section, as appropriate.

(i) Identification that the purpose of the batch cycle limitation is to comply with § 63.1322 (f)(1) or (g)(1).

(ii) Identification that the batch cycle limitation is based on a single worst-case HAP emitting product or on the expected mix of products for said batch process vent as allowed under § 63.1323(a)(1).

(iii) Definition of operating year for purposes of determining compliance with the batch cycle limitation.

(iv) If the batch cycle limitation is based on a single worst-case HAP emitting product, documentation specified in § 63.1323 (a)(1)(ii) through (a)(1)(iv), as appropriate, describing how the single product meets the requirements for worst-case HAP emitting product and the number of batch cycles allowed under the batch cycle limitation.

(v) If the batch cycle limitation is based on the expected mix of products, the owner or operator shall provide documentation that describes as many scenarios for differing mixes of products (i.e., how many batch cycles for each product) that the owner or operator desires the flexibility to accomplish. Alternatively, the owner or operator shall provide a description of the relationship among the mix of products that will allow a determination of compliance with the batch cycle limitation under an infinite number of scenarios. For example, if a batch process vent has two products, each product has the same flow rate and emits for the same amount of time, and product No. 1 has twice the emissions as product No. 2, the relationship describing an infinite number of scenarios would be that the owner or operator can accomplish two batch cycles of product No. 2 for each batch cycle of product No. 1 within the restriction of the batch cycle limitation.

§ 63.1326 Batch process vents—recordkeeping provisions.

(a) *Group determination records for batch process vents.* Except as provided in paragraphs (a)(7) through (a)(9) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (a)(1) through (a)(6) of this section for each batch process vent subject to the group determination procedures of § 63.1323. Except for paragraph (a)(1) of this section, the records required by this paragraph (a) are restricted to the information developed and used to make the group determination under § 63.1323(b) through § 63.1323(g), as appropriate. The information required by paragraph (a)(1) of this section is required for all batch process vents subject to the group determination procedures of § 63.1323. If an owner or operator did not need to develop certain information (e.g., annual average flow rate) to determine the group status, this paragraph (a) does not require that additional information be developed.

(1) An identification of each unique product that has emissions from one or more batch emission episodes venting from the batch process vent.

(2) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle for each unique product identified in paragraph (a)(1) of this section that was considered in making the group determination under § 63.1323.

(3) Total annual uncontrolled TOC or organic HAP emissions, determined at the exit from the batch unit operation before any control device, determined in accordance with § 63.1323(b).

(i) For Group 2 batch process vents, said emissions shall be determined at the batch cycle limitation.

(ii) For Group 1 batch process vents, said emissions shall be those used to determine the group status of the batch process vent.

(4) The annual average flow rate for the batch process vent, determined in accordance with § 63.1323(e).

(5) The cutoff flow rate, determined in accordance with § 63.1323(f).

(6) The results of the batch process vent group determination, conducted in accordance with § 63.1323(g).

(7) If a batch process vent is in compliance with § 63.1322 (a) or (b) and the control device is operating at all times when batch emission episodes are venting from the batch process vent, none of the records in paragraphs (a)(1) through (a)(6) of this section are required.

(8) If a batch process vent is in compliance with § 63.1322 (a) or (b), but the control device is operated only during selected batch emission episodes, only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(9) If the total annual emissions from the batch process vent are less than the appropriate level specified in § 63.1323(d), only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(b) *Compliance demonstration records.* Each owner or operator of a batch process vent or aggregate batch vent stream complying with § 63.1322 (a) or (b), shall keep the following records, as applicable, up-to-date and readily accessible:

(1) The annual mass emissions of halogen atoms in the batch process vent or aggregate batch vent stream determined according to the procedures specified in § 63.1323(h);

(2) If a batch process vent is in compliance with § 63.1322(a)(2), records documenting the batch cycle percent reduction as specified in § 63.1325(c)(2); and

(3) When using a flare to comply with § 63.1322 (a)(1), (a)(3), (b)(1), or (b)(3):

(i) The flare design (i.e., steam-assisted, air-assisted or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.1325(a); and

(iii) All periods during the compliance determination required by § 63.1325(a) when the pilot flame is absent.

(4) The following information when using a control device to achieve compliance with § 63.1322 (a)(2), (a)(3), (b)(2), or (b)(3):

(i) For an incinerator or non-combustion control device, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams;

(ii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater;

(iii) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.1325(c) for batch process vents and § 63.1325(e) for aggregate batch vent streams; and

(iv) For a scrubber or other control device following a combustion device to control halogenated batch process vents or halogenated aggregate batch vent streams, the percent reduction of total hydrogen halides and halogens as determined under § 63.1325(d)(3) or the emission limit determined under § 63.1325(d)(4).

(c) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.1324(c) and Table 7 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.1327(f) as allowed under § 63.1324(d), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.1324(f) for parameters specified in § 63.1324(c) and as required by § 63.1335(e) for alternate parameters. Said documentation shall include the parameter monitoring data used to establish the level.

(d) *Group 2 batch process vent continuous compliance records.* The owner or operator of a Group 2 batch process vent shall comply with either paragraph (d)(1) or (d)(2) of this section, as appropriate.

(1) The owner or operator of a Group 2 batch process vent complying with § 63.1322(g) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.1322(g)(1) and specified in § 63.1325(g).

(ii) Records specifying the number and type of batch cycles accomplished for each three month period.

(2) The owner or operator of a Group 2 batch process vent complying with § 63.1322(f) shall keep the following records up-to-date and readily accessible:

(i) Records designating the established batch cycle limitation required by § 63.1322(f)(1) and specified in § 63.1325(g).

(ii) Records specifying the number and type of batch cycles accomplished for each three month period.

(e) *Controlled batch process vent continuous compliance records.* Each owner or operator of a batch process vent that uses a control device to comply with § 63.1322(a) shall keep the following records, as applicable, up-to-date and readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.1324(c) as applicable, and listed in Table 7 of this subpart, or specified by the Administrator in accordance with § 63.1327(f) as allowed under § 63.1324(d). Said records shall be kept as specified under § 63.1335(d), except as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For flares, the records specified in Table 7 of this subpart shall be kept rather than averages.

(ii) For carbon adsorbers, the records specified in Table 7 of this subpart shall be kept rather than averages.

(2) Records of the batch cycle daily average value of each continuously monitored parameter, except as provided in paragraph (e)(2)(iii) of this section, as calculated using the procedures specified in paragraphs (e)(2)(i) through (e)(2)(ii) of this section.

(i) The batch cycle daily average shall be calculated as the average of all parameter values measured for an operating day during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the batch cycle daily averages.

(iii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum level established in accordance with § 63.1324(f), 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 batch cycle daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified in § 63.1324(e)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the times of all periods when the vent is diverted from the control device or the flow indicator specified in § 63.1324(e)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.1324(e)(2) or where computer monitoring of the position of the bypass valve is used to comply with § 63.1324(e)(3), hourly records of flow are not required.

(i) For compliance with § 63.1324(e)(2), the owner or operator shall record whether 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 configuration has been checked out, and records of any car-seal that has broken.

(ii) For compliance with § 63.1324(e)(3), the owner or operator shall record the times of all periods when the bypass line valve position has changed.

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(f) *Aggregate batch vent stream continuous compliance records.* In addition to the records specified in paragraphs (b) and (c) of this section, each owner or operator of an aggregate batch vent stream using a control device to comply with § 63.1322(b) shall keep records in accordance with the requirements for continuous process vents in § 63.118 (a) and (b), as applicable and as appropriate, except that when complying with § 63.118(b), owners or operators shall disregard statements concerning TRE index values for the purposes of this subpart.

§ 63.1327 Batch process vents—reporting requirements.

(a) The owner or operator of a batch process vent or aggregate batch vent stream at an affected source shall submit the information specified in paragraphs (a)(1) through (a)(4) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1335(e)(5).

(1) For each batch process vent complying § 63.1322(a) and each aggregate batch vent stream complying § 63.1322(b), the information specified in § 63.1326 (b) and (c), as applicable.

(2) For each Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d), the information specified in § 63.1326(d)(1)(i).

(3) For each Group 2 batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d), the information specified in § 63.1326(d)(2)(i).

(4) For each batch process vent subject to the group determination procedures, the information specified in § 63.1326(a), as appropriate.

(b) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent to become a Group 1 batch process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.1322 (a) or (b), as appropriate, as required under § 63.1335(e)(6)(iii)(D)(*2*).

(c) Whenever a process change, as defined in § 63.1323(i)(1), is made that causes a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) that is in compliance with § 63.1322(g) to have annual emissions greater than or equal to the level specified in § 63.1323(d) but remains a Group 2 batch process vent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(1) A description of the process change;

(2) The results of the redetermination of the annual emissions, average flow rate, and cutoff flow rate required under § 63.1323(i) and recorded under § 63.1326 (a)(3) through (a)(5); and

(3) The batch cycle limitation determined in accordance with § 63.1322(f)(1).

(d) Whenever a process change, as defined in § 63.1323(j)(1), is made that causes the percent reduction for all process vents at a new SAN affected source using a batch process to be less than 84 percent, the owner or operator shall submit a report within 180 operating days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in § 63.1335(e)(6)(iii)(D)(*2*). The following information shall be submitted:

(1) A description of the process change; and

(2) A schedule for compliance with the provisions of § 63.1322(a)(3), as required under § 63.1335(e)(6)(iii)(D)(*2*).

(e) The owner or operator is not required to submit a report of a process change if one of the conditions specified in paragraphs (e)(1) and (e)(2) of this section is met.

(1) The process change does not meet the description of a process change in § 63.1323 (i) or (j).

(2) The redetermined group status remains Group 2 for an individual batch process vent with annual emissions greater than or equal to the level specified in § 63.1323(d), a Group 2 batch process vent with annual emissions less than the level specified in § 63.1323(d) complying with § 63.1322(g) continues to have emissions less than the level specified in § 63.1323(d), or the achieved emission reduction remains at 84 percent or greater for new SAN affected sources using a batch process.

(f) If an owner or operator uses a control device other than those specified in § 63.1324(c) and listed in Table 7 of this subpart or requests approval to monitor a parameter other than those specified § 63.1324(c) and listed in Table 7 of this subpart, the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.1335(f), as part of the Precompliance Report required under § 63.1335(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

(g) Owners or operators complying with § 63.1324(e), shall comply with paragraph (g)(1) or (g)(2) of this section, as appropriate.

(1) Reports of the times of all periods recorded under § 63.1326(e)(3) when the batch process vent is diverted from the control device through a bypass line.

(2) Reports of all occurrences recorded under § 63.1326(e)(4) in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out.

§ 63.1328 Heat exchange systems provisions.

(a) This section applies to each affected source with the exception of each process contact cooling tower that is associated with an affected source manufacturing PET. The owner or operator of said affected source shall comply with § 63.104, with the differences noted in paragraphs (b)

through (d) of this section, for the purposes of this subpart.

(b) When the Periodic Report requirements contained in § 63.152(c) are referred to in § 63.104(b), the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(c) When an owner or operator invokes the delay of repair provisions as specified in § 63.104(b)(3), the information required by § 63.104 (b)(4)(i) through (b)(4)(v) shall be included in the next semi-annual Periodic Report required under § 63.1335(e)(6), for the purposes of this subpart. If the leak remains unrepaired, the information shall also be submitted in each subsequent Periodic Report, until the repair of the leak is reported.

(d) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.1311.

§ 63.1329 Process contact cooling towers provisions.

(a) This section applies to each new affected source that manufactures PET and each existing affected source that manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process. The owner or operator a new affected source shall comply with paragraph (b) of this section. The owner or operator of an existing affected source that manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process shall comply with paragraph (c) of this section. The compliance data for process contact cooling towers subject to the provisions of this section is specified in § 63.1311.

(b) *New affected source requirements.* The owner or operator of a new affected source subject to this section shall comply with paragraphs (b)(1) through (b)(2) of this section.

(1) The owner or operator of a new affected source subject to this section shall not send contact condenser effluent associated with a vacuum system to a process contact cooling tower.

(2) The owner or operator of a new affected source subject to this section shall indicate in the Notification of Compliance Status, as required in § 63.1335(e)(5), that contact condenser effluent associated with vacuum systems is not sent to process contact cooling towers.

(c) *Existing affected source requirements.* The owner or operator of an existing affected source subject to this section who manufactures PET using a continuous terephthalic acid high viscosity multiple end finisher process, and who is subject or becomes subject to 40 CFR part 60, subpart DDD, shall maintain an ethylene glycol concentration in the cooling tower at or below 4.0 percent by weight averaged on a daily basis over a rolling 14-day period of operating days. Compliance with this paragraph (c) shall be determined as specified in paragraphs (c)(1) through (c)(4) of this section.

(1) To determine the ethylene glycol concentration, owners or operators shall follow the procedures specified in 40 CFR 60.564(j)(1), except as provided in paragraph (c)(2) of this section.

(i) At least one sample per operating day shall be collected using the procedures specified in 40 CFR 60.564(j)(1)(i). An average ethylene glycol concentration by weight shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average ethylene glycol concentration so calculated constitutes a performance test. Exceedance of the standard during the reduced testing program specified in paragraph (b)(1)(ii) of this section is a violation of these standards.

(ii) The owner or operator may elect to reduce the sampling program to any 14 consecutive day period once every two calendar months, if at least seventeen consecutive 14-day rolling average concentrations immediately preceding the reduced sampling program are each less than 1.2 weight percent ethylene glycol. If the average concentration obtained over the 14 day sampling during the reduced test period exceeds the upper 95 percent confidence interval calculated from the most recent test results in which no one 14-day average exceeded 1.2 weight percent ethylene glycol, then the owner or operator shall reinstitute a daily sampling program. The 95 percent confidence interval shall be calculated as specified in paragraph (b)(1)(iii) of this section. A reduced program may be reinstituted if the requirements specified in this paragraph (c)(1)(ii) are met.

(iii) The upper 95 percent confidence interval shall be calculated using the Equation 27 of this subpart:

$$CI_{95} = \frac{\sum_{i=1}^{n} X_i}{n} + 2\sqrt{\frac{n\sum x^2 - \left(\sum x\right)^2}{n(n-1)}} \qquad [\text{Eq. } 27]$$

where:

X_i = daily ethylene glycol concentration for each day used to calculate each 14-day rolling average used in test results to justify implementing the reduced testing program.

n = number of ethylene glycol concentrations.

(2) Measuring an alternative parameter, such as carbon oxygen demand or biological oxygen demand, that is demonstrated to be directly proportional to the ethylene glycol concentration shall be allowed. Such parameter shall be measured during the initial 14-day performance test during which the facility is shown to be in compliance with the ethylene glycol concentration standard whereby the ethylene glycol concentration is determined using the procedures described in paragraph (b)(1) of this section. The alternative parameter shall be measured on a daily basis and the average value of the alternative parameter shall be calculated on a daily basis over a rolling 14-day period of operating days. Each daily average value of the alternative parameter constitutes a performance test.

(3) During each performance test, daily measurement and daily average 14-day rolling averages of the ethylene glycol concentration in the cooling tower water shall be recorded. For the initial performance test, these records shall be submitted in the Notification of Compliance Status report.

(4) All periods when the 14-day rolling average exceeds the standard shall be reported in the Periodic Report.

§ 63.1330 Wastewater provisions.

(a) The owner or operator of each affected source shall comply with the requirements of §§ 63.131 through 63.148, with the differences noted in paragraphs (a)(1) through (a)(12) of this section for the purposes of this subpart.

(1) When the determination of equivalence criteria in § 63.102(b) is referred to in §§ 63.132, 63.133, and 63.137, the provisions in § 63.6(g) shall apply.

(2) When the storage tank requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.148, §§ 63.119 through 63.123 are applicable, with the exception of the differences referred to in § 63.1314, for the purposes of this subpart.

(3) When the owner or operator requests to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions referred to in § 63.151(g), or the owner or operator submits an operating permit application instead of an Implementation Plan as specified in § 63.152(e), as referred to in § 63.146(a)(3), § 63.1335(g) and § 63.1335(e)(8), respectively, shall apply for the purposes of this subpart.

(4) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.146 and 63.147, the Notification of Compliance Status requirements contained in § 63.1335(e)(5) shall apply for the purposes of this subpart.

(5) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.146 and 63.147, the Periodic Report requirements contained in § 63.1335(e)(6) shall apply for the purposes of this subpart.

(6) When the Initial Notification Plan requirements in § 63.151(b) are referred to in § 63.146, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(7) When the Implementation Plan requirements contained in § 63.151 are referred to in § 63.146, the owner or operator of an affected source subject to this subpart need not comply for the purposes of this subpart.

(8) When the term ''range'' is used in § 63.143(f), the term ''level'' shall be used instead for the purposes of this subpart. This level shall be determined using the procedures specified in § 63.1334.

(9) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(e)(2) which specify that owners or operators shall demonstrate that 95 percent of the mass of HAP, as listed in Table 9 of subpart G of this part, is removed from the wastewater stream or combination of wastewater streams by the procedure specified in § 63.145(i) for a biological treatment unit.

(10) For the purposes of this subpart, owners or operators are not required to comply with the provisions of § 63.138(j)(3) which specify that owners or operators shall use the procedures specified in appendix C of this part to demonstrate compliance when using a biological treatment unit.

(11) When the provisions of § 63.139(c)(1)(ii) or the provisions of § 63.145(e)(2)(ii)(B) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (a)(11)(i) and (a)(11)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(12) The compliance date for the affected source subject to the provisions of this section is specified in § 63.1311.

(b) For each affected source, the owner or operator shall comply with the requirements for maintenance wastewater in § 63.105, except that when § 63.105(a) refers to ''organic HAPs,'' the definition of organic HAP in § 63.1312 shall apply for the purposes of this subpart.

§ 63.1331 Equipment leak provisions.

(a) Except as provided for in paragraphs (b) and (c) of this section, the owner or operator of each affected source shall comply with the requirements of subpart H of this part, with the differences noted in paragraphs (a)(1) through (a)(9) of this section.

(1) For an affected source producing polystyrene resin, the indications of liquids dripping, as defined in subpart H of this part, from bleed ports in pumps and agitator seals in light liquid service shall not be considered to be a leak. For purposes of this subpart, a ''bleed port'' is a technologically-required feature of the pump or seal whereby polymer fluid used to provide lubrication and/or cooling of the pump or agitator shaft exits the pump, thereby resulting in a visible dripping of fluid.

(2) The compliance date for the equipment leak provisions contained in this section is provided in § 63.1311.

(3) Owners and operators of an affected source subject to this subpart are not required to submit the Initial Notification required by § 63.182(a)(1) and § 63.182(b).

(4) The Notification of Compliance Status required by paragraphs § 63.182(a)(2) and § 63.182(c) shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in § 63.1311 for the equipment leak provisions. Said notification can be submitted as part of the Notification of Compliance Status required by § 63.1335(e)(5).

(5) The Periodic Reports required by § 63.182(a)(3) and § 63.182(d) may be submitted as part of the Periodic Reports required by § 63.1335(e)(6).

(6) For an affected source producing PET, an owner or operator shall comply with the requirements of paragraphs (a)(6)(i) and (a)(6)(ii) of this section instead of with the requirements of § 63.169 for pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems.

(i) A leak is determined to be detected if there is evidence of a potential leak found by visual, audible, olfactory, or any other detection method except that Method 21, 40 CFR part 60, appendix A shall not be used to determine if a leak is detected.

(ii)(A) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 63.171.

(B) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(C) Repaired shall mean that the visual, audible, olfactory, or other indications of a leak have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.

(7) For each affected source producing PET, an owner or operator is not required to develop an initial list of identification numbers for the equipment identified in paragraph (a)(6) of this section (i.e., pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems) as would otherwise be required under § 63.181(b)(1)(i).

(8) When the provisions of subpart H of this part specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (a)(8)(i) and (a)(8)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(9) For purposes of this subpart, bottoms receivers and surge control vessels are not considered equipment for purposes of this section and are not subject to the requirements of subpart H of this part.

(b) The provisions of this section do not apply to each TPPU producing PET using a process other than a continuous terephthalic acid (TPA) high viscosity multiple end finisher process that is part of an affected source if all of the components in the TPPU are either in vacuum service or in heavy liquid service.

(1) Owners and operators of a TPPU exempted under paragraph (b) of this section shall retain at the facility information, data, and analyses used to demonstrate that all of the components in the exempted TPPU are either in vacuum service or in heavy liquid service. Such documentation shall include an analysis or demonstration that the process fluids do not meet the criteria of ''in light liquid service'' or ''in gas or vapor service.'' Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(2) If changes occur at a TPPU exempted under paragraph (b) of this section such that all of the components in the TPPU are no longer either in vacuum service or in heavy liquid service (e.g., by either process changes or the addition of new components), the owner or operator shall comply with the provisions of this section for all of the components at the TPPU. The owner or operator shall submit a report within 180 days after the process change is made or the information regarding the process change is known to the owner or operator. This report may be included in the next Periodic Report, as specified in paragraph (a)(5) of this section. The following information shall be submitted:

(i) A description of the process change; and

(ii) A schedule for compliance with the provisions of § 63.1331(a), as specified in paragraphs (b)(2)(ii)(A) and (b)(2)(ii)(B) of this section.

(A) The owner or operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

(B) The Administrator shall approve the compliance schedule or request changes within 120 operating days of receipt of the compliance schedule and justification.

(c) The provisions of this section do not apply to each affected source producing PET using a continuous TPA high viscosity multiple end finisher process.

§ 63.1332 Emissions averaging provisions.

(a) This section applies to owners or operators of existing affected sources who seek to comply with § 63.1313(b) by using emissions averaging rather than following the provisions of §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(1) The following emission point limitations apply to the use of these provisions:

(i) All emission points included in an emissions average shall be from the same affected source. There may be an emissions average for each affected source located at a plant site.

(ii)(A) If a plant site has only one affected source for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions average for said affected source is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions average.

(B) If a plant site has two or more affected sources for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions averages for said affected sources is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions averages.

(2) Compliance with the provisions of this section can be based on either organic HAP or TOC.

(3) For the purposes of these provisions, whenever Method 18, 40 CFR part 60, appendix A is specified within the paragraphs of this section or is specified by reference through provisions outside this section, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used. The use of Method 25A, 40 CFR part 60, appendix A shall comply with paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A shall be the single organic HAP representing the largest percent by volume of the emissions.

(ii) The use of Method 25A, 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.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all of the information required in § 63.1335(e)(4) for all emission points to be included in an emissions average.

(c) Paragraphs (c)(1) through (c)(5) of this section describe the emission points that can be used to generate emissions averaging credits if control was applied after November 15, 1990, and if sufficient information is available to determine the appropriate value of credits for the emission point. Paragraph (c)(6) of this section discusses the use of pollution prevention in generating emissions averaging credits.

(1) Storage vessels, batch process vents, aggregate batch vent streams, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 2 emission points. The term ''continuous process vents subject to § 63.1315'' includes continuous process vents subject to § 63.1316 (b)(1)(iii), (b)(2)(iii), and (c)(2), which reference § 63.1315.

(2) Continuous process vents located in the collection of material recovery sections within the affected source at an existing affected source producing PET using a continuous dimethyl terephthalate process subject to § 63.1316(b)(1)(i) where the uncontrolled organic HAP emissions from said continuous process vents are equal to or less than 0.12 kg organic HAP per Mg of product. These continuous process vents shall be considered Group 2 emission points for the purposes of this section.

(3) Storage vessels, continuous process vents subject to § 63.1315, and process wastewater streams that are determined to be Group 1 emission points and that are controlled by a technology that the Administrator or permitting authority agrees has a higher nominal efficiency than the reference control technology. Information on the nominal efficiencies for such technologies must be submitted and approved as provided in paragraph (i) of this section.

(4) Batch process vents and aggregate batch vent streams that are determined to be Group 1 emission points and that

are controlled to a level more stringent than the applicable standard.

(5) Continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source, as specified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section. The continuous process vents identified in paragraphs (c)(5)(i) through (c)(5)(ii) of this section shall be considered to be Group 1 emission points for the purposes of this section.

(i) Continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source where the uncontrolled organic HAP emissions for said continuous process vents are greater than 0.12 kg organic HAP per Mg of product and said continuous process vents are controlled to a level more stringent than the applicable standard.

(ii) Continuous process vents subject to § 63.1316(b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections within the affected source where the uncontrolled organic HAP emissions from said continuous process vents are controlled to a level more stringent than the applicable standard.

(6) The percent reduction for any storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, and process wastewater stream from which emissions are reduced by pollution prevention measures shall be determined using the procedures specified in paragraph (j) of this section.

(i) For a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure must reduce emissions more than if the applicable reference control technology or standard had been applied to the emission point instead of the pollution prevention measure, except as provided in paragraph (c)(6)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 storage vessel, batch process vent, aggregate batch vent stream, continuous process vent, or process wastewater stream, the pollution prevention measure alone does not have to reduce emissions more than the applicable reference control technology or standard, but the combination of the pollution prevention measure and other controls must reduce emissions more than if the applicable reference control technology or standard had been applied instead of the pollution prevention measure.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990, cannot be used to generate credits unless the level of control is increased after November 15, 1990. In this case, credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points, identified in paragraph (c)(3) of this section, that are controlled by a reference control technology cannot be used to generate credits unless the reference control technology has been approved for use in a different manner and a higher nominal efficiency has been assigned according to the procedures in paragraph (i) of this section.

(3) Emission points for nonoperating TPPU cannot be used to generate credits. TPPU that are shutdown cannot be used to generate credits or debits.

(4) Maintenance wastewater cannot be used to generate credits. Wastewater streams treated in biological treatment units cannot be used to generate credits. These two types of wastewater cannot be used to generate credits or debits. For the purposes of this section, the terms wastewater and wastewater stream are used to mean process wastewater.

(5) Emission points controlled to comply with a State or Federal rule other than this subpart cannot be used to generate credits, unless the level of control has been increased after November 15, 1990, to a level above what is required by the other State or Federal rule. Only the control above what is required by the other State or Federal rule will be credited. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the emission point is subsequently made subject to a State or Federal rule other than this subpart, the emission point can continue to generate emissions averaging credit for the purpose of complying with the previously approved emissions average.

(e) For all emission points included in an emissions average, the owner or operator shall perform the following tasks:

(1) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the reference control technology or standard for those emission points. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) Calculate and record monthly credits for all Group 1 and Group 2 emission points that are over-controlled to compensate for the debits. Equations in paragraph (h) of this section shall be used to calculate credits. Emission points and controls that meet the criteria of paragraph (c) of this section may be included in the credit calculation, whereas those described in paragraph (d) of this section shall not be included.

(3) Demonstrate that annual credits calculated according to paragraph (h) of this section are greater than or equal to debits calculated for the same annual compliance period according to paragraph (g) of this section.

(i) The owner or operator may choose to include more than the required number of credit-generating emission points in an emissions average in order to increase the likelihood of being in compliance.

(ii) The initial demonstration in the Emissions Averaging Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debits from the debit-generating emission points must be made under representative operating conditions. After the compliance date, actual operating data will be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (g) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h) of this section. Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in § 63.1335(e)(6). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.1335(e)(6)(vi)(D)(*2*).

(f) Debits and credits shall be calculated in accordance with the methods and procedures specified in paragraphs (g) and (h) of this section, respectively, and shall not include emissions during the following periods:

(1) Emissions during periods of start-up, shutdown, and malfunction, as described in the Start-up, Shutdown, and Malfunction Plan.

(2) Emissions during periods of monitoring excursions, as defined in § 63.1334(d). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in

paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

(i) No credits would be assigned to the credit-generating emission point.

(ii) Maximum debits would be assigned to the debit-generating emission point.

(iii) The owner or operator may demonstrate to the Administrator that full or partial credits or debits should be assigned using the procedures in paragraph (l) of this section.

(g) Debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology or standard and the emissions allowed for the Group 1 emission point. Said Group 1 emission points are identified in paragraphs (c)(3) through (c)(5) of this section. Debits shall be calculated as follows:

(1) Source-wide debits shall be calculated using Equation 28 of this subpart. Debits and all terms of Equation 28 of this subpart are in units of megagrams per month.

$$\text{Debits} = \sum_{i=1}^{n}\left(\text{ECPV}_{i\text{ACTUAL}} - (0.02)\text{ECPV}_{iu}\right) + \sum_{j=1}^{n}\left(\text{ECPVS}_{j\text{ACTUAL}} - \text{ECPVS}_{j\text{STD}}\right) + \sum_{i=1}^{n}\left(\text{ES}_{i\text{ACTUAL}} - (b)\text{ES}_{iu}\right) + \sum_{i=1}^{n}\left(\text{EWW}_{i\text{ACTUAL}} - \text{EWW}_{ic}\right) + \sum_{i=1}^{n}\left(\text{EBPV}_{i\text{ACTUAL}} - (0.10)\text{EBPV}_{iu}\right) + \sum_{i=1}^{n}\left(\text{EABV}_{i\text{ACTUAL}} - (0.10)\text{EABV}_{iu}\right) \quad [\text{Eq. 28}]$$

where:

$ECPV_{iACTUAL}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $ECPV_{iACTUAL}$ is calculated according to paragraph (g)(2) of this section.

$(0.02)ECPV_{iu}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions. $ECPV_{iu}$ is calculated according to paragraph (g)(2) of this section.

$ECPVS_{jACTUAL}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source that are uncontrolled or controlled to a level less stringent than the applicable standard. $ECPVS_{jACTUAL}$ is calculated according to paragraph (g)(3) of this section.

$ECPVS_{jSTD}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions. $ECPVS_{jSTD}$ is calculated according to paragraph (g)(3) of this section.

$ES_{iACTUAL}$=Emissions from each Group 1 storage vessel i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology or standard. $ES_{iACTUAL}$ is calculated according to paragraph (g)(4) of this section.

$(BL)ES_{iu}$=Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. ES_{iu} is calculated according to paragraph (g)(4) of this section. For calculating emissions, BL=0.05 for each Group 1 storage vessel i subject to § 63.1314(a); and BL=0.02 for each storage vessel i subject to § 63.1314(c).

$EWW_{iACTUAL}$=Emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EWW_{iACTUAL}$ is calculated according to paragraph (g)(5) of this section.

EWW_{ic}=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. EWW_{ic} is calculated according to paragraph (g)(5) of this section.

$EBPV_{iACTUAL}$=Emissions from each Group 1 batch process vent i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EBPVi_{iACTUAL}$ is calculated according to paragraph (g)(6) of this section.

$(0.10)EBPV_{iu}$=Emissions from each Group 1 batch process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV_{iu}$ is calculated according to paragraph (g)(6) of this section.

$EABV_{iACTUAL}$=Emissions from each Group 1 aggregate batch vent stream i that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology. $EBPVi_{iACTUAL}$ is calculated according to paragraph (g)(7) of this section.

$(0.10)EABV_{iu}$=Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV_{iu}$ is calculated according to paragraph (g)(7) of this section.

n=The number of emission points being included in the emissions average.

(2) Emissions from continuous process vents subject to § 63.1315 shall be calculated as follows:

(i) For purposes of determining continuous process vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be after the final product recovery device, if any recovery devices are present; before any control device (for continuous process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere. Method 1 or 1A, 40 CFR

part 60, appendix A, shall be used for selection of the sampling site.

(ii) $ECPV_{iu}$ for each continuous process vent i shall be calculated using Equation 29 of this subpart.

$$ECPV_{iu} = \left(2.494 \times 10^{-9}\right) Qh \left(\sum_{j=1}^{n} C_j M_j\right) \qquad [Eq. 29]$$

where:

$ECPV_{iu}$=Uncontrolled continuous process vent emission rate from continuous process vent i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present in the continuous process vent, hours per month.

Cj=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

Mj=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in stream.

(A) The values of Q and Cj shall be determined during a performance test conducted under representative operating conditions. The values of Q and Cj shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(2)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q and Cj are no longer representative, a new performance test shall be conducted to determine new representative values of Q and Cj. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate $ECPV_{iACTUAL}$:

(A) If the continuous process vent is not controlled by a control device or pollution prevention measure, $ECPV_{iACTUAL}$=$ECPV_{iu}$, where $ECPV_{iu}$ is calculated according to the procedures in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent is controlled using a control device or a pollution prevention measure achieving less than 98 percent reduction, calculate $ECPV_{iACTUAL}$ using Equation 30 of this subpart.

$$ECPV_{iACTUAL} = ECPV_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \qquad [Eq. 30]$$

(*1*) The percent reduction shall be measured according to the procedures in § 63.116 if a combustion control device is used. For a flare meeting the criteria in § 63.116(a), or a boiler or process heater meeting the criteria in § 63.116(b), the percent reduction shall be 98 percent. If a noncombustion control device is used, percent reduction shall be demonstrated by a performance test at the inlet and outlet of the device, or, if testing is not feasible, by a control design evaluation and documented engineering calculations.

(*2*) For determining debits from Group 1 continuous process vents, product recovery devices shall not be considered control devices and cannot be assigned a percent reduction in calculating $ECPV_{iACTUAL}$. The sampling site for measurement of uncontrolled emissions is after the final product recovery device. However, as provided in § 63.113(a)(3), a Group 1 continuous process vent may add sufficient product recovery to raise the TRE index value above 1.0 or, for Group 1 continuous process vents at an existing affected source producing MBS, above 3.7, thereby becoming a Group 2 continuous process vent. Such a continuous process vent would not be a Group 1 continuous process vent and would, therefore, not be included in determining debits under this paragraph (g)(2)(iii)(B)(*2*).

(*3*) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from continuous process vents located in the collection of process sections within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be calculated as follows:

(i) The total organic HAP emissions from continuous process vents located in the collection of process sections j within the affected source, $ECPVS_{jACTUAL}$, shall be calculated as follows. The procedures in paragraph (g)(2)(iii) of this section shall be used to determine the organic HAP emissions for each individual continuous process vent, except that paragraph (g)(2)(iii)(B)(*2*) of this section shall not apply and the sampling site shall be after those recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed to determine $ECPVS_{jACTUAL}$.

(ii)(A) ECPVSjstd shall be calculated using Equation 31 of this subpart.

$$ECPVS_{jstd} = \left(EF_{std}\right)\left(PP_j\right) \qquad [Eq. 31]$$

where:

$ECPVS_{jstd}$=Emissions if the applicable standard had been applied to the uncontrolled emissions, megagrams per month.

EF_{std}=0.000018 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(1)(i).

=0.00002 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316 (b)(1)(ii) or (b)(2)(ii).

=0.00004 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(b)(2)(i).

=0.0000036 Mg organic HAP/Mg of product, if the collection of process sections within the affected source is subject to § 63.1316(c)(1).

PPj=Polymer produced, Mg/month, for the collection of process sections j within the affected source, as calculated according to paragraph (g)(3)(ii)(B) of this section.

(B) The amount of polymer produced, Mg per month, for the collection of process sections j within the affected source shall be determined by determining the weight of polymer pulled from the process line(s) during a 30-day period. The polymer produced shall be determined by direct measurement or by an alternate methodology, such as materials balance. If an alternate methodology is used, a description of the methodology, including all procedures, data, and assumptions shall be submitted as part of the Emissions Averaging Plan required by § 63.1335(e)(4).

(C) Alternatively, $ECPVS_{jstd}$ for continuous process vents located in the collection of process sections within the affected source subject to § 63.1316(c)(1) may be calculated using the procedures in paragraph (g)(2)(i) and (g)(2)(ii) of this section to determine the organic HAP emissions for each individual continuous process vent, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere. Then, individual continuous process vent emissions shall be summed and multiplied by 0.02 to determine $ECPVS_{jstd}$.

(4) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(g)(3).

(5) Emissions from wastewater streams shall be calculated using the procedures in § 63.150(g)(5).

(6) Emissions from batch process vents shall be calculated as follows:

(i) $EBPV_{iu}$ for each batch process vent i shall be calculated using the procedures specified in § 63.1323(b).

(ii) The following procedures and equations shall be used to determine $EBPV_{iACTUAL}$:

(A) If the batch process vent is not controlled by a control device or pollution prevention measure, $EBPV_{iACTUAL}=EBPV_{iu}$, where $EBPV_{iu}$ is calculated using the procedures in § 63.1323(b).

(B) If the batch process vent is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction for the batch cycle, calculate $EBPV_{iACTUAL}$ using Equation 32 of this subpart, where percent reduction is for the batch cycle.

$$EBPV_{iACTUAL} = EBPV_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \qquad [\text{Eq. } 32]$$

(*1*) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(*2*) The percent reduction for control devices shall be calculated according to the procedures in § 63.1325 (c)(2)(i) through (c)(2)(iii).

(*3*) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(7) Emissions from aggregate batch vent streams shall be calculated as follows:

(i) For purposes of determining aggregate batch vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be before any control device and before discharge to the atmosphere. Method 1 or 1A, 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) $EABV_{iu}$ for each aggregate batch vent stream i shall be calculated using Equation 33 of this subpart.

$$EABV_{iu} = \left(2.494\times10^{-9}\right)Qh\left(\sum_{j=1}^{n} C_j M_j\right) \qquad [\text{Eq. } 33]$$

where:

$EABV_{iu}$=Uncontrolled aggregate batch vent stream emission rate from aggregate batch vent stream i, megagrams per month.

Q=Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

h=Monthly hours of operation during which positive flow is present from the aggregate batch vent stream, hours per month.

C_j=Concentration, parts per million by volume, dry basis, of organic HAP j as measured by Method 18, 40 CFR part 60, appendix A.

M_j=Molecular weight of organic HAP j, gram per gram-mole.

n=Number of organic HAP in the stream.

(A) The values of Q and C_j shall be determined during a performance test conducted under representative operating conditions. The values of Q and C_j shall be established in the Notification of Compliance Status and must be updated as provided in paragraph (g)(7)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or product recovery equipment or operation such that the previously measured values of Q and C_j are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C_j. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate $EABV_{iACTUAL}$:

(A) If the aggregate batch vent stream is not controlled by a control device or pollution prevention measure, $EABV_{iACTUAL} = EABV_{iu}$, where $EABV_{iu}$ is calculated according to the procedures in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction, calculate $EABV_{iACTUAL}$ using Equation 34 of this subpart.

$$EABV_{iACTUAL} = EABV_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [\text{Eq. 34}]$$

(*1*) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(*2*) The percent reduction for pollution prevention measures shall be calculated according to the procedures specified in paragraph (j) of this section.

(h) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from that Group 1 or Group 2 emission point that has been controlled after November 15, 1990 to a level more stringent than what is required by this subpart or any other State or Federal rule or statute. Said Group 1 and Group 2 emission points are identified in paragraphs (c)(1) through (c)(5) of this section. Credits shall be calculated using Equation 35 of this subpart.

(1) Sourcewide credits shall be calculated using Equation 35 of this subpart.

$$\begin{aligned}
\text{Credits} = {} & D\sum_{i=1}^{n}\left((0.02)ECPV1_{iu} - ECPV1_{iACTUAL}\right) \\
& + D\sum_{j=1}^{n}\left(ECPVS1_{jSTD} - ECPVS1_{jACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(ECPV2_{iBASE} - ECPV2_{iACTUAL}\right) \\
& + D\sum_{j=1}^{m}\left(ECPVS2_{jBASE} - ECPVS2_{jACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((BL)ES1_{iu} - ES1_{iACTUAL}\right) + D\sum_{i=1}^{m}\left(ES2_{iBASE} - ES2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left(EWW1_{ic} - EWW1_{iACTUAL}\right) \qquad [\text{Eq. 35}] \\
& + D\sum_{i=1}^{m}\left(EWW2_{iBASE} - EWW2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((0.10)EBPV1_{iu} - EBPV1_{iACTUAL}\right) \\
& + D\sum_{i=1}^{n}\left((0.10)EABV1_{iu} - EABV1_{iACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(EBPV2_{iBASE} - EBPV2_{iACTUAL}\right) \\
& + D\sum_{i=1}^{m}\left(EABV2_{iBASE} - EABV2_{iACTUAL}\right)
\end{aligned}$$

Credits and all terms of Equation 35 of this subpart are in units of megagrams per month, the baseline date is November 15, 1990.

where:

D=Discount factor=0.9 for all credit generating emission points except those controlled by a pollution prevention measure; discount factor=1.0 for each credit generating emission point controlled by a pollution prevention measure (i.e., no discount provided).

$ECPV1_{iACTUAL}$=Emissions for each Group 1 continuous process vent i subject to § 63.1315 that is controlled to a level more stringent than the reference control technology. $ECPV1_{iACTUAL}$ is calculated according to paragraph (h)(2) of this section.

$(0.02)ECPV1_{iu}$=Emissions from each Group 1 continuous process vent i subject to § 63.1315 if the applicable reference control technology had been applied to the uncontrolled emissions. $ECPV1_{iu}$ is calculated according to paragraph (h)(2) of this section.

$ECPVS1_{jSTD}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions. $ECPVS1_{jSTD}$ is calculated according to paragraph (h)(3) of this section.

$ECPVS1_{jACTUAL}$=Emissions from Group 1 continuous process vents subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) located in the collection of process sections j within the affected source that are controlled to a level more stringent than the applicable standard. $ECPVS1_{jACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$ECPV2_{iACTUAL}$=Emissions from each Group 2 continuous process vent i subject to § 63.1315 that is controlled. $ECPV2_{iACTUAL}$ is calculated according to paragraph (h)(2) of this section.

$ECPV2_{iBASE}$=Emissions from each Group 2 continuous process vent i subject to § 63.1315 at the baseline date. $ECPV2_{iBASE}$ is calculated according to paragraph (h)(2) of this section.

$ECPVS2_{jBASE}$=Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source at the baseline date. $ECPVS2_{jBASE}$ is calculated according to paragraph (h)(3) of this section.

$ECPVS2_{jACTUAL}$=Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source that are controlled. $ECPVS2_{jACTUAL}$ is calculated according to paragraph (h)(3) of this section.

$ES1_{iACTUAL}$=Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the applicable reference control technology or standard. $ES1_{iACTUAL}$ is calculated according to paragraph (h)(4) of this section.

(BL)$ES1_{iu}$=Emissions from each Group 1 storage vessel i if the applicable reference control technology or standard had been applied to the uncontrolled emissions. $ES1_{iu}$ is calculated according to paragraph (h)(4) of this section. For calculating these emissions, BL=0.05 for each Group 1 storage vessel i subject to § 63.1314(a); and BL=0.02 for each storage vessel i subject to § 63.1314(c).

$ES2_{iACTUAL}$=Emissions from each Group 2 storage vessel i that is controlled. $ES2_{iACTUAL}$ is calculated according to paragraph (h)(4) of this section.

$ES2_{iBASE}$=Emissions from each Group 2 storage vessel i at the baseline date. $ES2_{iBASE}$ is calculated according to paragraph (h)(4) of this section.

$EWW1_{iACTUAL}$=Emissions from each Group 1 wastewater stream i that is controlled to a level more stringent than the reference control technology. $EWW1_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW1_{ic}$=Emissions from each Group 1 wastewater stream i if the reference control technology had been applied to the uncontrolled emissions. $EWW1_{ic}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iACTUAL}$=Emissions from each Group 2 wastewater stream i that is controlled. $EWW2_{iACTUAL}$ is calculated according to paragraph (h)(5) of this section.

$EWW2_{iBASE}$=Emissions from each Group 2 wastewater stream i at the baseline date. $EWW2_{iBASE}$ is calculated according to paragraph (h)(5) of this section.

(0.10)$EBPV1_{iu}$=Emissions from each Group 1 batch process vent i if the applicable reference control technology had been applied to the uncontrolled emissions. $EBPV1_{iu}$ is calculated according to paragraph (h)(6) of this section.

$EBPV1_{iACTUAL}$=Emissions from each Group 1 batch process vent i that is controlled to a level more stringent than the reference control technology. $EBPV1_{iACTUAL}$ is calculated according to paragraph (h)(6) of this section.

(0.10)$EABV1_{iu}$=Emissions from each Group 1 aggregate batch vent stream i if the applicable reference control technology had been applied to the uncontrolled emissions. $EABV1_{iu}$ is calculated according to paragraph (h)(7) of this section.

$EABV1_{iACTUAL}$=Emissions from each Group 1 aggregate batch vent stream i that is controlled to a level more stringent than the reference control technology. $EABV1_{iACTUAL}$ is calculated according to paragraph (h)(7) of this section.

$EBPV2_{iBASE}$=Emissions from each Group 2 batch process vent i at the baseline date. $EBPV2_{iBASE}$ is calculated according to paragraph (h)(6) of this section.

$EBPV2_{iACTUAL}$=Emissions from each Group 2 batch process vent i that is controlled. $EBPV2_{iACTUAL}$ is calculated according to paragraph (h)(6) of this section.

$EABV2_{iBASE}$=Emissions from each Group 2 aggregate batch vent stream i at the baseline date. $EABV2_{iBASE}$ is calculated according to paragraph (h)(7) of this section.

$EABV2_{iACTUAL}$=Emissions from each Group 2 aggregate batch vent stream i that is controlled. $EABV2_{iACTUAL}$ is calculated according to paragraph (h)(7) of this section.

n=Number of Group 1 emission points included in the emissions average. The value of n is not necessarily the same for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

m=Number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.

(i) Except as specified in paragraph (h)(1)(iv) of this section, for an emission point controlled using a reference control technology, the percent reduction for calculating credits shall be no greater than the nominal efficiency associated with the reference control technology, unless a higher nominal efficiency is assigned as specified in paragraph (h)(1)(ii) of this section.

(ii) For an emission point controlled to a level more stringent than the reference control technology, the nominal efficiency for calculating credits shall be assigned as described in paragraph (i) of this section. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedures in paragraph (i) of this section.

(iii) For an emission point controlled using a pollution prevention measure, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section.

(iv) For Group 1 and Group 2 batch process vents and Group 1 and Group 2 aggregate batch vent streams, the percent reduction for calculating credits shall be the percent reduction determined according to the procedures in paragraphs (h)(6)(ii) and (h)(6)(iii) of this section for batch process vents and paragraphs (h)(7)(ii) and (h)(7)(iii) of this section for aggregate batch vent streams.

(2) Emissions from continuous process vents subject to § 63.1315 shall be determined as follows:

(i) Uncontrolled emissions from Group 1 continuous process vents ($ECPV1_{iu}$) shall be calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 continuous process vents controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction ($ECPV1_{iACTUAL}$) shall be calculated using Equation 36 of this subpart.

$$ECPV1_{iACTUAL} = ECPV1_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right) \quad [\text{Eq. 36}]$$

(iii) The following procedures shall be used to calculate actual emissions from Group 2 continuous process vents ($ECPV2_{iACTUAL}$):

(A) For a Group 2 continuous process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, where the control achieves a percent reduction less than or equal to 98 percent reduction, use Equation 37 of this subpart.

$$ECPV2_{iACTUAL} = ECPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [\text{Eq. 37}]$$

(*1*) $ECPV2_{iu}$ shall be calculated according to the equations and procedures for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section, except as provided in paragraph (h)(2)(iii)(A)(*3*) of this section.

(*2*) The percent reduction shall be calculated according to the procedures in paragraphs (g)(2)(iii)(B)(*1*) through (g)(2)(iii)(B)(*3*) of this section, except as provided in paragraph (h)(2)(iii)(A)(*4*) of this section.

(*3*) If a recovery device was added as part of a pollution prevention project, $ECPV2_{iu}$ shall be calculated prior to that recovery device. The equation for $ECPV_{iu}$ in paragraph (g)(2)(ii) of this section shall be used to calculate $ECPV2_{iu}$; however, the sampling site for measurement of vent stream flow rate and organic HAP concentration shall be at the inlet of the recovery device.

(*4*) If a recovery device was added as part of a pollution prevention project, the percent reduction shall be demonstrated by conducting a performance test at the inlet and outlet of that recovery device.

(B) For a Group 2 continuous process vent controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction, use Equation 38 of this subpart.

$$ECPV2_{iACTUAL} = ECPV2_{iu}\left(1 - \frac{\text{Nominal efficiency \%}}{100\%}\right) \quad [\text{Eq. 38}]$$

(iv) Emissions from Group 2 continuous process vents at baseline shall be calculated as follows:

(A) If the continuous process vent was uncontrolled on November 15, 1990, $ECPV2_{iBASE}=ECPV2_{iu}$ and shall be calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous process vent was controlled on November 15, 1990, use Equation 39 of this subpart.

$$ECPV2_{iBASE} = ECPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad [\text{Eq. 39}]$$

(*1*) $ECPV2_{iu}$ is calculated according to the procedures and equation for $ECPV_{iu}$ in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(*2*) The percent reduction shall be calculated according to the procedures specified in paragraphs (g)(2)(iii)(B)(*1*) through (g)(2)(iii)(B)(*3*) of this section.

(C) If a recovery device was added as part of a pollution prevention project initiated after November 15, 1990, $ECPV2_{iBASE}=ECPV2_{iu}$, where $ECPV2_{iu}$ is calculated according to paragraph (h)(2)(iii)(A)(*3*) of this section.

(3) Emissions from continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) shall be determined as follows:

(i) Emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source if the applicable standard had been applied to the uncontrolled emissions ($ECPVS1_{jstd}$) shall be calculated according to paragraph (g)(3)(ii) of this section.

(ii) Actual emissions from Group 1 continuous process vents located in the collection of process sections j within the affected source controlled to a level more stringent than the applicable standard ($ECPVS1_{jACTUAL}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EF_{std} in Equation 31 of this subpart. Further, $ECPVS1_{jACTUAL}$ for continuous process vents subject to § 63.1316(c)(1) controlled in accordance with § 63.1316(c)(1)(iii) shall be calculated using the procedures in paragraph

(h)(2)(ii) of this section for individual continuous process vents and then summing said emissions to get $ECPVS1_{jACTUAL}$, except that the sampling site shall be after recovery devices installed as part of normal operation; before any add-on control devices (i.e., those required by regulation); and prior to discharge to the atmosphere.

(iii) Actual emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source ($ECPVS2_{jACTUAL}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, shall be used as EF_{std} in Equation 31 of this subpart.

(iv) Emissions from Group 2 continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections j within the affected source at baseline ($ECPVS2_{jBASE}$) shall be calculated using the procedures in paragraphs (g)(3)(ii)(A) and (g)(3)(ii)(B) of this section, except that the actual emission level, Mg organic HAP/Mg of product, at baseline shall be used as EF_{std} in Equation 31 of this subpart.

(4)(i) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(h)(3).

(ii) Actual emissions from Group 1 storage vessels at an existing affected source producing ASA/AMSAN subject to § 63.1314(c) using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction shall be calculated using the procedures specified in § 63.150(h)(3)(ii).

(5) Emissions from wastewater streams shall be calculated using the procedures specified in § 63.150(h)(5).

(6) Emissions from batch process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 batch process vents ($EBPV1_{iu}$) shall be calculated using the procedures § 63.1323(b).

(ii) Actual emissions from Group 1 batch process vents controlled to a level more stringent than the reference control technology ($EBPV1_{iACTUAL}$) shall be calculated using Equation 40 of this subpart, where percent reduction is for the batch cycle.

$$EBPV1_{iACTUAL} = EBPV1_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 40]}$$

(A) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.1325(c)(2).

(B) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(c)(2)(i) through (c)(2)(iii).

(C) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 batch process vents ($EBPV2_{iACTUAL}$) shall be calculated using Equation 41 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBPV2_{iu}$ shall be calculated using the procedures specified in § 63.1323(b).

$$EBPV2_{iACTUAL} = EBPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 41]}$$

(iv) Emissions from Group 2 batch process vents at baseline ($EBPV2_{iBASE}$) shall be calculated as follows:

(A) If the batch process vent was uncontrolled on November 15, 1990, $EBPV2_{iBASE}$=$EBPV2_{iu}$ and shall be calculated using the procedures specified in § 63.1323(b).

(B) If the batch process vent was controlled on November 15, 1990, use Equation 42 of this subpart and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section. $EBPV2_{iu}$ shall be calculated using the procedures specified in § 63.1323(b).

$$EBPV2_{iBASE} = EBPV2_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 42]}$$

(7) Emissions from aggregate batch vent streams shall be determined as follows:

(i) Uncontrolled emissions from Group 1 aggregate batch vent streams ($EABV1_{iu}$) shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(ii) Actual emissions from Group 1 aggregate batch vent streams controlled to a level more stringent than the reference control technology ($EABV1_{iACTUAL}$) shall be calculated using Equation 43 of this subpart.

$$EABV1_{iACTUAL} = EABV1_{iu}\left(1 - \frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 43]}$$

(A) The percent reduction for control devices shall be determined according to the procedures in § 63.1325(e).

(B) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 aggregate batch vent streams ($EABV2_{iACTUAL}$) shall be calculated using Equation 44 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iACTUAL} = EABV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 44]}$$

(iv) Emissions from Group 2 aggregate batch vent streams at baseline shall be calculated as follows:

(A) If the aggregate batch vent stream was uncontrolled on November 15, 1990, $EABV2_{iBASE}=EABV2_{iu}$ and shall be calculated according to the procedures and equation for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream was controlled on November 15, 1990, use Equation 45 of this subpart and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section. $EABV2_{iu}$ shall be calculated according to the equations and procedures for $EABV_{iu}$ in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV2_{iBASE} = EABV2_{iu}\left(1-\frac{\text{Percent reduction}}{100\%}\right) \quad \text{[Eq. 45]}$$

(i) The following procedures shall be followed to establish nominal efficiencies for emission controls for storage vessels, continuous process vents, and process wastewater streams. The procedures in paragraphs (i)(1) through (i)(6) of this section shall be followed for control technologies that are different in use or design from the reference control technologies and achieve greater percent reductions than the percent efficiencies assigned to the reference control technologies in § 63.111.

(1) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology, and the different control technology will be used in more than three applications at a single plant-site, the owner or operator shall submit the information specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section to the Director of the EPA Office of Air Quality Planning and Standards in writing:

(i) Emission stream characteristics of each emission point to which the control technology is or will be applied including the kind of emission point, flow, organic HAP concentration, and all other stream characteristics necessary to design the control technology or determine its performance.

(ii) Description of the control technology including design specifications.

(iii) Documentation demonstrating to the Administrator's satisfaction the control efficiency of the control technology. This may include performance test data collected using an appropriate EPA Method or any other method validated according to Method 301 of appendix A of this part. If it is infeasible to obtain test data, documentation may include a design evaluation and calculations. The engineering basis of the calculation procedures and all inputs and assumptions made in the calculations shall be documented.

(iv) A description of the parameter or parameters to be monitored to ensure that the control technology will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) The Administrator shall determine within 120 operating days whether an application presents sufficient information to determine nominal efficiency. The Administrator reserves the right to request specific data in addition to the items listed in paragraph (i)(1) of this section.

(3) The Administrator shall determine within 120 operating days of the submittal of sufficient data whether a control technology shall have a nominal efficiency and the level of that nominal efficiency. If, in the Administrator's judgment, the control technology achieves a level of emission reduction greater than the reference control technology for a particular kind of emission point, the Administrator will publish a Federal Register notice establishing a nominal efficiency for the control technology.

(4) The Administrator may grant permission to take emission credits for use of the control technology. The Administrator may also impose requirements that may be necessary to ensure operation and maintenance to achieve the specified nominal efficiency.

(5) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology and the different control technology will be used in no more than three applications at a single plant site, the information listed in paragraphs (i)(1)(i) through (i)(1)(iv) of this section can be submitted to the permitting authority for the affected source for approval instead of the Administrator.

(i) In these instances, use and conditions for use of the control technology can be approved by the permitting authority as part of an operating permit application or modification. The permitting authority shall follow the procedures specified in paragraphs (i)(2) through (i)(4) of this section except that, in these instances, a Federal Register notice is not required to establish the nominal efficiency for the different technology.

(ii) If, in reviewing the application, the permitting authority believes the control technology has broad applicability for use by other affected sources, the permitting authority shall submit the information provided in the application to the Director of the EPA Office of Air Quality Planning and Standards. The Administrator shall

review the technology for broad applicability and may publish a Federal Register notice; however, this review shall not affect the permitting authority's approval of the nominal efficiency of the control technology for the specific application.

(6) If, in reviewing an application for a control technology for an emission point, the Administrator or permitting authority determines the control technology is not different in use or design from the reference control technology, the Administrator or permitting authority shall deny the application.

(j) The following procedures shall be used for calculating the efficiency (percent reduction) of pollution prevention measures for storage vessels, continuous process vents, batch process vents, aggregate batch vent streams, and wastewater streams:

(1) A pollution prevention measure is any practice that meets the criteria of paragraphs (j)(1)(i) and (j)(1)(ii) of this section.

(i) A pollution prevention measure is any practice that results in a lesser quantity of organic HAP emissions per unit of product released to the atmosphere prior to out-of-process recycling, treatment, or control of emissions, while the same product is produced.

(ii) Pollution prevention measures may include: substitution of feedstocks that reduce organic HAP emissions; alterations to the production process to reduce the volume of materials released to the environment; equipment modifications; housekeeping measures; and in-process recycling that returns waste materials directly to production as raw materials. Production cutbacks do not qualify as pollution prevention.

(2) The emission reduction efficiency of pollution prevention measures implemented after November 15, 1990, can be used in calculating the actual emissions from an emission point in the debit and credit equations in paragraphs (g) and (h) of this section.

(i) For pollution prevention measures, the percent reduction used in the equations in paragraphs (g)(2) through (g)(7) of this section and paragraphs (h)(2) through (h)(7) of this section is the percent difference between the monthly organic HAP emissions for each emission point after the pollution prevention measure for the most recent month versus monthly emissions from the same emission point before the pollution prevention measure, adjusted by the volume of product produced during the two monthly periods.

(ii) Equation 46 of this subpart shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = \frac{E_B - \frac{(E_{pp})(P_B)}{P_{pp}}}{E_B} 100\% \qquad \text{[Eq. 46]}$$

where:

Percent reduction=Efficiency of pollution prevention measure (percent organic HAP reduction).

E_B=Monthly emissions before the pollution prevention measure, megagrams per month, determined as specified in paragraphs (j)(2)(ii)(A), (j)(2)(ii)(B), and (j)(2)(ii)(C) of this section.

E_{pp}=Monthly emissions after the pollution prevention measure, megagrams per month, as determined for the most recent month, determined as specified in either paragraphs (j)(2)(ii)(D) or (j)(2)(ii)(E) of this section.

P_B=Monthly production before the pollution prevention measure, megagrams per month, during the same period over which E_B is calculated.

P_{pp}=Monthly production after the pollution prevention measure, megagrams per month, as determined for the most recent month.

(A) The monthly emissions before the pollution prevention measure, E_B, shall be determined in a manner consistent with the equations and procedures in paragraphs (g)(2) and (g)(3) of this section for continuous process vents, paragraph (g)(4) of this section for storage vessels, paragraph (g)(6) of this section for batch process vents, and paragraph (g)(7) of this section for aggregate batch vent streams.

(B) For wastewater, E_B shall be calculated using Equation 47 of this subpart.

$$E_B = \sum_{i=1}^{n} \left[\left(6.0 * 10^{-8}\right) Q_{Bi} \, H_{Bi} \sum_{m=1}^{s} Fe_m \, HAP_{Bim} \right] \qquad \text{[Eq. 47]}$$

where:

n=Number of wastewater streams.

Q_{Bi}=Average flow rate for wastewater stream i before the pollution prevention measure, defined and determined according to § 63.144(c)(3), liters per minute, before implementation of the pollution prevention measure.

H_{Bi}=Number of hours per month that wastewater stream i was discharged before the pollution prevention measure, hours per month.

s=Total number of organic HAP in wastewater stream i.

Fe_m=Fraction emitted of organic HAP m in wastewater from Table 9 of subpart G of this part, dimensionless.

HAP_{Bim}=Average concentration of organic HAP m in wastewater stream i, defined and determined according to paragraph (g)(5)(i) of this section, before the pollution prevention measure, parts per million by weight, as measured before the implementation of the pollution measure.

(C) If the pollution prevention measure was implemented prior to September 12, 1996 records may be used to determine E_B.

(D) The monthly emissions after the pollution prevention measure, E_{pp}, may be determined during a performance test or by a design evaluation and documented engineering calculations. Once an emissions-to-production ratio has been established, the ratio can be

used to estimate monthly emissions from monthly production records.

(E) For wastewater, E_{pp} shall be calculated using Equation 48 of this subpart and n, Q_{ppi}, H_{ppi}, s, Fe_m, and HAP_{ppim} are defined and determined as described in paragraph (j)(2)(ii)(B) of this section, except that Q_{ppi}, H_{ppi}, and HAP_{ppim} shall be determined after the pollution prevention measure has been implemented.

$$E_{pp} = \sum_{i=1}^{n}\left[\left(6.0*10^{-8}\right)Q_{ppi}\ H_{ppi}\sum_{m=1}^{s}Fe_m\ HAP_{ppim}\right] \qquad \text{[Eq. 48]}$$

(iii) All equations, calculations, test procedures, test results, and other information used to determine the percent reduction achieved by a pollution prevention measure for each emission point shall be fully documented.

(iv) The same pollution prevention measure may reduce emissions from multiple emission points. In such cases, the percent reduction in emissions for each emission point must be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(7) of this section used to calculate credits for emission points controlled more stringently than the reference control technology, the nominal efficiency of a pollution prevention measure is equivalent to the percent reduction of the pollution prevention measure. When a pollution prevention measure is used, the owner or operator of an affected source is not required to apply to the Administrator for a nominal efficiency and is not subject to paragraph (i) of this section.

(k) The owner or operator must demonstrate that the emissions from the emission points proposed to be included in the emissions average will not result in greater hazard or, at the option of the Administrator, greater risk to human health or the environment than if the emission points were controlled according to the provisions in §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the Administrator.

(i) The Administrator may require owners and operators to use specific methodologies and procedures for making a hazard or risk determination.

(ii) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Administrator makes available for use.

(2) Owners and operators shall provide documentation demonstrating the hazard or risk equivalency of their proposed emissions average in their operating permit application or in their Emissions Averaging Plan if an operating permit application has not yet been submitted.

(3) An Emissions Averaging Plan that does not demonstrate hazard or risk equivalency to the satisfaction of the Administrator shall not be approved. The Administrator may require such adjustments to the Emissions Averaging Plan as are necessary in order to ensure that the emissions average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330.

(4) A hazard or risk equivalency demonstration must:

(i) Be a quantitative, bona fide chemical hazard or risk assessment;

(ii) Account for differences in chemical hazard or risk to human health or the environment; and

(iii) Meet any requirements set by the Administrator for such demonstrations.

(l) For periods of parameter monitoring excursions, an owner or operator may request that the provisions of paragraphs (l)(1) through (l)(4) of this section be followed instead of the procedures in paragraphs (f)(3)(i) and (f)(3)(ii) of this section.

(1) The owner or operator shall notify the Administrator of monitoring excursions in the Periodic Reports as required in § 63.1335(e)(6).

(2) The owner or operator shall demonstrate that other types of monitoring data or engineering calculations are appropriate to establish that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits. This demonstration shall be made to the Administrator's satisfaction, and the Administrator may establish procedures of demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other type of monitoring data or engineering calculations to be used to demonstrate that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits.

(4) The Administrator may assign full or partial credit and debits upon review of the information provided.

(m) For each emission point included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for Group 1 emission points complying with §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, and 63.1330, as applicable. The specific requirements for continuous process vents, batch process vents, aggregate batch vent streams, storage vessels, and wastewater operations that are included in an emissions average for an affected source are identified in paragraphs (m)(1) through (m)(7) of this section.

(1) For each continuous process vent subject to § 63.1315 equipped with a flare, incinerator, boiler, or process heater, as appropriate to the control technique:

(i) Determine whether the continuous process vent is Group 1 or Group 2 according to the procedures specified in § 63.1315;

(ii) Conduct initial performance tests to determine percent reduction according to the procedures specified in § 63.1315; and

(iii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(2) For each continuous process vent subject to § 63.1315 equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device, as appropriate to the control technique:

(i) Determine the flow rate, organic HAP concentration, and TRE index value according to the procedures specified in § 63.1315; and

(ii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1315.

(3) For continuous process vents subject to § 63.1316(b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1):

(i) Determine whether the emissions from the continuous process vents subject to § 63.1316(b)(1)(i) located in the collection of material recovery sections within the affected source are greater than, equal to, or less than 0.12 kg organic HAP per Mg of product according to the procedures specified in § 63.1318(b);

(ii) Determine the emission rate, ER_{HAP}, for each collection of process sections within the affected source according to the procedures specified in § 63.1318(b); and

(iv) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in § 63.1317, § 63.1319, § 63.1320.

(4) For each storage vessel controlled with an internal floating roof, external roof, or a closed vent system with a control device, as appropriate to the control technique:

(i) Perform the monitoring or inspection procedures according to the procedures specified in § 63.1314;

(ii) Perform the reporting and recordkeeping procedures according to the procedures specified in § 63.1314; and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan according to the procedures specified in § 63.1314.

(5) For wastewater emission points, as appropriate to the control technique:

(i) For wastewater treatment processes, conduct tests according to the procedures specified in § 63.1330;

(ii) Conduct inspections and monitoring according to the procedures specified in § 63.1330;

(iii) Implement a recordkeeping program according to the procedures specified in § 63.1330; and

(iv) Implement a reporting program according to the procedures specified in § 63.1330.

(6) For each batch process vent and aggregate batch vent stream equipped with a control device, as appropriate to the control technique:

(i) Determine whether the batch process vent or aggregate batch vent stream is Group 1 or Group 2 according to the procedures in § 63.1323;

(ii) Conduct performance tests according to the procedures specified in § 63.1325;

(iii) Conduct monitoring according to the procedures specified in § 63.1324; and

(iv) Perform the recordkeeping and reporting procedures according to the procedures specified in §§ 63.1326 and 63.1327.

(7) If an emission point in an emissions average is controlled using a pollution prevention measure or a device or technique for which no monitoring parameters or inspection procedures are required by §§ 63.1314, 63.1315, 63.1316 through 63.1320, 63.1321, or 63.1330, the owner or operator shall submit the information specified in § 63.1335(f) for alternate monitoring parameters or inspection procedures in the Emissions Averaging Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for 5 years.

(o) Precompliance Reports, Emission Averaging Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.1335.

§ 63.1333 Additional test methods and procedures.

(a) Performance testing shall be conducted in accordance with § 63.7(a)(3), (d), (e), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (a)(4) of this section and the additions specified in paragraphs (b) through (d) of this section. Sections 63.1314 through 63.1330 also contain specific testing requirements.

(1) Performance tests shall be conducted according to the provisions of § 63.7(e), except that performance tests shall be conducted at maximum representative operating conditions for the process.

(2) References in § 63.7(g) to the Notification of Compliance Status requirements in § 63.7(h) shall refer to the requirements in § 63.1335(e)(5).

(3) Because the site-specific test plans in § 63.7(c)(3) are not required, § 63.7(h)(4)(ii) is not applicable.

(4) 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 during the test.

(b) Each owner or operator of an existing affected source producing MBS complying with § 63.1315(b)(2) shall determine compliance with the mass emission per mass product standard by using Equation 49 of this subpart.

$$ER_{MBS} = \frac{\sum_{i=1}^{n} E_i}{PP_M} \qquad \text{[Eq. 49]}$$

where:

ER_{MBS}=Emission rate of organic HAP or TOC from continuous process vents, kg/Mg product.

E_i=Emission rate of organic HAP or TOC from continuous process vent i as calculated using the procedures specified in § 63.116(c)(4), kg/month.

PP_M=Amount of polymer produced in one month as determined by the procedures specified in § 63.1318(b)(1)(ii), Mg/month.

n=Number of continuous process vents.

When determining E_i, when the provisions of § 63.116(c)(4) specify that Method 18, 40 CFR part 60, appendix A, shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A, shall comply with paragraphs (b)(1) and (b)(2) of this section.

(1) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume.

(2) The use of Method 25A, 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.

(c) The owner or operator of an affected source, complying with § 63.1322(a)(3) shall determine compliance with the percent reduction requirement using Equation 50 of this subpart.

$$PR = \frac{\left[H_j \sum_{j=1}^{n} (E_i - E_o)j\right] + \sum_{k=1}^{n} H_k E_{ku} + \sum_{l=1}^{n} AE_{unc}}{\left(H_j \sum_{j=1}^{n} E_i\right) + \sum_{k=1}^{n} H_k E_{ku} + \sum_{l=1}^{n} AE_{unc}} (100) \qquad \text{[Eq. 50]}$$

where:

PR=Percent reduction

H_j=Number of operating hours in a year for control device j.

E_i=Mass rate of TOC or total organic HAP at the inlet of control device

j, calculated as specified in § 63.1325(f), kg/hr. This value includes all continuous process vents, batch process vents, and aggregate batch vent streams routed to control device j.

E_o=Mass rate of TOC or total organic HAP at the outlet of control device j, calculated as specified in § 63.1325(f), kg/hr.

H_k=Number of hours of operation during which positive flow is present in uncontrolled continuous process vent or aggregate batch vent stream k, hr/yr.

E_{ku}=Mass rate of TOC or total organic HAP of uncontrolled continuous process vent or aggregate batch vent stream k, calculated as specified in § 63.1325(f)(4), kg/hr.

AE_{unc}=Mass rate of TOC or total organic HAP of uncontrolled batch process vent l, calculated as specified in § 63.1325(f)(4), kg/yr.

n=Number of control devices, uncontrolled continuous process vents and aggregate batch vent streams, and uncontrolled batch process vents. The value of n is not necessarily the same for these three items.

(d) Data shall be reduced in accordance with the EPA approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

§ 63.1334 Parameter monitoring levels and excursions.

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter using the procedures specified in paragraph (b), (c), or (d) of this section. The procedures specified in paragraph (b) of this section have been approved by the Administrator. The procedures in paragraphs (c) and (d) of this section have not been approved by the Administrator and determination of the parameter monitoring level using the procedures in paragraph (c) or (d) of this section is subject to review and approval by the Administrator. Said determination and supporting documentation shall be included in the Precompliance Report, specified in § 63.1335(e)(3).

(1) The owner or operator shall operate control and recovery devices such that monitored parameters remain above the minimum established level or below the maximum established level.

(2) As specified in § 63.1335(e)(5) and § 63.1335(e)(8), all established levels, along with their supporting documentation and the definition of an operating day, shall be approved as part of and incorporated into the Notification of Compliance Status or operating permit, respectively.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of subpart A, F, or G of this part.

(b) *Establishment of parameter monitoring levels based on performance tests.* The procedures specified in paragraphs (b)(1) through (b)(3) of this section shall be used, as applicable, in establishing parameter monitoring levels. Level(s) established under this paragraph (b) shall be based on the parameter values measured during the performance test.

(1) *Storage tanks and wastewater.* The maximum and/or minimum monitoring levels shall be based on the parameter values measured during the performance test, supplemented, if desired, by engineering assessments and/or manufacturer's recommendations.

(2) *Continuous process vents.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(3) *Batch process vents.* The monitoring level(s) shall be established using the procedures specified in paragraphs (b)(3)(i) through (b)(3)(ii) of this section, as appropriate. The procedures specified in this paragraph (b)(3) may only be used if the batch emission episodes, or portions thereof, selected to be controlled were tested, and monitoring data were collected, during the entire period in which emissions were vented to the control device, as specified in § 63.1325(c)(1)(i). If the owner or operator chose to test only a portion of the batch emission episode, or portion thereof, selected to be controlled, as specified in § 63.1325(c)(1)(i)(A), the procedures in paragraph (c) of this section must be used.

(i) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(A) During initial compliance testing, the appropriate parameter shall be monitored continuously at all times when batch emission episodes, or portions thereof, selected to be controlled are vented to the control device.

(B) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(C) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(D) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled.

(E) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values measured during each batch emission episode, or portion thereof, selected to be controlled.

(ii) Instead of establishing a single level for the batch cycle, as described in paragraph (b)(3)(i) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraphs (b)(3)(i)(A) and (b)(3)(i)(B) of this section.

(iii) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.1335(e)(5). Said definition shall include an identification of each batch emission episode and the information required to determine parameter monitoring compliance for partial batch cycles (i.e., when part of a batch cycle is accomplished during two different operating days).

(4) *Aggregate batch vent streams.* For aggregate batch vent streams, the monitoring level shall be established in accordance with paragraph (b)(2) of this section.

(c) *Establishment of parameter monitoring levels based on performance tests, engineering assessments, and/or manufacturer's recommendations.* As required in paragraph (a) of this section,

the information specified in paragraphs (c)(2) and (c)(3) of this section shall be provided in the Precompliance Report.

(1) Parameter monitoring levels established under this paragraph (c) shall be based on the parameter values measured during the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values.

(2) The specific level of the monitored parameter(s) for each emission point.

(3) The rationale for the specific level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control or recovery device.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* If a performance test is not required by this subpart for a control or recovery device, the maximum or minimum level may be based solely on engineering assessments and/or manufacturer's recommendations. As required in paragraph (a) of this section, the determined level and all supporting documentation shall be provided in the Precompliance Report.

(e) *Compliance determinations.* The provisions of this paragraph (e) apply only to emission points and control or recovery devices for which continuous monitoring is required under this subpart.

(1) The parameter monitoring data for storage vessels, process vents, process wastewater streams, and emission points included in emissions averages that are required to perform continuous monitoring shall be used to determine compliance for the monitored control or recovery devices.

(2) Except as provided in paragraphs (e)(3) and (g) of this section, for each excursion, as defined in paragraph (f) of this section, the owner or operator shall be deemed out of compliance with the provisions of this subpart.

(3) If the daily average value of a monitored parameter is above the maximum level or below the minimum level established, or if monitoring data cannot be collected during monitoring device calibration check or monitoring device malfunction, but the affected source is operated during the periods of start-up, shutdown, or malfunction in accordance with the affected source's Start-up, Shutdown, and Malfunction Plan, then the event shall not be considered a monitoring parameter excursion.

(f) *Parameter monitoring excursion definitions.*

(1) For storage vessels, continuous process vents, aggregate batch vent streams, and wastewater streams, an excursion means any of the three cases listed in paragraphs (f)(1)(i) through (f)(1)(iii) of this section. For a control or recovery device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in paragraphs (f)(1)(i) through (f)(1)(iii) of this section, this is considered a single excursion for the control or recovery device.

(i) When the daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

(ii) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in paragraph (f)(1)(iv) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(iii) When the period of control or recovery device operation is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (f)(1)(iv) of this section.

(iv) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (f)(1)(ii) and (f)(1)(iii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.1335(g)(3), monitoring data are insufficient to calculate a valid hour of data if there are less than four data measurements made during the hour.

(2) For batch process vents, an excursion means one of the two cases listed in paragraphs (f)(2)(i) and (f)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in either paragraph (f)(2)(i) or (f)(2)(ii) of this section, this is considered a single excursion for the control device.

(i) When the batch cycle daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters.

(ii) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the 15-minute periods when batch emission episodes, or portions thereof, selected to be controlled are being vented to the control device during the operating day.

(g) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (g)(1) through (g)(6) of this section. This paragraph (g) applies to affected sources required to submit Periodic Reports semiannually or quarterly. The first semiannual period is the 6-month period starting the date the Notification of Compliance Status is due.

(1) For the first semiannual period—six excused excursions.

(2) For the second semiannual period—five excused excursions.

(3) For the third semiannual period—four excused excursions.

(4) For the fourth semiannual period—three excused excursions.

(5) For the fifth semiannual period—two excused excursions.

(6) For the sixth and all subsequent semiannual periods—one excused excursion.

§ 63.1335 General recordkeeping and reporting provisions.

(a) *Data retention.* Each owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, unless otherwise specified in this subpart.

(b) *Requirements of subpart A of this part.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in subpart A of this part as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Start-up, shutdown, and malfunction plan.* The owner or operator of an affected source shall develop and implement a written start-up, shutdown, and malfunction plan as specified in § 63.6(e)(3). This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of start-up, shutdown, and malfunction and a program for corrective action for malfunctioning process and air pollution control equipment used to comply with this subpart. The affected source shall keep this plan onsite and shall incorporate it by reference into their operating permit. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

(i) *Records of start-up, shutdown, and malfunction.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(D) of this section.

(A) Records of the occurrence and duration of each malfunction of air pollution control equipment or continuous monitoring systems used to comply with this subpart.

(B) For each start-up, shutdown, or malfunction, a statement that the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed; alternatively, documentation of any actions taken that are not consistent with the plan.

(C) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks and maintenance of continuous monitoring systems that are specified in the manufacturer's instructions.

(D) Records specified in paragraphs (b)(1)(i)(B) and (b)(1)(i)(C) of this section are not required if they pertain solely to Group 2 emission points that are not included in an emissions average or to Group 2 continuous process vents subject to § 63.1315(a) with a total resource effectiveness value greater than 4.0 or, for Group 2 continuous process vents subject to § 63.1315(b), with a total resource effectiveness value greater than 6.7.

(ii) *Reports of start-up, shutdown, and malfunction.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of the schedule specified in § 63.10(d)(5)(i). Said reports shall include the information specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy.

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 regarding construction and reconstruction, excluding the provisions specified in § 63.5 (d)(1)(ii)(H), (d)(2), and (d)(3)(ii).

(c) *Requirements of subpart H of this part.* Owners or operators of affected sources shall comply with the reporting and recordkeeping requirements in subpart H of this part, except as specified in § 63.1331.

(d) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(8) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) or (h) of this section. Documentation requirements are specified in paragraphs (d)(9) and (d)(10) of this section.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values. Owners or operators of batch process vents must record each measured data value.

(3) Daily average (or batch cycle daily average) values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (d)(3)(ii) of this section, except as specified in paragraph (d)(6) of this section.

(i) The daily average value or batch cycle daily average shall be calculated as the average of all parameter values recorded during the operating day. As specified in § 63.1326(e)(2)(i), only parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has chosen to control shall be used to calculate the average. The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the period the owner or operator specifies in the operating permit or the Notification of Compliance Status. It may be from midnight to midnight or another 24-hour period.

(4) *Records required when out of compliance.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is below the minimum level or above the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall retain the data recorded that operating day under paragraph (d)(2) of this section.

(5) *Records required when in compliance for daily average value or batch cycle daily average value.* If the daily average (or batch cycle daily average) value of a monitored parameter for a given operating day is above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator shall either:

(i) Retain block average values for 1 hour or shorter periods for that operating day; or

(ii) Retain the data recorded in paragraph (d)(2) of this section.

(6) *Records required when all recorded values are in compliance.* If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day. For these operating days, the records required in paragraph (d)(5) of this section shall also be retained for 5 years.

(7) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods.

(8) In addition to the periods specified in paragraph (d)(7) of this section, records shall be kept of the times and durations of any other periods during process operation or control device operation when monitors are not operating. For batch process vents, this paragraph (d)(8) only applies during batch emission episodes, or portions thereof, that the owner or operator has selected to control.

(9) For each TPPU that is not part of the affected source because it does not use as a reactant or process solvent, or produce as a by-product or co-product any organic HAP, the owner or operator shall maintain the documentation specified in § 63.1310(b)(1).

(10) For each flexible operation unit in which the primary product is determined to be something other than a thermoplastic product, the owner or operator shall maintain the documentation specified in § 63.1310(f)(6).

(e) *Reporting and notification.*

(1) In addition to the reports and notifications required by subparts A and H of this part, as specified in this

subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(8) of this section, as applicable.

(2) All reports required under this subpart shall be sent to the Administrator at the addresses listed in § 63.13. If acceptable to both the Administrator and the owner or operator of an affected source, reports may be submitted on electronic media.

(3) *Precompliance Report.* Affected sources requesting an extension for compliance, or requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls, shall submit a Precompliance Report according to the schedule described in paragraph (e)(3)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(3)(ii) through (e)(3)(vi) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. For new affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section.

(ii) A request for an extension for compliance must be submitted in the Precompliance Report, if it has not been submitted to the operating permit authority as part of the operating permit application. The request for a compliance extension will include the data outlined in § 63.6(i)(6)(i) (A), (B), and (D), as required in § 63.1311(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in subpart G of this part or seeks to comply by monitoring a different parameter than those specified in this subpart or in subpart G of this part.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the information requested in paragraph (e)(3)(iv)(A) or (e)(3)(iv)(B) of this section must be submitted in the Precompliance Report.

(A) The owner or operator must submit notification of the intent to use the provisions specified in paragraph (g) of this section; or

(B) The owner or operator must submit a request for approval to use alternative continuous monitoring and recordkeeping provisions as specified in paragraph (g) of this section.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart. Alternative controls must be deemed by the Administrator to be equivalent to the controls required by the standard, under the procedures outlined in § 63.6(g).

(vi) If an owner or operator demonstrates that the emissions estimation equations contained in § 63.1323(b) are inappropriate as specified in § 63.1323(b)(6)(ii)(B), the information required by § 63.1323(b)(6)(ii)(D) shall be submitted.

(vii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in § 63.1334 (c) or (d), the information specified by § 63.1334 (c) or (d), as appropriate.

(4) *Emissions Averaging Plan.* For all existing affected sources using emissions averaging, an Emissions Averaging Plan shall be submitted for approval according to the schedule and procedures described in paragraph (e)(4)(i) of this section. The Emissions Averaging Plan shall contain the information specified in paragraph (e)(4)(ii) of this section, unless the information required in paragraph (e)(4)(ii) of this section is submitted with an operating permit application. An owner or operator of an affected source who submits an operating permit application instead of an Emissions Averaging Plan shall submit the information specified in paragraph (e)(8) of this section. In addition, a supplement to the Emissions Averaging Plan, as required under paragraph (e)(4)(iii) of this section, is to be submitted whenever alternative controls or operating scenarios may be used to comply with this subpart. Updates to the Emissions Averaging Plan shall be submitted in accordance with paragraph (e)(4)(iv) of this section.

(i) *Submittal and approval.* The Emissions Averaging Plan shall be submitted no later than 18 months prior to the compliance date, and it is subject to Administrator approval. The Administrator shall determine within 120 operating days whether the Emissions Averaging Plan submitted presents sufficient information. The Administrator shall either approve the Emissions Averaging Plan, request changes, or request that the owner or operator submit additional information. Once the Administrator receives sufficient information, the Administrator shall approve, disapprove, or request changes to the plan within 120 operating days.

(ii) *Information required.* The Emissions Averaging Plan shall contain the information listed in paragraphs (e)(4)(ii)(A) through (e)(4)(ii)(K) of this section for all emission points included in an emissions average.

(A) The required information shall include the identification of all emission points in the planned emissions average and, where applicable, notation of whether each storage vessel, continuous process vent, batch process vent, aggregate batch vent stream, and process wastewater stream is a Group 1 or Group 2 emission point, as defined in § 63.1312 or as designated under § 63.1332 (c)(3) through (c)(5).

(B) The required information shall include the projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.1332. The projected credits must be greater than or equal to the projected debits, as required under § 63.1332(e)(3).

(C) The required information shall include the specific control technology or pollution prevention measure that will be used for each emission point included in the average and date of application or expected date of application.

(D) The required information shall include the specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.1332(j)(1) must be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator must identify each of these emission points.

(E) The required information shall include a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.1332 (m), (n), and (o) that are applicable to each emission point in the emissions average will be implemented beginning on or before the date of compliance.

(F) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(F)(*1*) through (e)(4)(ii)(F)(*5*) of this section for each storage vessel and continuous process vent subject to § 63.1315 included in the average.

(*1*) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Where TRE index value is used for continuous

process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) and the resulting TRE index value shall be submitted.

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(*3*) The required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(*4*) The required documentation shall include the anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.1332(i) shall be followed to apply for a nominal efficiency.

(*5*) The required documentation shall include the operating plan required by § 63.1314, as specified in § 63.122 (a)(2) and (b) for each storage vessel controlled with a closed-vent system with a control device other than a flare.

(G) The information specified in paragraph (f) of this section shall be included in the Emissions Averaging Plan for:

(*1*) Each continuous process vent subject to § 63.1315 controlled by a pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114; and

(*2*) Each storage vessel controlled by pollution prevention or a control technique other than an internal or external floating roof or a closed vent system with a control device.

(H) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(H)(*1*) through (e)(4)(ii)(H)(*5*) of this section for each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) included in the average.

(*1*) For continuous process vents subject to § 63.1316(b)(1)(i), the required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Continuous process vents subject to § 63.1316 (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) are considered Group 1 emission points for purposes of emissions averaging, as specified in § 63.1332(c)(5).

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(*3*) For process sections generating debits or credits by comparing actual emissions expressed as kg HAP emissions per Mg of product to the applicable standard, the required documentation shall include the actual emission level expressed as kg HAP emissions per Mg of product.

(*4*) For process sections using combustion control devices, the required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(*5*) For process sections using combustion control devices, the required documentation shall include the anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.1332(i) shall be followed to apply for a nominal efficiency.

(I) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from each collection of continuous process vents located in a process section within the affected source subject to § 63.1316 (b)(1)(i), (b)(1)(ii), (b)(2)(i), (b)(2)(ii), or (c)(1) and for which no monitoring parameters or inspection procedures are specified in § 63.114, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(J) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(J)(*1*) through (e)(4)(ii)(J)(*3*) of this section for each batch process vent and aggregate batch vent stream included in the average.

(*1*) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2.

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(*3*) For batch process vents, the required documentation shall include the estimated percent reduction for the batch cycle. For aggregate batch vent streams, the required documentation shall include the estimated percent reduction achieved on a continuous basis.

(K) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from batch process vents or aggregate batch vent streams and for which no monitoring parameters or inspection procedures are specified in § 63.1324, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(L) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(L)(*1*) through (e)(4)(ii)(L)(*4*) of this section for each process wastewater stream included in the average.

(*1*) The required documentation shall include the data used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream and the information specified in Table 14b of subpart G of this part for wastewater streams at new and existing affected sources.

(*2*) The required documentation shall include the estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.1332 (g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters must be reported as required by paragraph (e)(4)(iv) of this section.

(*3*) The required documentation shall include the estimated percent reduction if:

(*i*) A control technology that achieves an emission reduction less than or equal to the emission reduction that would otherwise have been achieved by a steam stripper designed to the specifications found in § 63.138(g) is or

will be applied to the wastewater stream;

(*ii*) A control technology achieving less than or equal to 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes; or

(*iii*) A pollution prevention measure is or will be applied.

(*4*) The required documentation shall include the anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.1332(i). A nominal efficiency shall be applied for if:

(*i*) A control technology that achieves an emission reduction greater than the emission reduction that would have been achieved by a steam stripper designed to the specifications found in § 63.138(g), is or will be applied to the wastewater stream; or

(*ii*) A control technology achieving greater than 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes.

(M) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(N) The required information shall include documentation of the data required by § 63.1332(k). The documentation must demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard or, at the option of the Administrator, greater risk to human health or the environment than if the emission points were not included in an emissions average.

(iii) *Supplement to Emissions Averaging Plan.* The owner or operator required to prepare an Emissions Averaging Plan under paragraph (e)(4) of this section shall also prepare a supplement to the Emissions Averaging Plan for any alternative controls or operating scenarios that may be used to achieve compliance.

(iv) *Updates to Emissions Averaging Plan.* The owner or operator of an affected source required to submit an Emissions Averaging Plan under paragraph (e)(4) of this section shall also submit written updates of the Emissions Averaging Plan to the Administrator for approval under the circumstances described in paragraphs (e)(4)(iv)(A) and (e)(4)(iv)(B) of this section unless the relevant information has been included and submitted in an operating permit application or amendment.

(A) The owner or operator who plans to make a change listed in either paragraph (e)(4)(iv)(A)(*1*) or (e)(4)(iv)(A)(*2*) of this section shall submit an Emissions Averaging Plan update at least 120 operating days prior to making the change.

(*1*) An Emissions Averaging Plan update shall be submitted whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.1332 by using a control technique other than that specified in the Emissions Averaging Plan or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Emissions Averaging Plan.

(*2*) An Emissions Averaging Plan update shall be submitted whenever an emission point or a TPPU is added to an existing affected source and is planned to be included in an emissions average, or whenever an emission point not included in the emissions average described in the Emissions Averaging Plan is to be added to an emissions average. The information in paragraph (e)(4) of this section shall be updated to include the additional emission point.

(B) The owner or operator who has made a change as defined in paragraph (e)(4)(iv)(B)(*1*) or (e)(4)(iv)(B)(*2*) of this section shall submit an Emissions Averaging Plan update within 90 operating days after the information regarding the change is known to the affected source. The update may be submitted in the next quarterly periodic report if the change is made after the date the Notification of Compliance Status is due.

(*1*) An Emissions Averaging Plan update shall be submitted whenever a process change is made such that the group status of any emission point in an emissions average changes.

(*2*) An Emissions Averaging Plan update shall be submitted whenever a value of a parameter in the emission credit or debit equations in § 63.1332 (g) or (h) changes such that it is below the minimum or above the maximum established level specified in the Emissions Averaging Plan and causes a decrease in the projected credits or an increase in the projected debits.

(C) The Administrator shall approve or request changes to the Emissions Averaging Plan update within 120 operating days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 operating days after the compliance dates specified in § 63.1311. The notification shall contain the information listed in paragraphs (e)(5)(i) through (e)(5)(viii) of this section.

(i) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, continuous monitoring system performance evaluations, any other information used to demonstrate compliance, and any other information required to be included in the Notification of Compliance Status under § 63.122 for storage vessels, § 63.117 for continuous process vents, § 63.146 for process wastewater, § 63.1316 through § 63.1320 for continuous process vents subject to § 63.1316, § 63.1327 for batch process vents, § 63.1329 for process contact cooling towers, and § 63.1332 for emission points included in an emissions average. In addition, each owner or operator shall comply with paragraph (e)(5)(i)(A) and (e)(5)(i)(B) of this section.

(A) For performance tests, group determinations, and process section applicability determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(5)(i)(B) of this section, for each test method used for a particular kind of emission point. For additional tests performed for the same kind of emission point using the same method, the results and any other required information shall be submitted, but a complete test report is not required.

(B) 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.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.120(d)(3) for storage vessels, § 63.114(e) for continuous process vents, § 63.1324 for batch process vents and aggregate batch vent streams, § 63.143(f) for process wastewater, § 63.1332(m) for emission points in emissions averages,

paragraph (e)(8) or (f) of this section, the Notification of Compliance Status shall contain the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(D) of this section, unless this information has been established and provided in the operating permit.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values or batch cycle daily average values of monitored parameters.

(D) For batch process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in § 63.1325(c)(2) and § 63.1334(b)(3)(iii).

(iii) For emission points included in an emissions average, the Notification of Compliance Status shall contain the values of all parameters needed for input to the emission credit and debit equations in § 63.1332 (g) and (h), calculated or measured according to the procedures in § 63.1332 (g) and (h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified.

(iv) The determination of applicability for flexible operation units as specified in § 63.1310(f)(6).

(v) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in § 63.1310(f)(7).

(vi) The results for each predominant use determination for storage vessels belonging to an affected source subject to this subpart that is made under § 63.1310(g)(6).

(vii) The results for each predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.1310(h)(6).

(viii) For owners or operators of Group 2 batch process vents establishing a batch cycle limitation as specified in § 63.1325(g), the affected source's operating year for purposes of determining compliance with the batch cycle limitation.

(6) *Periodic Reports.* For existing and new affected sources, each owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (e)(6)(xi) of this section.

(i) Except as specified in paragraphs (e)(6)(x) and (e)(6)(xi) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or containing the information in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section, as appropriate, shall be submitted semiannually no later than 60 operating days after the end of each 180 day period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period.

(ii) If none of the compliance exceptions specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that the affected source was in compliance for the preceding 6-month period and no activities specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the preceding 6-month period.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.1314 through 63.1330 for any emission point or process section, Periodic Reports shall include:

(A) All information specified in § 63.122 for storage vessels; §§ 63.117 and 63.118 and § 63.1320 for continuous process vents, as applicable; § 63.1327 for batch process vents and aggregate batch vent streams; § 63.104 for heat exchange systems; and § 63.146 for process wastewater;

(B) The daily average values or batch cycle daily average values of monitored parameters for both excused excursions, as defined in § 63.1334(g), and unexcused excursions, as defined in § 63.1334(f). For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified;

(C) The periods when monitoring data were not collected shall be specified;

(D) The information in paragraphs (e)(6)(iii)(D)(*1*) through (e)(6)(iii)(D)(*3*) of this section, as applicable:

(*1*) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section;

(*2*) Notification if a process change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule, as specified in paragraphs (e)(6)(iii)(D)(*2*)(*i*) and (e)(6)(iii)(D)(*2*)(*ii*) of this section, for emission points that are added or that change from Group 2 to Group 1 as specified in § 63.1310(i)(2)(ii); for continuous process vents under the conditions listed in § 63.1315(a)(12) or § 63.1320(b)(3), as applicable; or for batch process vents under the conditions listed in § 63.1327(b) or § 63.1327(d). This information may be submitted in a separate report, as specified in § 63.1315(a)(12), § 63.1320(b)(3), § 63.1327(b), or § 63.1327(d); and

(*i*) The owner or operator shall submit to the Administrator for approval a compliance schedule and a justification for the schedule.

(*ii*) The Administrator shall approve the compliance schedule or request changes within 120 operating days of receipt of the compliance schedule and justification.

(*3*) Notification if one or more emission point(s) or one or more TPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(*3*)(*i*) through (e)(6)(iii)(D)(*3*)(*iii*) of this section:

(*i*) A description of the addition to the affected source;

(*ii*) Notification of the group status of the additional emission point or all emission points in the TPPU; and

(*iii*) A compliance schedule, as required under paragraph (e)(6)(iii)(D)(*2*) of this section.

(E) The information in paragraph (b)(1)(ii) of this section for reports of start-up, shutdown, and malfunction.

(iv) For each batch process vent with a batch cycle limitation, every second Periodic Report shall include the type and number of batch cycles accomplished during the preceding 12-month period and a statement that the batch process vent is either in or out of compliance with the batch cycle limitation.

(v) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using the same method, results and any other information required shall be submitted, but a complete test report is not required.

(vi) The Periodic Report shall include the results for each change made to a primary product determination for a thermoplastic product made under § 63.1310(f)(6).

(vii) The Periodic Report shall include the results for each change made to a predominant use determination for a storage vessel belonging to an affected source subject to this subpart that is made under § 63.1310(g)(6).

(viii) The Periodic Report shall include the results for each change made to a predominant use determination for recovery operation equipment belonging to an affected source subject to this subpart that is made under § 63.1310(h)(6).

(ix) The Periodic Report required by § 63.1331(a)(5) may be submitted as part of the Periodic Report required by paragraph (e)(6) of this section.

(x) The owner or operator of an affected source shall submit quarterly reports for all emission points included in an emissions average.

(A) The quarterly reports shall be submitted no later than 60 operating days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 150 days after the compliance date.

(B) The quarterly reports shall include the information specified in paragraphs (e)(6)(x)(B)(*1*) through (e)(6)(x)(B)(*7*) of this section for all emission points included in an emissions average.

(*1*) The credits and debits calculated each month during the quarter;

(*2*) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.1332(e)(4);

(*3*) The values of any inputs to the debit and credit equations in § 63.1332(g) and (h) that change from month to month during the quarter or that have changed since the previous quarter;

(*4*) Results of any performance tests conducted during the reporting period including one complete report for each test method used for a particular kind of emission point as described in paragraph (e)(6)(v) of this section;

(*5*) Reports of daily average (or batch cycle daily average) values of monitored parameters for excursions as defined in § 63.1334(f);

(*6*) For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified; and

(*7*) Any other information the affected source is required to report under the operating permit or Emissions Averaging Plan for the affected source.

(C) § 63.1334 shall govern the use of monitoring data to determine compliance for Group 1 and Group 2 emission points included in emissions averages.

(D) Every fourth quarterly report shall include the following:

(*1*) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.1332(e)(3); and

(*2*) A certification of compliance with all the emissions averaging provisions in § 63.1332.

(xi) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in paragraphs (e)(6)(xi)(A) through (e)(6)(xi)(E) of this section.

(A) If requested by the Administrator, the owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point or process section that is not included in an emissions average if either condition in paragraph (e)(6)(xi)(A)(*1*) or (e)(6)(xi)(A)(*2*) of this section is met.

(*1*) An emission point has any excursions, as defined in § 63.1334(f), for a semiannual reporting period.

(*2*) A process section subject to § 63.1316 is out of compliance with its applicable standard.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(xi)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 operating days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year, the owner or operator may return to semiannual reporting for the emission point or process section unless the Administrator requests the owner or operator to continue to submit quarterly reports.

(E) § 63.1334 shall govern the use of monitoring data to determine compliance for Group 1 emission points.

(7) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) through (e)(7)(ii) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.1314 shall be submitted as specified in § 63.122 (h)(1) and (h)(2).

(ii) For owners or operators of affected sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.1332(i) shall be submitted.

(8) *Operating permit.* An owner or operator who submits an operating permit application instead of an Emissions Averaging Plan or a Precompliance Report shall submit the following information with the operating permit application:

(i) The information specified in paragraph (e)(4) of this section for points included in an emissions average;

(ii) The information specified in paragraph (e)(5) of this section, Notification of Compliance Status, as applicable; and

(iii) The information specified in paragraph (e)(3) of this section, Precompliance Report, as applicable.

(f) *Alternative monitoring parameters.* The owner or operator who has been directed by any section of this subpart to set unique monitoring parameters, or who requests approval to monitor a different parameter than those specified in § 63.1314 for storage vessels, § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(3) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery device, control device, 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).

(2) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

(3) The required information shall include a description of the proposed

monitoring, recordkeeping, and reporting system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (f)(3)(ii) of this section is met:

(i) If monitoring and recordkeeping is not continuous; or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the provisions listed in § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, § 63.1314 for storage vessels, or § 63.1330 for wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (g)(4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(3) of this section, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in § 63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily average (or batch cycle daily average) values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the affected source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent control or recovery device operating conditions, considering typical variability of the specific process and control or recovery device operating parameter being monitored.

(3) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once every 15 minutes) but records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once every 15 minutes;

(B) Except for the monitoring of batch process vents, calculate hourly average values each hour during periods of operation;

(C) Record the date and time when monitors are turned off or on;

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident;

(E) Calculate daily average (or batch cycle daily average) values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.1334(f), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain:

(A) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements specified in paragraph (h)(1) or (h)(2) of this section as alternatives to the provisions specified in § 63.1314 for storage vessels, § 63.1315 or 63.1317, as appropriate, for continuous process vents, § 63.1321 for batch process vents and aggregate batch vent streams, or § 63.1330 for wastewater. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section.

(1) The owner or operator may retain only the daily average (or batch cycle daily average) value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, 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 an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) through (h)(1)(ii)(C) of this section. All instances in an operating day constitute a single occurrence.

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

(B) The running average is based on at least six 1-hour periods; and

(C) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(iii) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, 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 an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C). The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.

(B) Annually after initial installation.

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

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (h)(1)(vi)(C) of this section.

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

(B) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (h)(1)(v) 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.

(C) 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 (h)(1) of this section.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average (or batch cycle daily average) value for any operating day when the daily average (or batch cycle daily 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 accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(i) If the owner or operator elects not to retain the daily average (or batch cycle daily 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.

(ii) If, on any operating day after the owner or operator has ceased recording daily average (or batch cycle daily average) values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average (or batch cycle daily average) value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average (or batch cycle daily average) value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(iii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(vi) of this section, for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (h)(1)(iv) 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 start-up, shutdown, or malfunction.

(iv) For purposes of paragraph (h) of this section, an excursion means that the daily average (or batch cycle daily 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 (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section.

(A) The daily average (or batch cycle daily average) value during any start-up, shutdown, or malfunction shall not be considered an excursion for purposes of paragraph (h)(2) of this section, if the owner or operator follows the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3).

(B) An excused excursion, as described in § 63.1334(g), shall not be considered an excursion for purposes of paragraph (h)(2) of this section.

Tables to Subpart JJJ of Part 63

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES

Reference	Applies to subpart JJJ	Comment
63.1(a)(1)	Yes	§ 63.1312 specifies definitions in addition to or that supersede definitions in § 63.2.
63.1(a)(2)–63.1(a)(3)	Yes.	
63.1(a)(4)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(a)(5)	No	Reserved.
63.1(a)(6)–63.1(a)(8)	Yes.	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	No	Subpart JJJ and other cross-referenced subparts specify calendar or operating day.
63.1(a)(11)	Yes.	
63.1(a)(12)–63.1(a)(14)	Yes.	
63.1(b)(1)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(b)(2)	Yes.	

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES—Continued

Reference	Applies to subpart JJJ	Comment
63.1(b)(3)	No	§ 63.1310(b) provides documentation requirements for TPPUs not considered affected sources.
63.1(c)(1)	Yes	Subpart JJJ (this table) specifies the applicability of each paragraph in subpart A to subpart JJJ.
63.1(c)(2)	No	Area sources are not subject to subpart JJJ.
63.1(c)(3)	No	Reserved.
63.1(c)(4)	Yes.	
63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications overridden by this table.
63.1(d)	No	Reserved.
63.1(e)	Yes.	
63.2	Yes	§ 63.1312 specifies those subpart A definitions that apply to subpart JJJ.
63.3	Yes	Subpart JJJ specifies those units of measure that apply to subpart JJJ.
63.4(a)(1)–63.4(a)(3)	Yes.	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)	Yes.	
63.5(b)(1)	Yes.	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes.	
63.5(b)(4)	No	Area sources are not subject to subpart JJJ.
63.5(b)(5)	Yes.	
63.5(b)(6)	No	§ 63.1310(i) specifies requirements.
63.5(c)	No	Reserved.
63.5(d)(1)(i)	No.	
63.5(d)(1)(ii)	Yes	Except that for affected sources subject to subpart JJJ, emission estimates specified in § 63.5(d)(1)(ii)(H) are not required.
63.5(d)(1)(iii)	Yes	Except that § 63.1335(e)(5) specifies Notification of Compliance Status requirements.
63.5(d)(2)	No.	
63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply.
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes	Except that where § 63.5(d)(1) is referred to, § 63.5(d)(1)(i) does not apply.
63.6(a)	Yes.	
63.6(b)(1)	Yes.	
63.6(b)(2)	Yes.	
63.6(b)(3)	Yes.	
63.6(b)(4)	Yes.	
63.6(b)(5)	Yes.	
63.6(b)(6)	No	Reserved.
63.6(b)(7)	Yes.	
63.6(c)(1)	Yes	§ 63.1311 specifies the compliance date.
63.6(c)(2)	Yes.	
63.6(c)(3)	No	Reserved.
63.6(c)(4)	No	Reserved.
63.6(c)(5)	Yes.	
63.6(d)	No	Reserved.
63.6(e)	Yes	Except the plan, and any records or reports of start-up, shutdown and malfunction do not apply to Group 2 emission points, unless they are included in an emissions average.
63.6(f)(1)	Yes.	
63.6(f)(2)	Yes	Except § 63.7(c), as referred to in § 63.6(f)(2)(iii)(D), does not apply.
63.6(f)(3)	Yes.	
63.6(g)	Yes.	
63.6(h)	No	Subpart JJJ does not require opacity and visible emission standards.
63.6(i)	Yes	Except for § 63.6(i)(15), which is reserved.
63.6(j)	Yes.	
63.7(a)(1)	Yes.	
63.7(a)(2)	No	§ 63.1335(e)(5) specifies submittal dates.
63.7(a)(3)	Yes.	
63.7(b)	No	§ 63.1333(a)(4) specifies notification requirements.
63.7(c)	No.	
63.7(d)	Yes.	
63.7(e)	Yes	Except that performance tests must be conducted at maximum representative operating conditions. In addition, some of the testing requirements specified in subpart JJJ are not consistent with § 63.7(e)(3).
63.7(f)	Yes.	
63.7(g)	Yes	Except that references to the Notification of Compliance Status report in § 63.9(h) are replaced with the requirements in § 63.1335(e)(5).

TABLE 1.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJ AFFECTED SOURCES—Continued

Reference	Applies to subpart JJJ	Comment
63.7(h)	Yes	Except §63.7(h)(4)(ii) is not applicable, since the site-specific test plans in §63.7(c)(3) are not required.
63.8(a)(1)	Yes.	
63.8(a)(2)	No.	
63.8(a)(3)	No	Reserved.
63.8(a)(4)	Yes.	
63.8(b)(1)	Yes.	
63.8(b)(2)	No	Subpart JJJ specifies locations to conduct monitoring.
63.8(b)(3).		
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	No.	
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	§63.1334 specifies monitoring frequency.
63.8(c)(5)–63.8(c)(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)–63.8(f)(3)	Yes.	
63.8(f)(4)(i)	No	Timeframe for submitting request is specified in §63.1335(e).
63.8(f)(4)(ii)	No.	
63.8(f)(4)(iii)	No.	
63.8(f)(5)(i)	Yes.	
63.8(f)(5)(ii)	No.	
63.8(f)(5)(iii)	Yes.	
63.8(f)(6)	No	Subpart JJJ does not require continuous emission monitors.
63.8(g)	No	Data reduction procedures specified in §63.1335(d).
63.9(a)	Yes.	
63.9(b)	No	Subpart JJJ does not require an initial notification.
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No.	
63.9(f)	No	Subpart JJJ does not require opacity and visible emission standards.
63.9(g)	No.	
63.9(h)	No	§63.1335(e)(5) specifies Notification of Compliance Status requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	
63.10(b)(1)	Yes.	
63.10(b)(2)	Yes.	
63.10(b)(3)	No	§63.1310(b) requires documentation of sources that are not affected sources.
63.10(c)	No	§63.1335 specifies recordkeeping requirements.
63.10(d)(1)	Yes.	
63.10(d)(2)	No.	
63.10(d)(3)	No	Subpart JJJ does not require opacity and visible emission standards.
63.10(d)(4)	Yes.	
63.10(d)(5)	Yes	Except that reports required by §63.10(d)(5)(i) may be submitted at the same time as Periodic Reports specified in §63.1335(e)(6). The start-up, shutdown, and malfunction plan, and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.
63.10(e)	No.	
63.10(f)	Yes.	
63.10(d)(4)	Yes.	
63.12	Yes.	
63.13	Yes.	
63.14	Yes.	
63.15	Yes.	

TABLE 2.—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure [a] (kilopascals)
75 ≤ capacity < 151	≥13.1
151 ≥ capacity	≥5.2

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 3.—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES PRODUCING THE LISTED THERMOPLASTICS

Thermoplastic	Chemical [a]	Vessel capacity (cubic meters)	Vapor pressure [b] (kilopascals)
ASA/AMSAN [c]	Styrene/acrylonitrile mixture	≥3.78	≥0.47
	Acrylonitrile	≥75.7	≥1.62
Polystyrene, continuous processes		≥38 and <75.7	≥14.2
		≥75.7	≥1.9
Nitrile [c]	Acrylonitrile	≥ 13.25	≥ 1.8

[a] Vessel capacity and vapor pressure criteria are specific to the listed chemical. When chemical not listed (i.e., —), vessel capacity and vapor pressure criteria apply to all chemicals regulated by this rule for a given subcategory.
[b] Maximum true vapor pressure of total organic HAP at storage temperature.
[c] The applicability criteria in Table 2 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 3).

TABLE 4.—GROUP 1 STORAGE VESSELS AT NEW AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure [a] (kilopascals)
38 ≤ capacity < 151	≥13.1
151 ≤ capacity	≥0.7

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 5.—GROUP 1 STORAGE VESSELS AT NEW AFFECTED SOURCES PRODUCING THE LISTED THERMOPLASTICS

Thermoplastic	Chemical [a]	Vessel capacity (cubic meters)	Vapor pressure [b] (kilopascals)
ASA/AMSAN [c]	Styrene/acrylonitrile mixture	≥3.78	≥0.47.
	Acrylonitrile	≥75.7	≥1.62.
SAN, continuous		≥2,271	0.5≤vp<0.7.
		≥151	0.7≤vp≥10.
		≥30 and <151	vp≥10.
		≥151	vp≥10.
Nitrile [c]	Acrylonitrile	≥13.25	≥1.8.
Polystyrene, continuous processes		≥19.6 and <45.4	vp≥7.48.
		≥45.4 and <109.8	vp≥0.61.
		≥109.8	vp≥0.53.
ABS, continuous mass	Styrene	≥45.43	≥0.078.
		≥38 and <45.43	vp≥13.1.
		≥45.43	vp≥0.53.

[a] Vessel capacity and vapor pressure criteria are specific to the listed chemical. When chemical not listed (i.e., —), vessel capacity and vapor pressure criteria apply to all chemicals regulated by this rule for a given subcategory.
[b] Maximum true vapor pressure of total organic HAP at storage temperature.
[c] The applicability criteria in Table 4 of this subpart shall be used for chemicals not specifically listed in this table (i.e., Table 5).

TABLE 6.—KNOWN ORGANIC HAZARDOUS AIR POLLUTANTS FROM THERMOPLASTIC PRODUCTS

Thermoplastic product/subcategory	Organic HAP/chemical name (CAS No.)						
	Acetaldehyde (75–07–0)	Acrylonitrile (107–13–1)	1,3 Butadiene (106–99–0)	1,4–Dioxane (123–91–1)	Ethylene Glycol (107–21–1)	Methanol (67–56–1)	Styrene (100–42–5)
ABS latex		✔	✔				✔
ABS using a batch emulsion process		✔	✔				✔
ABS using a batch suspension process		✔	✔				✔
ABS using a continuous emulsion process		✔	✔				✔
ABS using a continuous mass process		✔	✔				✔
ASA/AMSAN		✔	✔				✔
EPS							✔
MABS		✔	✔				✔
MBS			✔				✔
Nitrile resin		✔					
PET using a batch dimethyl terephthalate process	✔			✔	✔	✔	
PET using a batch terephthalic acid process	✔			✔	✔		
PET using a continuous dimethyl terephthalate process	✔			✔	✔	✔	
PET using a continuous terephthalic acid process	✔			✔	✔		

TABLE 6.—KNOWN ORGANIC HAZARDOUS AIR POLLUTANTS FROM THERMOPLASTIC PRODUCTS—Continued

Thermoplastic product/subcategory	Organic HAP/chemical name (CAS No.)						
	Acetaldehyde (75–07–0)	Acrylonitrile (107–13–1)	1,3 Butadiene (106–99–0)	1,4–Dioxane (123–91–1)	Ethylene Glycol (107–21–1)	Methanol (67–56–1)	Styrene (100–42–5)
PET using a continuous terephthalic acid high viscosity multiple end finisher process	✔			✔	✔		
Polystyrene resin using a batch process							✔
Polystyrene resin using a continuous process							✔
SAN using a batch process		✔					✔
SAN using a continuous process		✔					✔

AACAS No.=Chemical Abstract Service Number.
AAABS=Acrylonitrile butadiene styrene resin.
AAASA/AMSAN=Acrylonitrile styrene resin/alpha methyl styrene acrylonitrile resin.
AAEPS=expandable polystyrene resin.
AAMABS=methyl methacrylate acrylonitrile butadiene styrene resin.
AAPET=poly(ethylene terephthalate) resin.
AAAAN=styrene acrylonitrile resin.
AAMBS=methyl methacrylate butadiene styrene resin.

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature [a]	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average firebox temperature as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average upstream and downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test—NCS.[c] 3. Record the batch cycle daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR.[d e] 5. Report all batch cycle daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR.[d e] 6. Report all instances when monitoring data are not collected.[e]
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the batch process vents or aggregate batch vent streams are *not* introduced with or used as the primary fuel.	Firebox temperature [a]	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average firebox temperature as specified in § 63.1326(e)(2).[d] 4. Report all batch cycle daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Flare	Presence of a flame at the pilot light.	1. Hourly records of whether the monitor was continuously operating during batch emission episodes, or portions thereof, selected for control and whether the pilot flame was continuously present during said periods. 2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.[c] 3. Record the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when a pilot flame is absent or the monitor is not operating. 4. Report the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when all pilot flames of a flare are absent—PR.[d]

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Scrubber for halogenated batch process vents or aggregate batch vent streams (Note: Controlled by a combustion device other than a flare).	pH of scrubber effluent, and.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average pH of the scrubber effluent measured during the performance test—NCS.[c] 3. Record the batch cycle daily average pH of the scrubber effluent as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average pH values of the scrubber effluent that are below the minimum operating pH established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Do	Scrubber liquid flow rate.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the scrubber liquid flow rate measured during the performance test—NCS.[c] 3. Record the batch cycle daily average scrubber liquid flow rate as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average scrubber liquid flow rates that are below the minimum flow rate established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Absorber[f]	Exit temperature of the absorbing liquid, and.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average exit temperature of the absorbing liquid measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit temperature of the absorbing liquid as specified in § 63.1326(e)(2) for each batch cycle. 4. Report all the batch cycle daily average exit temperatures of the absorbing liquid that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Do	Exit specific gravity for the absorbing liquid.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average exit specific gravity measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit specific gravity as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average exit specific gravity values that are below the minimum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Condenser[f]	Exit (product side) temperature.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average exit temperature measured during the performance test—NCS.[c] 3. Record the batch cycle daily average exit temperature as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
Carbon Adsorber[f]	Total regeneration stream mass flow during carbon bed regeneration cycle(s), and.	1. Record the total regeneration stream mass flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass flow during each carbon bed regeneration cycle measured during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the total regeneration stream mass flow is above the maximum mass flow rate established in the NCS or operating permit—PR.[d e]
Do	Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).	1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s). 2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycles(s) measured during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum temperature established in the NCS or operating permit—PR.[d e]
All Control Devices	Presence of flow diverted to the atmosphere from the control device *or*.	1. Hourly records of whether the flow indicator was operating during batch emission episodes, or portions thereof, selected for control and whether flow was detected at any time during said periods as specified in § 63.1326(e)(3). 2. Record and report the times and durations of all periods during batch emission episodes, or portions thereof, selected for control when emissions are diverted through a bypass line or the flow indicator is not operating—PR.[d]
Do	Monthly inspections of sealed valves.	1. Records that monthly inspections were performed as specified in § 63.1326(e)(4)(i). 2. Record and report all monthly inspections that show the valves are not closed or the seal has been changed—PR.[d]

TABLE 7.—GROUP 1 BATCH PROCESS VENTS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Absorber, Condenser, and Carbon Adsorber (as an alternative to the requirements previously presented in this table).	Concentration level or reading indicated by an organic monitoring device at the outlet of the control device.	1. Continuous records as specified in § 63.1326(e)(1).[b] 2. Record and report the average concentration level or reading measured during the performance test—NCS.[c] 3. Record the batch cycle daily average concentration level or reading as specified in § 63.1326(e)(2). 4. Report all batch cycle daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]

[a] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.
[b] ''Continuous records'' is defined in § 63.111.
[c] NCS = Notification of Compliance Status described in § 63.1335(e)(5).
[d] PR = Periodic Reports described in § 63.1335(e)(6).
[e] The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1335(e)(6)(iii)(C).
[f] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 8.—OPERATING PARAMETERS FOR WHICH LEVELS ARE REQUIRED TO BE ESTABLISHED FOR CONTINUOUS AND BATCH PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS

Device	Parameters to be monitored	Established operating parameter(s)
Thermal incinerator	Firebox temperature	Minimum temperature.
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater	Firebox temperature	Minimum temperature.
Scrubber for halogenated vents	pH of scrubber effluent; and scrubber liquid flow rate	Minimum pH; and minimum flow rate.
Absorber	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Minimum temperature; and minimum specific gravity.
Condenser	Exit temperature	Maximum temperature.
Carbon absorber	Total regeneration stream mass flow during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum mass flow; and maximum temperature.
Other devices (or as an alternate to the requirements previously presented in this table)[a].	HAP concentration level or reading at outlet of device	Maximum HAP concentration or reading.

[a] Concentration is measured instead of an operating parameter.

[FR Doc. 96–22781 Filed 9–11–96; 8:45 am]
BILLING CODE 6560–50–P/M