ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–6344–7]

RIN 2060–AE–86

National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule promulgates national emission standards for hazardous air pollutants (NESHAP) for new and existing plant sites that manufacture polyether polyols. The hazardous air pollutants (HAP) emitted by the facilities covered by this rule include ethylene oxide (EO), propylene oxide (PO), hexane, toluene, and incidental emissions of several other HAP. Some of these pollutants are considered to be probable human carcinogens when inhaled, and all can cause toxic effects following exposure. The rule is estimated to reduce emissions of these pollutants by 1,810 Megagrams per year (Mg/yr) (2,000 tons per year (tons/yr)). Because all of the pollutants are also volatile organic compounds (VOC), which are precursors to ambient ozone, the promulgated rule will also aid in the reduction of tropospheric ozone.

DATES: This regulation is effective on June 1, 1999.

ADDRESSES: *Docket.* Docket No. A–96–38, containing information considered by the EPA in development of the promulgated standards, is available for public inspection from 8:00 a.m. to 5:30 p.m., Monday through Friday, at the following address in room M–1500, Waterside Mall (ground floor): U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460, telephone number (202) 260–7548. A reasonable fee may be charged for copying docket materials.

FOR FURTHER INFORMATION CONTACT: For information concerning this final rule or the analyses performed in developing this rule, contact Mr. David Svendsgaard, Organic Chemicals Group, Emission Standards Division (MD–13), Office of Air Quality Planning and Standards, U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–2380, facsimile number (919) 541–3470, electronic mail address svendsgaard.dave@epa.gov. For information concerning applicability and rule determinations, contact your State or local representative or the appropriate EPA Regional Office representatives. For a listing of EPA Regional contacts, see the following.

SUPPLEMENTARY INFORMATION:

Electronic Access

These final standards and all other information considered by the EPA in the development of these final standards are available in Docket Number A–96–38 by request from the EPA's Air and Radiation Docket and Information Center (see **ADDRESSES**). Electronic versions of documents from the Office of Air and Radiation (OAR) are available through the EPA's OAR Technology Transfer Network Web site (TTNWeb). The TTNWeb is a collection of related Web sites containing information about many areas of air pollution science, technology, regulation, measurement, and prevention. The TTNWeb is directly accessible from the Internet via the World Wide Web location at the following address: http://www.epa.gov/ttn. Electronic versions of this preamble and rule are located under the OAR Policy and Guidance Information Web site, at http://www.epa.gov/ttn/oarpg/, under the **Federal Register** notices section. If more information on the TTNWeb is needed, contact the Systems Operator at (919) 541–5384.

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Regulated Entities

Entities regulated by this action are polyether polyols production facilities. Regulated categories and entities include:

Category	Standard industrial classification (SIC) codes	North American industrial classification system (NAICS) codes	Examples of potentially regulated entities
Industry	Typically, 2843 and 2869	Typically, 325199 and 325613	Producers of polyether polyols and polyether mono-ols.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your facility, company, business organization, etc., is subject to this rule, you should carefully examine the applicability criteria in 40 CFR 63.1420. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Judicial Review

National emission standards for polyether polyols production were proposed in the **Federal Register** on September 4, 1997 (62 FR 46804). Today's **Federal Register** action announces the EPA's final decision on the rule. Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of the final rule is available 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 CAA, the requirements that are the subject of today's final rule 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. List of Source Categories

The EPA identified a total of approximately 84 plant sites producing polyether polyols. Of the 84 facilities, 78 were considered in the analysis supporting the proposed rule and are believed to be major sources according to the 1990 CAA Amendments' criteria of having the potential to emit 10 tons/yr (9.1 Mg/yr) of any one HAP or 25 tons/yr (22.7 Mg/yr) of combined HAP. Today's final rule applies to all major sources that produce polyether polyols. Area sources are not subject to today's final rule.

In developing the background information to support the proposed rule, the EPA decided it was appropriate to subcategorize the source category for purposes of analyzing the maximum achievable control technology (MACT) floors and regulatory alternatives. The subcategories were: polyether polyols made from the polymerization of epoxides, and polyether polyols made from the polymerization of tetrahydrofuran (THF). An ''epoxide'' is a chemical compound consisting of a three-membered cyclic ether. Ethylene oxide and propylene oxide are the only epoxides that are listed as HAP under section 112(b) of the CAA. Subcategorization was necessary due to the distinctively different nature of the epoxide and THF processes and their effect on the applicability of controls. One noteworthy distinction between the two subcategories is that the first group, polyols made with epoxides, uses a HAP as the monomer, whereas the second group, polyols made with THF, does not use a HAP monomer. Additionally, the first group (epoxide reactants) performs the reaction primarily on a batch basis, while the second group (THF) performs the reaction on a continuous basis.

The Agency obtained data from facilities that make polyether products by polymerizing a compound having multiple reactive hydrogen atoms, resulting in the formation of a ''polyol,'' and from facilities that make polyethers by polymerizing a compound with a single reactive hydrogen, which forms a ''mono-ol.'' The Agency then investigated the distinctions between the production units and the emissions controls for products from these two groups. The Agency found no fundamental difference between the processes, the chemistry, the emissions, or the types of control equipment. Further, many producers use the same process equipment to produce polyols and mono-ols, yet they generically refer to both types of products as ''polyols.'' Therefore, for the purposes of this regulation, the Agency uses the term ''polyether polyols'' to represent both polyether polyols and polyether mono-ols.

II. Summary of Considerations Made in Developing This Standard

A. Background and Purpose of the Regulation

The CAA 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.'' (section 101(b)(1)). Section 112(b) of the CAA, as revised in 61 FR 30816 (June 18, 1996), lists 188 HAP believed to cause adverse health or environmental effects. Section 112(d) requires that emission standards be promulgated for all categories and subcategories of ''major'' sources of these HAP, and for many smaller ''area'' sources listed for regulation, pursuant to section 112(c). Major sources are defined as those that emit or have the potential to emit at least 10 tons/yr (9.1 Mg/yr) of any one HAP or 25 tons/yr (22.7 Mg/yr) of any combination of HAP.

On July 16, 1992 (57 FR 31576), the EPA published a list of categories of sources slated for regulation. This list included the polyether polyol production source category regulated by the standards being promulgated today. The statute requires emissions standards for the listed source categories to be promulgated between November 1992 and November 2000. On December 3, 1993, the EPA published a schedule for promulgating these standards (58 FR 63941). Standards for the polyether polyols production source category covered by this rule were proposed on September 4, 1997 (62 FR 46804).

The final standards give existing affected sources 3 years from the date of promulgation to comply with the emission limitations for storage vessels, process vents, wastewater, and heat exchangers. Subject to certain limited exceptions, this is the maximum amount of time allowed under the CAA. The final standards give existing affected sources 6 months to comply with the equipment leak provisions. New affected sources are required to comply with the standards upon initial startup. The EPA believes these standards to be achievable for all affected sources within the time provided.

Monitoring, recordkeeping, and reporting requirements are also included in this final rule. All of these components are necessary to ensure that sources will comply with the standards both initially and over time. However, the EPA has made every effort to simplify the requirements in the rule.

B. Source of Authority

The amended CAA requires the EPA to promulgate national emission standards for sources of HAP. Section 112(d) provides that these standards must reflect:

> * * * 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)).

This level of control is referred to as the MACT. The CAA goes on to establish the least stringent level of control for MACT; this level is termed the ''MACT floor.''

According to the CAA, new source 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)). 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 sources or subcategories with fewer than 30 sources (section 112(d)(3)). These two minimum levels of control define the MACT floor for new and existing sources. When the EPA considers control levels more stringent than the MACT floor described above, the selection of MACT must take into consideration the cost of achieving the emission reduction, any non-air quality, health, and environmental impacts, and energy requirements.

C. Stakeholder and Public Participation

Numerous representatives of the polyether polyol production industry were consulted during the development of this standard. Industry representatives have included both trade associations and polyether polyol producers. The EPA also received input from representatives from State environmental agencies. Representatives from other EPA offices and programs participated in the regulatory development process as members of the work group. The work group was involved in the regulatory development process and was given opportunities to review and comment on the standards before proposal and promulgation. Therefore, the EPA believes that the impact on other EPA offices and programs has been adequately considered during the development of these standards. Finally, industry representatives, regulatory authorities, environmental groups, and the public, as a whole, had the opportunity to comment on the proposed standards and to provide additional information during the public comment period that followed proposal.

The Polyether Polyols NESHAP was proposed in the **Federal Register** on September 4, 1997 (62 FR 46804). The preamble and Basis and Purpose Document for the proposed standards for polyether polyols sources (published on September 4, 1997) described the rationale for the proposed standards. Public comments on the Polyether Polyols NESHAP were solicited at the time of its proposal.

In addition, amendments to the Polymers and Resins I NESHAP (which some of the requirements in this final rule cross-reference that existing rule) were proposed on March 9, 1999 (63 FR 11560). Public comments were solicited by the EPA regarding how those proposed amendments, and the incorporation of concepts in the Polymers and Resins proposed rule into subpart PPP, would affect sources subject to the Polyether Polyols final rule.

To provide interested individuals the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal of these requirements. However, the public did not request a hearing and, therefore, one was not held. The public comment period for the proposed rule was from September 4, 1997 to December 3, 1997. A total of 11 comment letters were received during the public comment period, and 4 comment letters were received after the end of the public comment period. Commenters included industry representatives and trade organizations. The comments were carefully considered, and changes were made in the promulgated 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, which is referenced in Section V of this preamble and serves as the basis for the revisions that have been made to these standards between proposal and promulgation. Section V of this preamble discusses some of the major changes made to the proposed standards.

III. Summary of Promulgated Standards

This section provides a summary of the final standards contained in subpart PPP. The full regulatory text is printed in today's final rule and is also available in Docket No. A–96–38, directly from the EPA, or from the Technology Transfer Network (TTN) on the EPA's electronic bulletin boards. More information on how to obtain a copy of the proposed regulation is provided at the beginning of the **SUPPLEMENTARY INFORMATION** section of this document.

A. Affected Sources

For this final rule, an affected source is defined as each group of one or more polyether polyols manufacturing process units (PMPUs) that is located at a plant site that is a major source. Polyether polyols are defined as the products formed by the reaction of EO, PO, or other cyclic ethers with compounds having one or more reactive hydrogens (i.e., a hydrogen atom bonded to nitrogen, sulfur, oxygen, phosphorous, etc.) to form polyethers (i.e., compounds with two or more ether bonds). The definition of ''polyether polyol'' excludes hydroxy ethyl cellulose and materials regulated under the Hazardous Organics NESHAP (HON), such as glycols and glycol ethers.

An existing affected source is any affected source that is not a new affected source. A new affected source can be created by one of four ways. If a plant site with an existing polyols-affected source adds one or more new PMPUs, the added group of one or more new PMPUs is a new affected source if the added group of one or more new PMPUs has the potential to emit more than 10 tons/yr (9.1 Mg/yr) of any one HAP or 25 tons/yr (22.7 Mg/yr) of all HAP. In this situation, the plant site would have an existing affected source and a new affected source. Each subsequent set of one or more added PMPUs with potential HAP emissions above the 10/25 levels cited above would be a separate new affected source.

New affected sources are also created when one or more PMPUs are constructed at a major source plant site where polyether polyols were not previously produced (with no consideration of the potential HAP emissions from the PMPU). Another instance where a new affected source is created is if one or more PMPUs are 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.

Affected sources covered by the promulgated rule emit a variety of HAP from several different types of emission points. The most significant emissions are of the following HAP: EO, PO, hexane, and toluene. These final standards regulate emissions of these compounds, as well as all other organic HAP that are emitted during the production of polyether polyols.

Emissions from the following types of emission points (i.e., emission source types) are being covered by the promulgated rule: storage vessels, process vents, heat exchange systems, equipment leaks, and wastewater operations. Tables 1 and 2 summarize the level of control for existing and new affected sources, respectively, for each of these types of emission points. Where the applicability criteria and required level of control are the same as the HON (40 CFR Part 63, subparts F, G, and H), this is indicated in Tables 1 and 2 as ''HON.'' ''Epoxides,'' in Tables 1 and 2, refer to EO and PO. ''Nonepoxide organic HAP'' refers to organic HAP other than EO and PO that are used in the polyether polyols production process. The following sections describe these standards in more detail, by emission source type.

TABLE 1.—SUMMARY OF LEVEL OF THE STANDARDS FOR EXISTING AFFECTED SOURCES

	Emission sources	Storage			Heat exch. syst.	Equip. leaks
		Process vents		Wastewater		
Polyether Polyols made with tetrahydro-furan.	HON	HON		HON	HON	HON.
		Epoxide emissions	Nonepoxide organic HAP emissions from making or modifying product	Nonepoxide organic HAP in catalyst extraction		
Polyether Polyols made with epoxides.	HON	98 percent aggregate emission reduction; or flare emissions from all vents; or maintain outlet conc. ≤ 20 ppmv; or maintain emiss. factor < 1.69×10^{-2} kg epox./Mg product.	Group 1 combination of process vents from batch unit operations: 90 percent aggregate emission reduction; or flare emissions from all vents.. Group 1 process vents from continuous unit operations: 98 percent emission reduction; or flare emissions.	90 percent aggregate emission reduction; or flare emissions from all vents.	HON	HON	HON.

TABLE 2.—SUMMARY OF LEVEL OF THE STANDARDS FOR NEW AFFECTED SOURCES

	Emission sources				Heat exch. syst.	Equip. leaks
	Storage	Process vents		Wastewater		
Polyether Polyols made with tetrahydro-furan.	Existing source HON.	HON		Exist. source HON.	HON	HON.
		Epoxide emissions	Nonepoxide organic HAP emissions from making or modifying product	Nonepoxide organic HAP in catalyst extraction		
Polyether Polyols made with epoxides.	Existing source HON.	99.9 percent aggregate emission reduction; or maintain outlet conc. ≤ 20 ppmv; or maintain emiss. factor < 4.43×10^{-3} kg epox./Mg product.	Group 1 combination of process vents from batch unit operations: 90 percent aggregate emission reduction; or flare emissions from all vents.. Group 1 process vents from continuous unit operations: 98 percent emission reduction; or flare emissions..	90 percent aggregate emission reduction; or flare emissions from all vents.	Exist. source HON.	HON	HON.

B. Storage Vessels

For polyether polyols made with either epoxides or THF, the storage vessel requirements at new and existing affected sources are nearly identical to the HON storage vessel requirements in subpart G for existing sources. The final rule specifies procedures for determining whether a storage vessel is assigned to a PMPU. Group 1 storage vessels require control, while Group 2 storage vessels do not. If a storage vessel has a capacity below 75 cubic meters, it is Group 2. For vessels with capacities

between 75 and 151 cubic meters, they are Group 1 if the vapor pressure of the liquid being stored is 13.1 kilopascals or greater. Storage vessels with capacities greater than 151 cubic meters are Group 1 if the vapor pressure of the liquid being stored is 5.2 kilopascals or greater.

The storage vessel provisions require that one of the following control systems be applied to Group 1 storage vessels: (1) An internal floating roof with proper seals and fittings; (2) an external floating roof with proper seals and fittings; (3) an external floating roof converted to an internal floating roof with proper seals and fittings; or (4) a closed vent system with a 95 percent efficient combustion, recovery, or recapture device. The storage vessel provisions give details on the types of seals and fittings required. Monitoring and compliance provisions include periodic visual inspections of vessels, roof seals, and fittings, as well as internal inspections. If a closed vent system and combustion, recovery, or recapture device is used, the owner or operator must establish appropriate monitoring procedures. Reports and records of inspections, repairs, and other information necessary to determine compliance are also required by the storage vessel provisions.

C. Process Vents

There are separate process vent provisions for affected sources that produce polyether polyols using epoxide reactants and affected sources that produce polyether polyols using THF. The control requirements for each type of affected source are discussed below, followed by a discussion of the monitoring, reporting, and recordkeeping provisions.

1. Polyether Polyols That Use Epoxides as a Reactant

For the polyether polyols that use epoxides as a reactant, the process vent provisions are separated into three groups that are based on the function of the organic HAP in the production process. These groups are: (1) Epoxide (i.e., EO and PO) emissions resulting from the use of these chemicals as reactants; (2) emissions of organic HAP other than EO or PO (i.e., ''nonepoxide organic HAP'') resulting from their use in making or modifying the polyether polyol product; and (3) emissions of nonepoxide organic HAP resulting from their use in catalyst extraction.

a. *Requirements for epoxide emissions.* The existing source requirement for epoxide emissions from process vents is to reduce epoxide emissions by 98 weight-percent. For new sources, this requirement is 99.9 weight-percent. This is an aggregated percent reduction applied to all process vents that emit epoxides in the PMPU. Therefore, the owner or operator has the flexibility to select which vents to control, provided that the overall epoxide emission reduction from the PMPU is equal to, or greater than, the required efficiency.

In addition to using a combustion, recovery, or recapture device to achieve the 98 percent reduction (or 99.9 percent for new sources), the final rule allows the use of ''extended cookout'' (ECO) as a means of reducing emissions by the required percentage. This pollution prevention technique reduces emissions by extending the time of reaction, thus leaving less unreacted epoxides to be emitted downstream.

Instead of complying with the 98 (or 99.9) weight-percent reduction limitation, an owner or operator may comply by demonstrating that each outlet stream has a concentration of 20 parts per million by volume (ppmv) epoxide or total organic compound (TOC). This option is available for existing and new affected sources, but only if a combustion, recovery, or recapture device is used.

As another alternative to the 98 percent emission reduction, owners or operators of existing affected sources may maintain an epoxide emission factor from the PMPU of no more than 1.69×10^{-2} kilograms of epoxide emissions per megagram of product made (kg/Mg), or 1.69×10^{-2} pounds of epoxide emissions per 1,000 pounds of product made (lb/1000 lb). The corresponding emission factor for new affected sources is 4.43×10^{-3} kg/Mg (4.43×10^{-3} lb/1000 lb). Compliance with this alternative limitation is achieved by developing and following an epoxide annual emissions plan, which must include provisions for the monitoring of the process and any combustion, recovery, or recapture device parameters to demonstrate continuous compliance with the emission limitation.

Finally, for affected existing sources, if a flare is used to reduce epoxide HAP emissions from all process vents in the PMPU, then a demonstration of 98 percent epoxide emission reduction is not required. If an owner or operator of an new affected source wants to use only a flare, a demonstration that the flare will achieve 99.9 percent epoxide emission reduction is required.

An owner or operator can also choose to use a combination of the percent reduction, 20 ppmv, and flare compliance options discussed above in a single PMPU.

b. *Requirements for emissions resulting from the use of nonepoxide organic HAP to make or modify the product.* For nonepoxide organic HAP emissions that result from the use of nonepoxide organic HAP to make or modify the product, the final rule uses a ''group'' approach, where those vents that are classified as Group 1 are required to be controlled. This provision only applies if a nonepoxide organic HAP is used to make or modify the product.

In many instances, the process vent stream containing these nonepoxide organic HAP will also contain epoxides. The combustion, recovery, or recapture device used to comply with the epoxide emission provisions discussed above may also reduce nonepoxide emissions. It is for this reason that the final rule requires that the group determination for nonepoxide organic HAP emissions from making or modifying the product be conducted after the emissions exit the epoxide combustion, recovery, or recapture device (or after the ECO). Therefore, any nonepoxide emission reduction that is coincidentally achieved in the epoxide combustion, recovery, or recapture device will impact whether the process vent is classified as Group 1.

The group determination approach for process vents from batch unit operations differs from that for process vents from continuous unit operations. Each approach is discussed below.

For process vents from batch unit operations, the approach is to determine if the collection of process vents in each PMPU that is associated with the use of nonepoxide organic HAP to make or modify the product is Group 1 or Group 2. If the combination of batch process vents is determined to be Group 1, the aggregate nonepoxide organic HAP emissions are required to be reduced by 90 weight-percent. As with the epoxide percent emission reduction requirement, this requirement is on an aggregated basis. Therefore, the owner or operator has the flexibility to select which vents to control, provided that the overall nonepoxide emission reduction from the PMPU is equal to, or greater than, 90 weight-percent. If a flare is used to reduce these nonepoxide organic HAP emissions from all process vents associated with the use of a nonepoxide organic HAP to make or modify the product, then a demonstration of 90 weight-percent emission reduction is not required. These requirements are the same for new and existing affected sources.

The group status for the combination of batch vents in a PMPU is determined by calculating the annual emissions

from all of the applicable vents. If the total nonepoxide organic HAP emissions are less than 11,800 kilograms per year (26,000 pounds per year), then the collection of vents is classified as Group 2, and no control is required. If the emissions are greater than 11,800 kilograms per year (26,000 pounds per year), they are used to calculate a ''cut-off'' flow rate. This cutoff flow rate is then compared to the actual combined annual average flow rate for all the vents. If the actual combined annual average flow rate is less than the cutoff flow rate, the group of vents is Group 1.

For process vents from continuous unit operations, the approach is to determine if each process vent in the PMPU that is associated with the use of nonepoxide organic HAP to make or modify the product is Group 1. If a continuous process vent is determined to be Group 1, the nonepoxide organic HAP emissions are required to be reduced by using a flare or by 98 weight-percent. As with batch vents, these requirements are the same for new and existing affected sources.

A continuous process vent is Group 1 if it has a flow rate greater than or equal to 0.005 standard cubic meters per minute, a HAP concentration greater than or equal to 50 ppmv, and a total resource effectiveness (TRE) index value less than or equal to 1.0. The final rule directly refers to the HON TRE equation in subpart G.

c. *Requirements for nonepoxide organic HAP emissions from catalyst extraction.* This provision only applies if a nonepoxide organic HAP is used in the catalyst extraction process. The promulgated process vent provisions require the owner or operator of existing affected sources using epoxides to reduce the aggregate total nonepoxide organic HAP emissions by 90 weight-percent from process vents associated with catalyst extraction at new or existing affected sources. This is also an aggregate emission reduction requirement for the PMPU. If a flare is used to reduce these nonepoxide organic HAP emissions from all process vents associated with catalyst extraction, then a demonstration of 90 weight-percent emission reduction is not required.

Uncontrolled nonepoxide organic HAP emissions from continuous or batch catalyst extraction unit operations are measured after the exit from the continuous or batch unit operation, but before any recovery devices; and controlled emissions are measured at the outlet of the combustion, recovery, or recapture device. Primary condensers operating as reflux condensers are considered to be part of the unit operation and are not considered to be recovery devices.

2. Polyether Polyols That Use THF as a Reactant

The promulgated rule directly references the HON process vent provisions in subpart G for polyether polyols processes that use THF as a reactant. These provisions require a Group 1/Group 2 determination. A group 1 process vent is one with a flow rate greater than or equal to 0.005 standard cubic meters per minute, a HAP concentration greater than or equal to 50 ppmv, and a TRE less than or equal to 1.0. Owners or operators of Group 1 process vents at THF facilities are required to either reduce organic HAP emissions by 98 weight-percent, maintain an outlet concentration of 20 ppmv, or route emissions to a flare.

3. Monitoring, Reporting, and Recordkeeping Provisions for Process Vents

Monitoring, reporting, and recordkeeping provisions necessary to demonstrate compliance are also included in the process vent provisions. Compliance with the monitoring provisions is based on parametric monitoring of the combustion, recovery, or recapture device, or monitoring of the process parameters if ECO is used to control epoxide emissions.

D. Wastewater Operations

The final wastewater provisions in subpart PPP refer directly to the HON wastewater provisions. Water that is discarded from a PMPU is considered to be wastewater if the water has an annual average concentration of organic HAP of 5 parts per million by weight (ppmw) or greater and an annual average flow rate of 0.02 liters per minute (0.0053 gallons per minute) or greater, or an annual average concentration of organic HAP of at least 10,000 ppmw at any flow rate. There are two types of wastewater: maintenance wastewater and process wastewater. The requirements for each type of wastewater are discussed below.

1. Maintenance Wastewater

The final rule directly incorporates the HON requirements in § 63.105 of subpart F for maintenance wastewater. The provisions of § 63.105 require owners or operators to prepare a description of procedures that will be used to manage HAP-containing wastewater created during maintenance activities and to implement these procedures.

2. Process Wastewater

The final rule also directly incorporates HON provisions for process wastewater, which are contained in § 63.132 through § 63.149 of subpart G. These provisions employ a Group 1/Group 2 approach with Group 1 process wastewater streams requiring control. However, subpart PPP does not incorporate the HON new source Group 1 process wastewater stream criteria. That is, the Group 1 process wastewater stream criteria for new and existing affected sources are equivalent to the HON existing source Group 1 criteria. These criteria are as follows. A Group 1 wastewater stream is a wastewater stream with a total annual average concentration of organic HAP greater than or equal to 10,000 ppmw at any flow rate, or a total annual average concentration greater than or equal to 1,000 ppmw and an annual average flow rate greater than or equal to 10 liters per minute (2.6 gallons per minute).

An owner or operator may determine the organic HAP concentration and flow rate of wastewater streams either (1) at the point of determination (where the wastewater exits the PMPU); or (2) downstream of the point of determination, provided that adjustments are made for changes that occur to the stream from the point of determination to the downstream location. Both the applicability determination and the Group 1/Group 2 determination must reflect the wastewater characteristics before losses due to volatilization, a concentration differential due to dilution, or a change in organic HAP concentration or flow rate due to treatment.

There are requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators that handle Group 1 wastewater streams. These provisions require either that specified measures be undertaken to suppress organic emissions from the wastewater stream, or that emissions be vented to a control device.

There are also treatment requirements for Group 1 wastewater streams to reduce the organic HAP content in the wastewater prior to placement in units without air emissions controls. There are a number of treatment options for Group 1 wastewater streams. These include reducing the total concentration of organic HAP to a level less than 50 ppmw, treating the stream in a steam stripper meeting specified design criteria, reducing the organic HAP mass flow rate by 99 percent (or by the fraction removed, or F_r, value for the HAP), achieving the required mass

removal (RMR) for the HAP, achieve a RMR of 95 percent in a biological treatment process, or treating the stream in a unit complying with specified Resource Conservation and Recovery Act (RCRA) requirements. Also, there is an exemption if the total source organic HAP mass flow rate is less than 1 Mg/yr (1.1 tons/yr).

The rule requires that inspections be conducted on waste management units. It also requires that design steam strippers and biological treatment units be monitored, along with control devices on waste management units. The rule also contains extensive provisions outlining how to demonstrate compliance, including reporting and recordkeeping provisions. For more information regarding the wastewater provisions in this final rule, consult the January 17, 1997 amendments to the HON (62 FR 2722).

E. Equipment Leaks

The equipment leak provisions in the promulgated rule refer directly to the HON requirements contained in 40 CFR part 63, subpart H. These final standards apply to equipment in organic HAP service for 300 or more hours per year that is associated with a PMPU, including valves, pumps, connectors, compressors, pressure relief devices, open-ended valves or lines, sampling connection systems, instrumentation systems, surge control vessels, bottoms receivers, and agitators. The provisions also apply to closed-vent systems and combustion, recovery, or recapture devices used to control emissions from any of the listed equipment.

The promulgated standard requires leak detection and repair (LDAR) for pumps in light liquid service and for valves in gas or light liquid service. The LDAR program involves a periodic check for organic vapor leaks with a portable instrument using Method 21 of appendix A of part 60. If leaks are found, they must be repaired within a certain period of time. These provisions contain programs where owners or operators that have demonstrated success in eliminating leaking equipment can increase the interval between leak inspections.

The final rule also requires LDAR of connectors in gas or light liquid service. The monitoring frequency for connectors is determined by the percent leaking connectors in the process unit and the consistency of performance.

Subpart H also contains standards for compressors, open-ended lines, pressure relief devices, and sampling connection systems. Compressors are required to be controlled using a barrier-fluid seal system, by a closed vent system to a combustion, recovery, or recapture device, or must be demonstrated to have no leaks greater than 500 parts per million (ppm) HAP. Sampling connections must be a closed-purge or closed-loop system, or must be controlled using a closed vent system to a combustion, recovery, or recapture device. Agitators must either be monitored for leaks or use systems that are better designed such as dual mechanical seals. Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service are subject to instrumental monitoring only if evidence of a potential leak is found through sight, sound, or smell. Instrumentation systems consist of smaller pipes and tubing that carry samples of process fluids to be analyzed to determine process operating conditions or systems for measurement of process conditions.

Surge control vessels and bottoms receivers are required to be controlled using a closed vent system vented to a combustion, recovery, or recapture device. However, the applicability of controls to surge control vessels and bottoms receivers is based on the size of the vessel and the vapor pressure of the contents. The criteria for determining whether controls are required for surge control vessels and bottoms receivers are the same as the criteria for determining whether controls are required for storage vessels.

The standards require certain records to demonstrate compliance with the standard, and the records must be retained in a readily accessible recordkeeping system. Subpart H requires that the following records be maintained for equipment that would be subject to the standards: records of testing associated with batch processes; design specifications of closed vent systems and combustion, recovery, or recapture devices; and test results from performance tests.

F. Heat Exchangers

The final standards for heat exchange systems directly refer to the heat exchange provisions listed in subpart F of the HON at § 63.104. These provisions require that the owner or operator monitor heat exchange systems for leaks and repair any leaks that are detected.

G. General Testing Requirements

Specific testing requirements related to each emission source type are included in the applicable sections of the final rule. Section 63.1437 of the final rule addresses conditions for performance tests and compliance determination procedures for flares.

Section 63.1437 requires that performance testing be conducted during maximum operating conditions for all emissions sources except for process vents from batch unit operations. Tests for process vents from batch unit operations are to be performed at worst-case conditions.

This section limits the time frame for the maximum operating and worst-case conditions to either the 6-month period that ends 2 months before the Notification of Compliance Status is due, or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test. This section also indicates that tests should not be performed under conditions that: (1) Cause damage to equipment, (2) necessitate that product made does not meet an existing specification for sale to a customer, (3) necessitate that product made is in excess of demand, or (4) cause plant or testing personnel to be subject to unsafe conditions.

This section clarifies that a performance test is not required for flares, and requires that a compliance determination be conducted for flares in accordance with § 63.11(b) of the General Provisions.

H. Monitoring Levels and Excursions

Specific monitoring requirements related to each emission source type are included in the applicable sections of the final rule. Section 63.1438 of the final rule addresses the establishment of parameter monitoring levels and excursions.

This section specifies how parameter monitoring levels are to be established. The three methods are: (1) To establish parameter levels based exclusively on performance testing; (2) to establish parameter monitoring levels based on performance tests, supplemented by engineering assessments and/or manufacturer's recommendations; and (3) to establish parameter monitoring levels based on engineering assessments and/or manufacturer's recommendations.

This section also provides definitions of excursions and how excursions are related to compliance. Table 3 in this preamble illustrates instances that are defined as excursions.

TABLE 3.—SUMMARY OF EXCURSIONS

Emission source type	Type of excursion	Description of excursion
Storage vessels, where continuous monitoring is required.	Daily average exceedance	When the daily average of a monitored parameter is above the maximum, or below the minimum, established level.
	Insufficient monitoring data	Depends on the monitoring plan.
Storage vessels, where continuous monitoring is not required.	If monitoring plan specifies monitoring a parameter, a filling period exceedance.	When the average value of one or more parameters, averaged over the duration of the filling period for the storage vessel, is above the maximum level or below the minimum level.
	If monitoring plan specifies that a value must be recorded at specific intervals, insufficient monitoring data.	When measured values are not available for at least 75 percent of the specific intervals at which parameters are to be monitored and recorded, according to the monitoring plan, during the filling period for the storage vessel.
Process wastewater streams, heat exchange systems, or equipment leaks.	[See the HON]	[See the HON Requirements.]
Continuous process vents using combustion, recovery, or recapture devices.	Daily average exceedance	When the daily average of a monitored parameter is above the maximum, or below the minimum, established level.
	Insufficient monitoring data	Insufficient monitoring data is when an owner or operator fails to obtain a valid hour of data for at least 75 percent of the operating hours during an operating day. Four 15-minute parameter measurements must be obtained to constitute a valid hour of data.
Batch process vents using combustion, recovery, or recapture devices.	Daily average exceedance	When the daily average of a monitored parameter is above the maximum, or below the minimum, established level.
	Insufficient monitoring data	Insufficient monitoring data is when an owner or operator fails to obtain valid parameter measurements for at least 75 percent of the 15-minute periods during an operating day.
Process vents using ECO	Batch cycle parameter exceedance.	If time is monitored, when the time from the end of the epoxide feed to the end of an ECO is shorter than the minimum duration established for the product class.
		If reactor partial pressure is monitored, when the reactor epoxide partial pressure at the end of an ECO is above the maximum pressure established for the product class.
		If epoxide concentration is monitored, when the epoxide concentration in the reactor at the end of an ECO is above the maximum epoxide concentration established for the product class.

The owner or operator is allowed a certain number of ''excused'' excursions. In the first semiannual period, the owner or operator is allowed to excuse six excursions. This diminishes to one excused excursion for each semiannual period after the sixth semiannual period.

For each excursion that is not excused, the owner or operator is deemed to be out of compliance with the provisions of the final rule. If a condenser is used and temperature is the parameter monitored, or if another recovery or recapture device is used and organic HAP concentration is the parameter monitored, then the excursion is a violation of the emission limitation. For all other parameter monitoring situations, an excursion is a violation of the operating limit.

I. General Provisions

The final rule incorporates by reference the General Provisions in subpart A as promulgated on March 13, 1994. However, the EPA is in the process of drafting amendments to the General Provisions. After the promulgation of the amendments to the General Provisions, the amended General Provisions will be automatically considered to be incorporated into this subpart. For that reason, as amendments are proposed for the General Provisions, owners and operators are encouraged to comment on how those amendments could potentially affect owners and operators subject to subpart PPP of part 63.

The final rule references the start-up, shutdown, and malfunction plan requirements in § 63.6(e)(3) of the General Provisions. The start-up, shutdown, and malfunction plan developed for each affected source must describe procedures for operating and maintaining the affected source during periods of start-up, shutdown, and malfunction, and must describe procedures and a program for corrective action for malfunctioning process and air pollution equipment used to comply with this subpart.

J. General Recordkeeping and Reporting Requirements

Specific recordkeeping and reporting requirements related to each emission source type are included in the applicable sections of the final rule. Section 63.1439 of the final rule provides more general reporting, recordkeeping, and testing requirements. The following are the types of reports that must be submitted to the Administrator, as appropriate: Initial Notification, Precompliance Report, Notification of Compliance Status, Periodic Reports, and Other Reports. The requirements for each of the types of reports are summarized below.

Section 63.1434 of the final rule incorporates the reporting requirements of subpart H. The subpart H reporting requirements include an Initial Notification, a Notification of Compliance Status, and Periodic Reports. The information required by subpart H should be submitted along with the information specified in subpart PPP for the applicable report.

1. Initial Notification

For existing sources, the Initial Notification is required to be submitted June 1, 2000. For new sources, the due date is dependent on the date of initial start-up date. The Initial Notification must include the following information:

a. The name and address of the owner or operator.

b. The address (i.e., physical location) of the affected source.

c. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date.

d. An identification of the kinds of emission points within the affected source.

e. A statement of whether or not the affected source is a major source.

2. Precompliance Report

Affected sources making one or more of the following requests must submit a Precompliance Report 1 year before their compliance date: (1) Requesting an extension for compliance; (2) requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; (3) requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data; or (4) requesting to establish parameter monitoring levels based on engineering assessments and manufacturing recommendations. Supplements to the Precompliance Report may also be submitted after the due date of the Precompliance Report, if the owner or operator finds it necessary to clarify or modify information previously submitted under the original Precompliance Report. In addition, the final rule provides that, unless the Administrator has objected to a request made in the Precompliance Report or a supplement to the Precompliance Report within 45 days of its receipt, the request shall be automatically deemed ''approved.''

An owner or operator who submits an operating permit application may submit the information specified in the Precompliance Report, as applicable, with the operating permit application, in addition to any other information required to be included in the operating permit application.

3. Notification of Compliance Status

The Notification of Compliance Status is required to be submitted within 150 days after the source's compliance date. The information required to show compliance for each emission point must be included in the Notification of Compliance Status. Such information includes, but is not limited to, results of any performance tests, design analyses, and parameter monitoring levels for each emission point and supporting data for the designated level.

4. Periodic Reports

Generally, Periodic Reports are required to be submitted semiannually. However, if a combustion, recovery, or recapture device for a particular emission point or process section has more than the excused number of excursions, or if the regulatory authority requests it of the owner or operator, quarterly reports may be required for 1 year for that emission point. After 1 year, semiannual reporting may be resumed, if no additional excursions occur.

The Periodic Report must report when excursions occur, as well as results of any performance tests conducted during the reporting period. For equipment leaks, Periodic Reports must contain summary information on the LDAR program, changes in monitoring frequency or monitoring alternatives, and/or initiation of a quality improvement program (QIP).

5. Other Reports

Other reports required under the final rule include: (1) Reports of process changes that change the compliance status of process vents; (2) reports of changes to the primary product of a PMPU or process unit that becomes a PMPU as a result of the change; (3) reports of the addition of a new PMPU or emission point (other than an equipment leak); (4) reports of reconstruction or new source construction; (5) requests for approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, or alternative controls; and (5) requests for extensions of the allowable repair period and notifications of inspections for storage vessels and wastewater.

IV. Control Technology Basis of the Standard

The rule requirements are based on the MACT floor level of control for the following emission types for polyether polyols made with epoxides: storage vessels, process vent epoxide emissions, process vent nonepoxide emissions from catalyst extraction, and equipment leaks. The Agency selected requirements more stringent than the floor for wastewater emissions and for nonepoxide organic HAP process vent emissions from making or modifying the product. For polyether polyols made with THF, the Agency selected requirements more stringent than the MACT floor level of control for all of the emission types (i.e., storage, process vent emissions, equipment leaks and wastewater). These MACT control levels have not changed since the September 4, 1997 proposal (62 FR 46804).

The HON control basis establishes MACT for both polyether polyols made with epoxides and polyether polyols made with THF, although for polyether polyols made with THF, the HON control level is above the floor. The only exception to this HON control basis is where control levels established in the ''Control of Volatile Organic Compound Emissions From Batch Processes—Alternative Control Techniques Information Document,'' Document No. EPA–453/R–94–020 (i.e., the Batch ACT), are the above the floor control basis for process vents from batch unit operations.

The HON level of control establishes the basis for MACT for this standard because the continuous unit operations in polyether polyols manufacturing plants are fairly similar to the process units at sources that are subject to the HON. Given the similarity of PMPUs to process units subject to the HON and the fact that the HON level of control had received extensive evaluation during the development of the HON, the EPA concluded that the cost and other impacts of the HON levels were representative of those that could be expected for the polyether polyols production industry. The estimated cost effectiveness for the Batch ACT was determined to be comparable to the cost effectiveness of the HON continuous vent provisions and is expected to be comparable to the cost effectiveness of the process vent requirements in this final rule.

V. Summary of Impacts

The impacts discussed in this section are presented relative to a baseline reflecting the level of control in the absence of the rule. See the baseline emissions memorandum in the Supplementary Information Document for Proposed Standards (EPA–453/R–97–010c, May 1997) for a detailed discussion of this approach. The impacts for existing sources were estimated by bringing each facility's control level up to the levels of the standards. According to industry representatives, no new sources were projected to be constructed in the next 5 years. Therefore, no new source impacts were estimated.

A. Air Impacts

These promulgated standards are estimated to reduce HAP emissions from all existing sources of polyether polyols by 1,810 Mg/yr (2,000 tons/yr). This represents a 47 percent reduction from the baseline level of emissions. This reduction is relatively low, since

several affected facilities have already installed stringent pollution controls in response to State air toxics rules.

B. Other Environmental Impacts

All the HAP being reduced by this regulation are also volatile organic compounds (VOC); thus, a reduction of 1,810 Mg/yr (2,000 tons/yr) of VOC is anticipated as a result of implementing these standards. However, emissions of other criteria pollutants are estimated to increase by 80 Mg/yr (88 tons/yr) as a result of operating process vent and wastewater emission control systems to comply with the standards. Therefore, the net reduction in criteria pollutants resulting from this regulation is anticipated to be 1,730 Mg/yr (1,900 tons/yr).

C. Energy Impacts

The total nationwide energy demands that will result from implementing the process vent and wastewater requirements are around 4.7×10^{10} British thermal units annually (Btu/yr).

D. Cost Impacts

Cost impacts include the capital costs of new control equipment, the cost of energy (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 raw materials in the form of emissions. Also, cost impacts include the costs of monitoring, recordkeeping, and reporting associated with these promulgated standards.

Under the final rule, it is estimated that total capital costs for existing sources will be $10.2 million (August 1996 dollars) and that total annual costs will be $7.7 million per year. The actual compliance cost impacts of the final rule could be less than estimated, due to the potential to use common combustion, recovery, or recapture devices, upgrade existing combustion, recovery, or recapture devices, use other less expensive control technologies, or implement pollution prevention. Because the effect of such practices is highly site-specific and data were unavailable to estimate how often the lower cost compliance practices could be utilized, it is not possible to quantify the amount by which actual compliance costs will be reduced.

E. Economic Impacts

The goal of the economic impact analysis (EPA Document No. EPA–453/R–97–013, May 1997) is to estimate the market response of the polyether polyols industry to the emission standards and determine any adverse effects that may result from the regulation. Approximately 78 facilities owned by 36 different companies producing polyether polyols domestically may potentially be affected by the regulation.

Since the nationwide annualized cost of this regulation of $7.7 million represents approximately 0.06 percent of the estimated 1996 sales revenues for domestically produced polyether polyols, the EPA determined that the regulation is not likely to have a significant economic impact on this industry as a whole. For this reason, a streamlined economic analysis was performed to determine facility-specific impacts. Facility-specific impacts were examined by calculating the ratio of the estimated annualized costs of controls for each facility to the estimated revenues per facility (i.e., cost-to-sales ratio) to assess the likelihood of facility closures and employment impacts. A cost-to-sales ratio exceeding 1 percent was determined to be an initial indicator of the potential for a significant facility impact.

Costs exceeded 1 percent of sales for only one facility out of the 78 facilities affected by the regulation. This firm is estimated to potentially experience a cost-to-sales ratio of 1.5 percent. Based on an analysis of the costs of compliance compared to facility and company financial data for this firm, the EPA concluded that it was unlikely that the company owning this facility would choose to close it. The company is financially robust and the costs are a small share of the total company sales and net income. Therefore, the facility-specific impacts are not considered to be significant for any facility affected by this promulgated regulation. The generally small scale of the impacts suggests that there will also be no significant impacts on markets for the products made using polyether polyols, such as polyurethanes. For more information, consult the economic impact report entitled ''Economic Analysis Of Air Pollution Regulations: Polyether Polyols Production, May 1997'' in the docket for today's rule.

VI. Significant Comments and Changes to the Proposed Standards

Comments on the proposed rule were received from industry and trade organizations. A detailed discussion of these comments and responses can be found in the Basis and Purpose Document for the Final Standards (EPA–453/R–99–002b).

There were a number of comments submitted that were considered to be significant by the EPA. These significant comments covered many aspects of the rule. The Agency's review of the significant issues raised by the commenters resulted in changes to the proposed rule in many instances. This section summarizes the significant comments raised and provides the EPA's response.

A. Primary Product Determination

One commenter expressed confusion over aspects of the primary product determination in the proposed rule, particularly the provision that specified how a non-PMPU could become a PMPU after the initial determination based on actual production. The EPA agrees that this portion of the proposed primary product provisions needed clarification. In fact, the EPA conducted an overall review of the proposed primary product provisions, and concluded that several structural and clarifying changes were needed. In addition, the EPA noted some potential situations that could occur that were not addressed in the proposed provisions.

The specific concern raised by the commenter was addressed by clearly stipulating how owners or operators of non-PMPUs are to determine whether they have become subject to the rule after the initial primary product determination. The final rule specifies that non-PMPUs that have produced polyether polyols in the past 5 years are to annually re-determine the primary product using actual production values. The rule also specifies how a non-PMPU process unit is to determine the primary product if it has not produced polyether polyols in the past 5 years, but plans to produce polyether polyols in the future.

The proposed provisions required that initial primary product determination be based on a 5-year prediction of anticipated production by the owner or operator. The EPA is aware that, in some instances, the owner or operator may not be able to make such a prediction. Clarifications and/or revisions were made to the primary product provisions to address this situation. First, in the initial determination, the time frame for which production must be anticipated for new process units was changed to 1 year. Also, provisions were added for owners or operators that cannot determine their primary product based on anticipated 5-year (or 1-year) production. To summarize, if polyether polyols have been produced in an existing process unit for 5 percent or greater of the time since September 4, 1997, then the process unit is designated as a PMPU and is subject to the existing source provisions of subpart PPP. For new process units, if polyether polyols will be produced at any time during the first

year of production, then the unit is a PMPU and is subject to the new source provisions of subpart PPP.

In addition to the provisions discussed above that specify how non-PMPUs are to determine if they become PMPUs (i.e., subject to subpart PPP), the EPA has also clarified and expanded the provisions that specify how the PMPU designation can be removed from a process unit. The first case, which is retained from the proposed rule, is where production of polyether polyols ceases and the owner or operator does not anticipate the production of polyether polyols in the future. Also, the EPA has added provisions that specify procedures for a primary product reevaluation based on actual production. If an owner or operator of a PMPU finds that another product has been produced for a greater amount of time than polyether polyols over a specified time period (previous 5 years or since beginning the production of polyether polyols), then the PMPU designation could possibly be removed. The stipulation is that production of the ''new'' primary product must make the process unit subject to another part 63 NESHAP. If the new primary product is not subject to another part 63 NESHAP and polyether polyols continue to be produced, the process unit continues to be classified as a PMPU and continues to be subject to subpart PPP.

The EPA has also added provisions addressing the determination of the primary product in situations where two or more products are produced simultaneously. Also, clarifications were made in the reporting and recordkeeping requirements associated with the primary product determination. A more in-depth explanation of the primary product determination procedures in § 63.1420(e) can be found in the preamble to the proposed amendments to the Polymers and Resins I and IV NESHAP (64 FR 11563). The primary product provisions in § 63.1420(e) mirror those proposed in §§ 63.480(f) and 63.1310(f).

B. Definition of ''Polyether Polyol''

In the proposed rule a ''Polyether Polyol'' was defined as:

> * * * a compound formed through the polymerization of ethylene oxide (EO) or propylene oxide (PO) or other cyclic ethers with compounds having one or more reactive hydrogens (i.e., a hydrogen atom bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers. This definition excludes materials regulated under the HON, such as glycols and glycol ethers.

One commenter requested that the EPA revise the definition of ''polyether polyol'' to clarify that the production of typical alkanolamines, which lack repeating ether units, is not regulated under subpart PPP. Another commenter explained that hydroxy ethyl cellulose is formed through the reaction of EO on cellulose polymer molecules. This commenter requested that the EPA clarify whether hydroxy ethyl cellulose manufacturing is included or excluded from the definition of ''polyether polyol.''

The EPA has revised the definition of ''polyether polyol'' in the final rule addressing both of these issues by excluding the production of hydroxy ethyl cellulose and by specifying that a polyether must have two or more ether bonds.

C. Definition of ''Process Vent''

The definition of ''process vent'' in the proposed rule did not include any cutoffs based on the flow or HAP concentration of the process vent. One commenter was concerned that the definition of ''process vent'' did not have a de minimis cutoff, as does the definition of ''process vent'' in the HON. The cutoff suggested by the commenter (0.005 weight-percent total organic HAP) has been incorporated into the final definition of a process vent, for process vents from continuous unit operations. This decision was based on the fact that the EPA considers it to be impractical to impose requirements for process vent streams with such low HAP concentrations (less than 0.005 weight percent organic HAP). For similar reasons, a de minimis cutoff for process vents from batch unit operations was also added in the final rule. In the Polymers and Resins I and IV NESHAP, the batch process vent definition contains a de minimis cutoff of 225 kg/yr uncontrolled HAP emissions. The EPA believes that this level is also an appropriate de minimis level for process vents from batch unit operations in the polyether polyols industry.

D. Outlet Concentration Limit as an Alternative Epoxide Process Vent Emission Limit for New Sources

The proposed rule did not include a concentration limit as an alternative epoxide process vent emission limit for new sources. The preamble to the proposed rule solicited comments on this subject, to which four commenters responded. All four recommended a 20 ppmv alternative concentration limit. The commenters indicated that the preambles for the New Source Performance Standards for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (40 CFR part 60, subpart NNN), and the HON (40 CFR part 63, subpart G) provided rationales for a 20 ppmv limitation that also are applicable to the polyether polyols rule.

In subpart NNN's preamble (48 FR 48932, October 21, 1983), the EPA stated that the outlet concentration of 20 ppmv was established based on kinetic calculations of incinerators. It was demonstrated that, at a given temperature and residence time, a stream with a low inlet concentration could not demonstrate an outlet concentration below 20 ppmv. In the preamble to the proposed amendments to the HON (61 FR 43698, August 26, 1996), the EPA expanded the application of this lower bound concentration performance standard to control/recovery devices other than incinerators. In the HON preamble, the EPA explained that recovery devices are designed to typically reduce emissions to the same outlet concentration level given a relatively wide range of inlet concentrations. When the inlet concentration is substantially below the design maximum leading conditions (and begins to approach the residual level in the outlet stream), the recovery device efficiency will decrease.

The EPA agrees that the rationales for the 20 ppmv concentration limit provided in the preambles discussed above are also applicable to subpart PPP. Further, the technological limitations that form the basis for this alternative 20 ppmv limit are applicable to combustion, recovery, and recapture devices that may be used at existing affected sources or new affected sources. Therefore, the EPA believes it is appropriate to also allow this alternative for new sources.

Therefore, the final rule contains an alternative concentration limit of 20 ppmv for both new and existing sources. This concentration is measured at the outlet of the combustion, recovery, or recapture device.

Another commenter advocated that the alternative 20 ppmv concentration limit should apply more broadly to process vents that do not utilize a combustion, recovery, or recapture device to reduce epoxide emissions. The examples provided by the commenter included vents from equipment practicing a very long ECO or vents from equipment where the epoxide content is very low and emissions are very small.

As discussed above, the lower outlet concentration limit recognizes that there is a lower outlet concentration boundary, below which combustion, recapture and control devices cannot achieve. The EPA understands that the outlet concentration after ECO may be

as low as that after a combustion, recovery, or recapture device. However, this is not based on technological limitations of ECO, as is the basis for the 20 ppmv concentration limit for combustion, recovery, and recapture devices. Therefore, the EPA believes that allowing the 20 ppmv concentration limit for ECO is not appropriate.

Further, the EPA does not believe that it is appropriate to use this alternative concentration requirement as a de minimis cutoff for vents where the epoxide content is very low and emissions are very small. The EPA believes that the HAP concentration and emission de minimis cutoffs in definition of the process vent (discussed above in Section V.C) adequately address these vents.

Finally, the proposed existing source concentration limit was 20 ppmv of total epoxides. Other rules, such as the HON, allow the option of determining outlet concentration limits on a TOC basis. In many instances in the polyether polyols industry, the EPA believes that all the TOC in the emission stream will be epoxides, making the TOC and epoxide concentration equivalent. In fact, if there were other TOC in the stream, compliance with a 20 ppmv TOC limit would mean that the epoxide concentration would necessarily be less than 20 ppmv. For these reasons, the EPA believes that having the alternative concentration limits based on total epoxides or TOC is appropriate for this rule. As discussed later in Section V.J, the EPA decided to allow Method 25A (which is designed to measure TOC) to determine compliance with the alternative concentration limits.

E. Flares as a Reference Control Technology

Two commenters requested that the EPA allow flares as a reference control technology for process vents at existing and new sources. The EPA agreed with the commenters that flares are an acceptable reference control technology for situations where the required organic HAP emission reduction is 98 percent or less. The final rule allows flares as a reference control technology for epoxide process vent emissions at existing sources, for Group 1 nonepoxide organic HAP process vent emissions at new and existing sources, and for nonepoxide organic HAP process vent emissions from catalyst extraction at new and existing sources. However, the data presented by the commenters do not support a destruction efficiency of 99.9 percent for flares combusting EO and PO, which is the equivalent percent reduction efficiency for the epoxide process vent limitation for new sources. Therefore, the EPA cannot allow flares as a reference control technology for epoxide process vent emissions at new sources.

F. Group Determination on an Individual Process Vent Basis for Nonepoxide Organic HAP Emissions From Making or Modifying the Product

In addition to the use of epoxides reactants, some polyether polyol producers use organic HAP as initiators, solvents, viscosity adjusters, or in other ways to provide special properties to the final products. To address emissions of these nonepoxide organic HAP, the proposed rule contained requirements for ''nonepoxide organic HAP used in making or modifying the product.'' To determine whether control of these nonepoxide organic HAP emissions was required, the proposed rule used a ''group'' applicability approach, where vents that were classified as Group 1 were required to be controlled by 90 percent. The proposed rule required that the group determination be performed on an aggregate basis. That is, the stream characteristics for all process vents from continuous unit operations within the PMPU that were associated with the use of the nonepoxide organic HAP to make or modify the product were combined and the group criteria applied to the theoretical combined stream. Similarly, the batch vent group determined was on an aggregate basis.

Two commenters raised the point that the equations and other criteria for deciding whether a vent is Group 1 or Group 2 were based on cost-effectiveness decisions related to controlling individual process vents, and that those equations were borrowed from other rules, where they were applied on an individual vent basis. The commenters requested that owners or operators have the option of making the group determinations for nonepoxide process vents on a vent-by-vent basis, rather than being required to do the group determination for the combination of all process vents.

The EPA agrees with the statement that the Group 1 criteria are essentially cost-effectiveness decisions. The group determination criteria in other MACT standards, specifically the HON (for process vents from continuous unit operations) and Polymers and Resins I and IV (for process vents from batch unit operations), are based on cost effectiveness. Prior to proposal, the EPA concluded that the cost-effectiveness based group criteria from the HON and the Polymers and Resins rules were also appropriate measures of the cost effectiveness of controlling process vent streams at polyether polyols facilities, given the similarities in the process vent stream parameters between the affected industries. Therefore, these group determination criteria were borrowed for the proposed subpart PPP. However, the EPA does recognize that in all three of the rules cited above, the group determination is applied to individual process vents.

The EPA agrees that the TRE index approach was developed for, and has been applied to, individual vents. The EPA further agrees that applying the TRE approach to the combination of process vents from continuous unit operations in a PMPU is not appropriate without conducting an analysis to validate the equations for the combination of vents, or developing new equations. Rather than take this approach, the EPA has decided, in the final rule, to apply the Group 1 criteria for process vents from continuous unit operations that use nonepoxide organic HAP to make or modify the product to individual process vents.

For process vents from batch unit operations that use nonepoxide organic HAP to make or modify the product, the Group 1 equations are the same equations employed in the Polymers and Resins I and IV MACT standards (40 CFR part 63, subparts U and JJJ, respectively). The EPA agrees with the commenters that in these polymers and resins standards, the Group criteria are applied to individual vents. However, unlike the TRE for process vents from continuous unit operations, the group determination approach that is used in subparts U, JJJ, and PPP, was originally developed to be used for either individual vents or the combination of vents.

The original source of the batch vent group determination approach is the Batch ACT document. On page 7–5 of that document, the EPA states ''The control option requirements presented in Chapter 6 apply to (1) individual batch VOC process vents to which the annual mass emissions and average flowrate cutoffs are applied directly, and (2) aggregated VOC process vents for which a singular annual mass emission total and average flowrate cutoff value is calculated and for which the option is applied across an aggregate of sources.'' Therefore, for process vents from batch unit operations, the EPA disagrees with the statements that the group determination equations are being used ''in a totally different context'' and that there is no supporting rationale for using them. The final rule retains the requirement that the Group criteria be applied to the nonepoxide organic HAP

emissions from the combination of process vents from batch unit operations associated with the use of nonepoxide organic HAP to make or modify the product.

G. Possibility of Dual Controls for Nonepoxide Organic HAP Emissions From Making or Modifying the Product

As discussed above, the proposed rule required group determinations for the nonepoxide organic HAP process vent emissions from making or modifying the product. One commenter pointed out that the proposed rule was not clear about when and where to make this group determination. The commenter also noted that a process vent that uses a control technique for epoxides only (e.g., a scrubber or ECO) would require a second control technique for the nonepoxide organic HAP emissions.

The EPA considered the commenter's points and the options suggested by the commenter. The final rule requires that the group determination for nonepoxide organic HAP emissions be made after the stream has been controlled for the epoxide emissions. The EPA believes that this approach addresses the situation regarding the possibility of dual control. If the epoxide control device also reduces nonepoxide emissions, then that control would impact whether the vent (or group of batch vents) is Group 1. Therefore, control of nonepoxide emissions along with the epoxides will impact whether controls are required at all. If the vent (or group of vents) still has sufficient nonepoxide organic HAP emissions after the epoxide control device to satisfy the Group 1 criteria, the EPA does not believe it is unreasonable to require an additional control device to achieve the specified percent reduction of the nonepoxide emissions.

H. Worst-Case Testing Requirements

The proposed rule required that performance tests for process vents be conducted during worst-case operating conditions for the process. Four commenters requested that this requirement be deleted from the rule.

Worst-case testing requirements were not deleted from the final rule, but were revised. The EPA's reason for requiring compliance testing under worst-case conditions is so that the reduction efficiency of the control device is documented under the most challenging conditions for that control device, especially since commenters noted how difficult it is to represent a typical venting episode. The phrase ''worst-case'' in the proposed rule referred to the operating conditions of the process (or PMPU). The worst-case testing requirement has been revised to require testing during the worst-case conditions with respect to the combustion, recovery, or recapture (i.e., control) device.

Presumably, the control device should function as well or better under conditions that are not as challenging. By revising the rule to require testing during the worst-case conditions with respect to the control device, continuous monitoring of operating parameters established during the test provides a reasonable measure of continuous compliance with the efficiency requirement under all conditions.

The commenters asserted that there is no obvious technological difference that would require a different approach to performance testing in this rule from other regulations that have allowed performance tests during representative operating conditions. The EPA disagrees with the commenters' rationale. The EPA believes that there are obvious technological differences from the polyether polyols industry to industries previously regulated (particularly SOCMI type industries) since polyether polyols are produced on a batch basis. There is much more variance in the process vent parameters (i.e., flow and concentration) for process vent streams from batch unit operations, compared to process vents from continuous unit operations. In fact, this point was stressed by commenters. The EPA believes that it is more appropriate to compare the requirements of this rule with other rules that also regulate industries that operate on a batch basis. For this rule, the EPA not only compared the worst-case testing conditions with other rules regulating batch processes, but adopted similar language to that which is contained in the Pharmaceutical Production NESHAP (40 CFR part 63, subpart GGG).

The EPA would like to clarify a misconception related to these worst-case testing provisions. It is not the intent that production schedules be significantly altered, or that impractical scenarios be created for testing that would never occur in actual production. In other words, the EPA intends that testing be conducted for the worst-case situation that can reasonably be expected to occur during normal production. In order to clarify this intent, the EPA has added language in § 63.1438, the general testing section of the rule. This new language specifies that absolute worst case testing conditions does not include situations that could cause damage to equipment, situations that necessitate that the owner or operator make products that do not meet an existing specification for sale to a customer, or situations that necessitate that the owner or operator make products in excess of demand.

The added language in § 63.1438 also specifies the time period in which the worst-case conditions are to be determined. This time period is either the 6-month period that ends 2 months before the Notification of Compliance Status is due, or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test. By limiting the worst-case conditions to one of these 6-month periods, the rule eliminates the need for an owner or operator to consider endless possible production scenarios, and allows them to focus on those production scenarios in the 6-month period selected by the owner or operator.

In conclusion, the EPA believes that requiring that performance tests for process vents from batch unit operations during absolute worst-case conditions is necessary to ensure that the emission limitations in the rule are achieved. The EPA also believes that, with the modifications to the rule made after proposal, that the worst-case provisions are reasonable and workable for the polyether polyols industry.

I. Engineering Calculations as an Alternative to Performance Testing

Three commenters voiced concern over the feasibility, accuracy, expense, and safety of measuring emissions from process vents from batch unit operations. The commenters stated that a performance test on these short duration, variable vents is likely to be very inaccurate and potentially dangerous. Two of the commenters recommended that a material balance based on common engineering calculations should be allowed in the final rule as a compliance demonstration option. The commenters stated that engineering calculations would provide a more accurate, less costly, and significantly safer means to verify compliance.

The EPA recognizes that there are issues related to the feasibility, accuracy, and expense of testing process vents from batch unit operations. The EPA would refer readers to Section 7.3 of the Batch ACT for a detailed discussion of these issues. However, the EPA does believe that accurate emission tests can be conducted for these process vents.

One reason that the EPA has historically required performance testing for control devices that reduce emissions from process vents, when engineering analyses are allowed for

other emission sources (such as storage vessels), is that emissions from process vents are typically significantly larger than those from other emission sources. When emissions are larger, the EPA believes that it is important that the effectiveness of the control device be accurately determined by a performance test.

Given that the magnitude of the emissions was a part of the basis for requiring performance tests, the EPA believes that it is reasonable to allow an alternative to performance testing for a process vent control device if emissions being routed to the device are comparable to the emissions that would be vented to control devices for other emission sources for which performance tests are not required. Therefore, the EPA decided that engineering assessments could be allowed in lieu of performance testing for ''small'' control devices that reduce HAP emissions from process vents. For the Pharmaceutical Production NESHAP, the EPA also determined that it was appropriate to allow engineering calculations as an alternative to performance testing for small control devices, where a small control device is defined as one with uncontrolled annual HAP emissions of less than 10 tons/yr (9.1 Mg/yr). The EPA believes that this level of uncontrolled emissions is also appropriate to define a small control device for the polyether polyols industry. Therefore, the final rule allows the use of a design evaluation instead of a performance test if the control device receives less than 10 tons/yr (9.1 Mg/yr) uncontrolled emissions from one or more PMPUs.

The exemption from performance testing for small control devices discussed above should help to alleviate some of the concerns raised by the commenters. Many of the concerns related to the feasibility, accuracy, and expense of testing these batch vents are due to the short duration, variable nature of batch venting episodes. The EPA believes that if a control device receives more than 10 tons/yr (9.1 Mg/yr) of uncontrolled HAP emissions, it is likely that the vent streams being routed to the device are of longer duration and less variable, thus making it easier to conduct the performance test.

However, the EPA also recognizes that the small control device exemption will not totally eliminate the concerns raised by the commenters. Therefore, the EPA made other changes to the testing requirements to address potential problems related to the testing of batch process vents, which are briefly discussed below.

Since batch emission episodes can be less than 1 hour, the rule was changed to specify that test runs be conducted for the complete duration of the batch venting episode or 1 hour, whichever is less. Other references to 1-hour periods were also removed.

The proposed rule required the use of Method 1 or 1A to select sampling sites. Commenters claimed that, in many instances, neither method would be appropriate for the batch vent streams. The rule was restructured by separating the paragraph addressing the use of Method 1 or 1A for sample or velocity traverses from the paragraphs specifying the sampling site location. In other words, if the owner or operator conducts a sample or velocity traverse, the final rule requires that Method 1 or 1A be used. However, it does not require that these methods be used to select sampling sites.

With regard to the safety issue, the final rule states that, in cases where it is imperative to limit any leakage of emissions into the work atmosphere, a sampling port with a double seal should be installed so that the probe can be inserted and removed without any leakage of exhaust gas into the work atmosphere. Further, the final rule requires that permanent sampling ports be installed at the inlet to the control device during a period when it is most convenient (or least disruptive) to shut the process down (e.g., during a scheduled maintenance outage). In addition to these specific requirements, a general requirement was added that allows owners or operators to eliminate potential testing scenarios if the test could create a situation which could cause plant or testing personnel to be subject to unsafe conditions.

In conclusion, the EPA acknowledges that issues exist with regard to the testing of emissions from batch process units. Changes have been made to the final rule to address these issues. However, the Agency maintains that numerous other industries that utilize batch processes are regulated by MACT standards, and are able to conduct performance tests. The EPA believes that the commenters did not provide sufficient rationale why the polyether polyols industry presents unique testing problems that are not present in these other industries that utilize batch processes. Therefore, the final rule requires that control devices that receive more than 10 tons/yr (9.1 Mg/yr) of uncontrolled organic HAP emissions conduct tests to demonstrate control device performance.

J. Allowable Test Methods for Control Efficiency Determinations

The proposed rule required test Method 18 (40 CFR part 60, appendix A), or any other method or data that have been validated according to Method 301 (40 CFR part 63, appendix A) for control device efficiency determinations. Three commenters noted that this requirement was inconsistent with the test methods used by the facility whose data established the new source MACT floor for epoxide process vent emissions (Method 25A of 40 CFR part 60, appendix A, was used). These commenters also discussed the expense of Method 301 validations, and noted that the proposed rule relied on Method 25A in other parts of the rule (for wastewater), and that other rules (such as the Polymers and Resins IV rule) allow Method 25A without Method 301 validation.

The EPA agrees that allowing of the use of Method 25A would provide more flexibility, and potentially provide the opportunity for less costly testing. However, the EPA believes that Method 25A should be used only after an accurate response factor has been determined. The importance of calibrating a flame ionization detector (FID) reading obtained using Method 25A with respect to a certain compound (adjustment by response factor) depends on how the Method will be used to demonstrate compliance with the standard. In general, the EPA believes that an accurate response factor is necessary in cases where Method 25A is used to demonstrate control efficiency across a device where the composition of the stream may change, or in situations where multiple components, including non-HAP VOC, are present. Because the relative proportion of organic compounds may change across the control device, appropriate response factors are needed to accurately quantify TOC at the inlet and outlet of a control device. In addition, the EPA believes that owners and operators should have the opportunity to demonstrate compliance at the outlet of a control device by measuring 20 ppmv TOC or less. Therefore, the final rule does allow the use of Method 25A under certain conditions. The following describes the choices of test methods allowed in the final rule: (1) Method 18 (40 CFR part 60, appendix A) to determine HAP concentration in any control device efficiency determination; (2) Method 25 (40 CFR part 60, appendix A) to determine total gaseous nonmethane organic concentration for control efficiency determinations in combustion devices; (3) Method 25A (40 CFR part

60, appendix A) to determine the HAP or TOC concentration for control device efficiency determinations under the conditions specified in Method 25 (40 CFR part 60, appendix A) for direct measurement of an effluent with a flame ionization detector, or in demonstrating compliance with the 20 ppmv TOC outlet standard. As an alternative, any other method or data that have been validated according to the applicable procedures in Method 301 (40 CFR part 63, appendix A) may be used.

K. Site-Specific Onset of Extended Cookout

In the proposed rule, the EPA recognized that extended cookout, or ECO, is a pollution prevention alternative used by some polyether polyols producers to reduce epoxide emissions. The proposed rule required that owners or operators of existing sources using ECO achieve the same 98 percent emission reduction (99.9 percent for new sources) that was required for owners or operators using combustion, recovery, or recapture devices. In order to demonstrate a percent efficiency, it was necessary to designate the basis, or the ''uncontrolled'' emissions, for assessing the percent reduction. The point where uncontrolled emissions were to be assessed, called the ''onset'' of the ECO, was defined in the proposed rule as the point when the epoxide concentration in the reactor liquid is equal to 25 percent of the concentration of epoxide in the liquid at the end of the epoxide feed. Commenters supported this default ECO onset, and it has been retained in the final rule.

In addition to using this ''default'' definition of the ECO onset, the proposed rule allowed owners and operators the option of defining the onset of the ECO for their specific process, at another point. The factors required to allow an owner or operator to set a site-specific ECO onset were the profit variable margin (the difference between variable costs (raw materials and energy) of the product and the cost of the raw material). One commenter objected to allowing the establishment of a site-specific ECO onset based on economics, stating that economics can be subjective, making it easy to demonstrate a 98-percent emission reduction.

A late submittal from one commenter challenged the first commenter's argument that the onset of ECO is subjective, noting that one of the pieces of economic information, the price of the raw material, comes from the *Chemical Market Reporter.* However, the other variable in defining the onset of ECO, the product variable margin and the selling price, was the variable that provoked the original commenter's concern. In fact, the commenter providing the late comment stated that the product variable margin has ''a much stronger correlation between product profitability and the economic onset of ECO.''

Due to the subjectivity of the product variable margin, and the strong correlation between the product variable margin and the ECO onset, the EPA agreed with the first commenter. The EPA revised the final rule, removing the option of setting site-specific ECO onsets. Allowing the determination of a site-specific ECO onset is not consistent with the concept of MACT, since, given the subjectivity of this approach, it could effectively result in different levels of control for facilities in the same source category.

L. Parameter Monitoring Excursion Definitions

As a result of public comments, the EPA decided to restructure and expand the sections associated with parameter monitoring excursions in order to simplify and clarify these provisions in subpart PPP. The goal of these revisions was to include all of the necessary information about excursions and compliance in one location.

At proposal, the definitions of excursions and the statement that owners and operators were out of compliance for each parameter monitoring excursion were located in separate paragraphs. In the final rule, these concepts are combined into the same paragraph (§ 63.1438(f)).

Basically, there are two ways for excursions to occur. The first is if the average parameter value measured is above a maximum, or below a minimum, established value. The second is if insufficient monitoring data are collected. Revisions were made for both of these instances.

Provisions were added specifying that monitoring data recorded during start-ups, shutdowns, and malfunctions, and during periods of non-operation of the affected source (or portion thereof) are not to be included in any average computed. In addition, the EPA has added paragraphs that describe the periods that are not to be included when determining the period of control or recovery device operation, for purposes of determining whether sufficient monitoring data were collected. Under the new provisions, the following periods are not to be used when determining if sufficient monitoring data are available for the owner or operator to avoid having an excursion: periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments; start-ups; shutdowns; malfunctions; and periods of non-operation of the affected source that result in the cessation of emissions to which the monitoring applies.

M. Monitoring During Start-ups, Shutdowns, and Malfunctions

The proposed rule required that monitoring data be collected during periods of start-up, shutdown, or malfunction (SSM). Commenters requested that the EPA allow a provision for ceasing to collect monitoring data at a particular control device if operating that monitoring device during periods of SSM would damage the monitoring device. The EPA revised the final rule to allow the owner or operator to cease collecting monitoring data if the owner or operator has illustrated that the monitoring device would be damaged or destroyed if it were not shut down during the SSM period. Such a provision must be included in the Start-up, Shutdown, and Malfunction Plan. Getting such a provision in the Start-up, Shutdown, and Malfunction Plan is accomplished by submitting a request, and rationale defending the request, in the Precompliance Report or in a supplement to the Precompliance Report.

N. Process Vent Control Requirement for Epoxide Emissions From New Sources

A major issue raised in the public comments that did not result in a rule change was related to the new source limitation for process vent epoxide emissions. The proposed rule included a requirement that epoxide emissions from process vents at new affected sources be reduced by 99.9 percent or greater. Several commenters objected to this requirement, and provided numerous reasons supporting their objections. Most of these reasons were related to the facility identified by the EPA as the ''best performing facility,'' upon which this new source limitation was based. The commenters felt that this facility was not representative of the industry, and that a separate subcategory should be created for this facility. The commenters also pointed out that there were inconsistencies between the test methods used by this best performing facility to verify their epoxide emission reduction and the test methods that were contained in the proposed rule. Further, the commenters stated that the 99.9 percent limitation would force new sources to utilize combustion technology, which would

increase criteria pollutants and create potential safety hazards.

The EPA spent a great deal of time evaluating all aspects of this issue. The EPA concluded that the available data do not support the assertion that the polyether polyols source category should be subcategorized in the manner suggested by the commenters. Also, the fact that specific test data (which were analyzed in detail by the Agency) are available for this facility and that permit conditions are in place requiring compliance at the 99.9 percent level leaves the Agency little latitude in establishing new source MACT at a less stringent level. Discussion of each of the individual points raised by commenters is provided below.

1. Subcategorization

As noted above, several commenters stated their belief that the facility that formed the basis for the 99.9 percent new source epoxide emission requirement was not representative of the industry, and that a separate subcategory should be created for this facility. The commenters discussed three characteristics of this facility to support this assertion. The first was the method of operation. The other two were the facility's size and the fact that the facility utilized two incinerators.

By ''method of operation,'' commenters were referring to the venting method employed during the reaction phase of the production process. The commenters stated that the best performing facility is not a similar source, due to the fact that the reactor vents during the epoxide feed step of the reaction. The commenters claimed that such an operation would send high concentrations of epoxides to the control device as a continuous or semi-continuous stream, resulting in an artificially high destruction efficiency (compared to a facility that does not vent unreacted epoxides continuously).

Prior to the development of the proposed rule, the EPA understood the technical merits of this argument, but did not have sufficient data to allow a comparison of the venting and emission characteristics of this facility with other polyether polyols production facilities. Therefore, the EPA requested additional data in order to conclude whether or not subcategorization was warranted on this basis. Therefore, the preamble to the proposed rule stated this data need and specifically requested facility-specific information, in order to allow for further evaluation of this issue (62 FR 46814).

In response to this request, one commenter presented a comparison of uncontrolled and controlled epoxide emissions for a facility owned by the commenter that does not vent during the epoxide feed (i.e., a ''nonvented'' facility) with the best controlled facility, which does vent during the epoxide feed (i.e., ''vented''). Another commenter provided a comparison of two facilities owned by the same company that were reported to be similar in most aspects, except with respect to when the facility vents the reactor (one was vented and one was nonvented). In addition, one commenter presented a hypothetical comparison between a venting facility and a nonventing facility. All of these comparisons led to conclusions by these commenters that uncontrolled emissions at vented facilities are much higher than uncontrolled emissions at nonvented facilities, which would give vented facilities an unfair advantage in achieving a higher epoxide emission reduction.

The EPA appreciated these comparisons. However, several inconsistencies and assumptions were identified that caused the Agency to conclude that these comparisons do not, independently, provide a sufficient basis for subcategorizing the polyether polyols source category into vented and nonvented subcategories. Some of EPA's concerns with these comparisons are discussed below.

With regard to the comparison of an actual facility with the best performing facility, the EPA found that the epoxide emission estimates used for the best performing facility in the commenter's comparison were drastically different from the emission data that were directly submitted to the EPA by the best performing facility. Also, the emission data from the commenter's facility had been updated from the data originally submitted during an EPA plant site visit to that facility. The estimates provided in the comments were lower than the original estimates due to process improvements at the facility (that were not related to the method of operation). The EPA conducted a similar comparison of the uncontrolled epoxide emissions at these same two facilities using the data originally submitted to the EPA by the two companies. The results were not in accordance with those presented by the commenter. In fact, the uncontrolled emission factor for the commenter's facility was higher than the best controlled facility's factor. Clearly, the analysis of the data available to the Agency does not support this commenter's analysis.

The actual facility analysis conducted by a second commenter stated that their analysis consisted of two facilities owned by the commenter that were ''similarly sized units.'' However, the EPA found that the production capacity for the nonvented reactor was larger than that for the vented reactor, and the emissions were not adjusted accordingly.

Finally, the hypothetical analysis assumed that a water-cooled condenser was used at the reactor vent. The EPA believes that the use of more efficient refrigerated condensers, which would result in considerably lower uncontrolled emissions, is more representative of practice in the industry.

Given these and other inconsistencies in the facility comparisons provided by commenters, the EPA could not conclude that subcategorization was necessary.

No commenters submitted the facility-specific data that were requested in the proposal preamble. Therefore, even if the examples provided by the commenters had led to the conclusion that subcategorization was warranted, the EPA did not have sufficient facility information to allow a complete subcategorization evaluation.

However, the Agency still wanted to attempt to address the commenters' concerns on this issue. Given the lack of facility-specific data provided by the industry prior to proposal and during the public comment period, the EPA conducted a brief telephone survey to inquire specifically about the method of operation at polyether polyol production facilities. Representatives from all the facilities in the process vent database were called and asked to describe their method of venting during epoxide feed. Of the facilities for which the EPA was able to collect method-of-venting data, 24 percent (including the best-controlled facility) reported venting during the epoxide feed step, and 76 percent reported that their facilities did not vent during the epoxide feed step. Therefore, the EPA concluded that the manner of operation of the best-controlled facility was not ''unique,'' as was claimed by several of the commenters.

The EPA then sought to determine whether the different venting modes during epoxide feed resulted in differences in the amount and pattern of emissions and the achievable degree of emission reduction. The EPA determined that using a facility's uncontrolled emission factor (mass uncontrolled epoxide emissions per mass of polyol product produced) was the best method of comparison, and calculated such a factor for each facility for which sufficient information was available. For the vented facilities, the median uncontrolled emission factor

was 0.17 lb epoxide emissions per 1000 lb of product. The mean uncontrolled emission factor was considered to be an inadequate measure of central tendency, because the data points for vented facilities had a widely varied distribution, with two orders of magnitude difference between the ends of the range. For the nonvented facilities, the median uncontrolled emission factor was 1.09. The commenters asserted that uncontrolled epoxide emissions at vented facilities are considerably higher than those at nonvented facilities. However, the results of the EPA's analysis, based on the best information available, clearly do not support this assertion, since the median uncontrolled emission factor calculated for nonvented facilities is over six times higher than the median uncontrolled emission factor for vented facilities.

In conclusion, based on all of the information available to the Agency, the EPA was unable to determine a different emission trend between the vented and nonvented groups from the data made available to the Agency between proposal and promulgation. Therefore, the EPA did not subcategorize the industry based on the method of operation.

The commenters' second rationale for supporting their claim that the best-controlled facility is not a similar source was that the facility's production capacity is many times that of other sources in the source category. It is the EPA's policy (57 FR 31576; July 16, 1992) that subcategories, or subsets of similar emission sources within a source category, be defined if technical differences in emissions characteristics, processes, control device applicability, or opportunities for pollution prevention exist within the source category. The EPA does not believe that the fact that the best-controlled facility has a larger production capacity satisfies any of these criteria. Further, since one facility in the process vent database has a capacity that is 83 percent of the best-controlled facility's capacity, the EPA also disagrees that the production capacity at the best-controlled facility is unusually large in comparison to the rest of the source category.

The third argument given by the commenters to support their claim that the best-controlled facility is not similar to other affected sources was that this facility has two incinerators, and that no other source uses incineration. The EPA disagrees with the commenters' claim that the best-controlled facility is the only source using an incinerator to control epoxide emissions, since there is another facility in the database that also uses incineration. Further, the fact that a source has a better control than all other facilities in the source category through the use of one or more incinerators is not a sufficient basis for asserting that the source should be subcategorized. The purpose of MACT is to ensure that regulated sources meet the control standards achieved by the best performing sources in the category. Subcategorization on the basis of the control technology utilized would undermine the very concept of MACT.

In addition to the evaluation of the individual points raised by commenters, the EPA also considered whether these characteristics of the best-controlled facility collectively form a basis for subcategorization. The EPA concluded that, based on the facility-specific process, emissions, and emissions control information provided to the Agency by the polyether polyol industry, a separate subcategory should not be created solely for the best-controlled facility.

2. Inconsistency in Test Methods

An additional concern raised by two commenters was that the data from the best-controlled facility do not support the new source standard because the Agency used information from the State permit and its corresponding performance test reports as data for the best-controlled facility. The commenters claimed that these data were submitted to the State agency to demonstrate compliance with permit emission limitations for VOC, not HAP, and to document that the incinerators were meeting the required VOC destruction efficiency. They noted that there are several significant inconsistences between the test methods used and the methods required in the proposed standards.

The EPA disagrees with the commenters' statement that the data from the best-controlled facility do not support the new source standard because the performance test was conducted to determine VOC destruction efficiency instead of epoxide emission destruction efficiency, and that the permit conditions are specific to VOC. The primary pollutant in the stream was propylene oxide (PO), and this is the pollutant for which Method 18, at the inlet of the incinerator, and Method 25A, at the outlet of the incinerator, were calibrated during the test at the best-controlled facility. Therefore, even though the test and permit cite VOC destruction efficiency, it is clear that it is the destruction of PO that was tested and regulated at the best-controlled facility. The commenters' concerns about inconsistencies between the test reports and the proposed standards was discussed in greater detail earlier in this document, in relation to the changes to the test method requirements.

3. Increase in Criteria Pollutant Emissions

Two commenters explained that the combustion technology utilized by the best-controlled facility (which would be necessary to meet the 99.9 percent requirement) results in an increase in criteria pollutants, which were not included in EPA's MACT floor analysis, while alternative control technologies, such as scrubbers or ECO, would be expected to cause significantly lower nitrogen oxides (NO_X) emissions. The EPA is aware that incineration has secondary criteria pollutant emissions. However, MACT floor decisions, under the Clean Air Act, are based on the reduction of HAP emissions, and not on their secondary impacts. The EPA also realizes that an increase in criteria pollutants could trigger Prevention of Significant Deterioration (PSD) and/or New Source Review (NSR). The EPA has addressed this issue in previous NESHAP, by referring to a July 1, 1994 guidance memorandum issued by the EPA (available on the Technology Transfer Network; see ''Pollution Control Projects (PCP) and NSR Applicability'' from John S. Seitz, Director, Office of Air Quality Planning and Standards to EPA Regional Air Division Directors). In that memorandum, the EPA provided guidance for permitting authorities regarding their ability to approve the PCP exemptions (from PSD review and major NSR) for source categories other than electric utilities that use add-on controls and switching to less-polluting fuels to reduce emissions of toxic pollutants. In the July 1, 1994 guidance memorandum, the EPA specifically identified the combustion of organic toxic pollutants as an example of an add-on control that could be considered a PCP and an appropriate candidate for a case-by-case exclusion from major NSR. The EPA is alert to potential NSR conflicts and feels that this memorandum will alleviate most NSR/PSD review concerns. In the event that it will not, the EPA will attempt to create implementation flexibility on a case-by-case basis.

4. Safety Concerns

The commenters claimed that the EPA has failed to account for potential process safety considerations associated with the combustion of ethylene oxide (EO). The safety issues of incineration of epoxides were adequately addressed at

the best-controlled facility and the other facility in the database that has incineration. Therefore, the EPA did not find these reasons to be sufficient to justify eliminating the data from the best-controlled facility when determining the MACT floor for new sources.

VII. Administrative 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 (section 307(d)(7)(A))).

B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, 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.

The EPA has determined that this rule does not meet any of the criteria enumerated above and therefore, does not constitute a ''significant regulatory action'' under the terms of Executive Order 12866.

C. Executive Order 13045

Executive Order 13045, ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that the EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Order has the potential to influence the regulation. This final rule falls into that category only in part: The minimum rule stringency is set according to a congressionally-mandated, technology-based lower limit called the ''floor,'' while a decision to increase the stringency beyond this floor can be based on risk considerations. Only to the extent that the Agency may consider the inherent toxicity of a regulated pollutant, and any differential impact such a pollutant may have on children's health, in deciding whether to adopt control requirements more stringent than the floor level.

This final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866. No children's risk analysis was performed for this rulemaking because no alternative technologies exist that would provide greater stringency at a reasonable cost, and therefore the results of any such analysis would have no impact on the stringency decision.

D. Paperwork Reduction Act

The information collection requirements in this rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 1811.02) and a copy may be obtained from Sandy Farmer by mail at OP Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., SW.; Washington, DC 20460, by email at farmer.sandy@epa.gov, or by calling (202) 260–2740. A copy may also be downloaded off the internet at http://www.epa.gov/icr. The information requirements are not effective until OMB approves them.

The public recordkeeping and reporting burden for this collection of information is estimated to average 1,046 hours per respondent for the first year and 162 hours for each of the second and third years (following promulgation of the rule). Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

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

E. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The EPA has also determined that this rule will not have a significant adverse economic impact on a substantial number of small businesses. Consistent with Small Business Administrative (SBA) size standards, a polyether polyols producing firm is classified as a small entity if it has less than 750 employees and is unaffiliated with a larger domestic entity. Based upon this standard, 7 of the 36 polyether polyol producing firms are classified as small entities (i.e., having fewer than 750 employees). The EPA determined that none of these seven small entities will experience an increase in costs as a result of the promulgation of today's rule that is greater than one percent of revenues. This does not qualify as a significant economic impact on a substantial number of small businesses.

F. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides

that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a ''major rule'' as defined by 5 U.S.C. § 804(2).

G. Unfunded Mandates

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in aggregate, or the private sector in any 1 year, nor does the rule significantly or uniquely impact small governments, because it contains no requirements that apply to such governments or impose obligations upon them. Thus, the requirements of the UMRA do not apply to this rule.

H. Executive Order 12875

Under Executive Order 12875, EPA may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments or EPA consults with those governments. If EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments ''to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates.''

Today's rule implements requirements specifically set forth by the Congress in section 112 of the CAA without the exercise of any discretion by the EPA. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule.

I. Executive Order 13084

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. The rule does not affect these entities because they do no own or operate sources subject to this rule and therefore are not required to purchase control systems to meet the requirements of this rule. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

J. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA), Pub. L. 104–113 (March 7, 1996), directs all Federal agencies to use voluntary consensus standards in regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA requires Federal agencies to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards. This section summarizes the EPA's response to the requirements of the NTTAA for the analytical and test methods to be required by this final rule.

Consistent with the NTTAA, the EPA conducted a search to identify voluntary consensus standards. The search identified 15 voluntary consensus standards that appeared to have possible use in lieu of EPA standard reference methods in this rule. However, after reviewing available standards, EPA determined that eight of the candidate consensus standards identified for measuring emissions of the HAP or surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data or other important technical and policy considerations. Seven of the remaining candidate consensus standards are new standards under development that EPA plans to follow, review and consider adopting at a later date.

One consensus standard, ASTM Z7420Z, is potentially practical for EPA use in lieu of EPA Method 18 (See 40 CFR part 60, appendix A). At the time of EPA's search, the ASTM standard was still under development and EPA had provided comments on the method. The EPA also compared a draft of this ASTM standard to methods previously approved as alternatives to EPA Method 18 with specific applicability limitations. These methods, designated as ALT–017 and CTM–028, are available through EPA's Emission Measurement Center Internet site at www.epa.gov/ttn/emc/tmethods.html. The proposed ASTM Z7420Z standard is very similar to these approved alternative methods. When finalized and adopted by ASTM, the standard may be equally suitable for specific applications. However, today's rule does not adopt the ASTM standard at this time as it is not practical to do so until the potential candidate is final and EPA has reviewed the final standard. The EPA plans to continue to follow the progress of the standard and will consider adopting the ASTM standard at a later date.

This rule requires standard EPA methods known to the industry and States. Approved alternative methods also may be used with prior EPA approval.

List of Subjects in 40 CFR Part 63

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

Dated: May 12, 1999.

Carol M. Browner,

Administrator.

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

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR AFFECTED 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 PPP to read as follows:

Subpart PPP—National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production

Sec.

Subpart PPP—National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production

§ 63.1420 Applicability and designation of affected sources.

(a) *Definition of affected source.* The provisions of this subpart apply to each affected source. Affected sources are described in paragraphs (a)(1) through (4) of this section.

(1) An affected source is either an existing affected source or a new affected source. Existing affected source is defined in paragraph (a)(2) of this section, and new affected source is defined in paragraph (a)(3) of this section.

(2) An existing affected source is defined as the group of one or more polyether polyol manufacturing process units (PMPUs) and associated equipment, as listed in paragraph (a)(4) of this section, that is not part of a new affected source, as defined in paragraph (a)(3) of this section, and that is located at a plant site that is a major source.

(3) A new affected source is defined as a source that meets the criteria of paragraph (a)(3)(i), (ii), or (iii) of this section. The situation described in paragraph (a)(3)(i) of this section is distinct from those situations described in paragraphs (a)(3)(ii) and (iii) of this section.

(i) At a site without organic HAP emission points before September 4, 1997 (i.e., a ''greenfield'' site), the group of one or more PMPUs and associated equipment, as listed in paragraph (a)(4) of this section, that is part of a major source, and on which construction for the PMPU(s) commenced after September 4, 1997;

(ii) The group of one or more PMPUs meeting the criteria in paragraph (g)(1)(i) of this section; or

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

(4) The affected source also includes the emission points and equipment specified in paragraphs (a)(4)(i) through (vi) of this section that are associated with a PMPU (or a group of PMPUs) making up an affected source, as defined in § 63.1423.

(i) Each waste management unit.

(ii) Maintenance wastewater.

(iii) Each heat exchange system.

(iv) Equipment required by or utilized as a method of compliance with this subpart which may include control techniques and recovery devices.

(v) Product finishing operation.

(vi) Each feed or catalyst operation.

(b) *PMPUs without organic HAP.* The owner or operator of a PMPU that is part of an affected source, as defined in paragraph (a) of this section, but that does not use or manufacture any organic HAP during the production of one or more products is only subject to the provisions of this subpart as specified in paragraph (b)(1) or (2) of this section, as applicable. Products or raw material(s) containing organic HAP as impurities

only are not considered organic HAP for the purposes of this paragraph.

(1) If an organic HAP is not used or manufactured in the production of polyether polyols, the PMPU is not subject to any provisions of this subpart, except that the owner or operator shall comply with either paragraph (b)(1)(i) or (ii) of this section. The owner or operator is not required to comply with the provisions of 40 CFR part 63, subpart A (the General Provisions) for that PMPU.

(i) Retain information, data, and analyses used to document the basis for the determination that the PMPU does not use or manufacture 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, engineering calculations, or process knowledge.

(ii) When requested by the Administrator, demonstrate that the PMPU does not use or manufacture any organic HAP.

(2) If an organic HAP is used or manufactured in the production of polyether polyols, but an organic HAP is not used in the production of one or more products that are not polyether polyols, the PMPU is not subject to any provision of this subpart other than paragraph (b)(1)(i) or (ii) of this section during the production of the non-polyether polyol products that do not use or manufacture any organic HAP.

(c) *Emission points included in the affected source but not subject to the provisions of this subpart.* The affected source includes the emission points listed in paragraphs (c)(1) through (12) of this section, but these emission points are not subject to the requirements of this subpart or the provisions of 40 CFR part 63, subpart A.

(1) Equipment that does not contain organic HAP or that contains organic HAP as impurities only and is located at a PMPU that is part of an affected source.

(2) Stormwater managed in segregated sewers.

(3) Water from fire-fighting and deluge systems in segregated sewers.

(4) Spills.

(5) Water from safety showers.

(6) Water from testing of deluge systems.

(7) Water from testing of firefighting systems.

(8) Vessels that store and/or handle material that contains no organic HAP or organic HAP as impurities only.

(9) Equipment that operates in organic HAP service for less than 300 hours during the calendar year.

(10) Loading racks, loading arms, or loading hoses that only transfer liquids containing HAP as impurities.

(11) Loading racks, loading arms, or loading hoses that vapor balance during all loading operations.

(12) Utility fluids, such as heat transfer fluids.

(d) *Processes exempted from the affected source.* The processes specified in paragraphs (d)(1) through (3) of this section are not part of the affected source and are exempted from the requirements of both this subpart and subpart A of this part.

(1) Research and development facilities.

(2) Solvent reclamation, recovery, or recycling operations at hazardous waste treatment, storage, and disposal facilities (TSDF) requiring a permit under 40 CFR part 270 that are not part of a PMPU to which this subpart applies.

(3) Reactions or processing that occur after the epoxide polymerization is complete and after all catalyst removal steps, if any, are complete.

(e) *Primary product determination and applicability.* An owner or operator of a process unit that produces or plans to produce a polyether polyol shall determine if the process unit is subject to this subpart in accordance with this paragraph.

(1) *Initial primary product determination.* The owner or operator shall initially determine the primary product of each process unit in accordance with paragraphs (e)(1)(i) through (iii) of this section.

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

(ii) If a process unit produces more than one intended product at the same time, the primary product shall be determined in accordance with paragraph (e)(1)(ii)(A) or (B) of this section.

(A) The product for which the process unit has the greatest annual design capacity on a mass basis shall represent the primary product of the process unit, or

(B) If a process unit has the same maximum annual design capacity on a mass basis for two or more products and if one of those products is a polyether polyol, then the polyether polyol shall represent the primary product of the process unit.

(iii) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraph (e)(1)(iii)(A) or (B) of this section based on the anticipated operations for the 5 years following September 4, 1997 for existing process units, or for the first year after the process unit begins production of any product for the new process units. If operations cannot be anticipated sufficiently to allow the determination of the primary product for the specified period, applicability shall be determined in accordance with paragraph (e)(2) of this section.

(A) If the flexible operation unit will manufacture one product for the greatest operating time over the specified 5-year period for existing process units, or the specified 1-year period for new process units, then that product shall represent the primary product of the flexible operation unit.

(B) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest expected production on a mass basis over the specified 5-year period for existing process units, or the specified 1-year period for new process units shall represent the primary product of the flexible operation unit.

(iv) If, according to paragraph (e)(1)(i), (ii), or (iii) of this section, the primary product of a process unit is a polyether polyol, then that process unit shall be designated as a PMPU. If the plant site is a major source, that PMPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source or part of an affected source comprised of one or more other PMPUs and associated equipment, as listed in paragraph (a)(4) of this section, and subject to this subpart. If the primary product of a process unit is not a polyether polyol, then that process unit is not a PMPU.

(2) *Provisions if primary product cannot be determined.* If the primary product cannot be determined for a flexible operation unit in accordance with paragraph (e)(1)(iii) of this section, applicability shall be determined in accordance with this paragraph.

(i) If the owner or operator can determine that a polyether polyol is not the primary product, then that flexible operation unit is not a PMPU.

(ii) If the owner or operator cannot determine that a polyether polyol is not the primary product as specified in paragraph (e)(2)(i) of this section, applicability shall be determined in accordance with paragraph (e)(2)(ii)(A) or (B) of this section.

(A) If the flexible operation unit is an existing process unit, the flexible operation unit shall be designated as a PMPU if a polyether polyol was produced for 5 percent or greater of the total operating time of the flexible operation unit since September 4, 1997.

(B) If the flexible operation unit is a new process unit, the flexible operation unit shall be designated as a PMPU if the owner or operator anticipates that a polyether polyol will be manufactured in the flexible operation unit at any time in the first year after the date the unit begins production of any product.

(3) *Annual applicability determination for non-PMPUs that have produced a polyether polyol.* Once per year beginning June 1, 2004 the owner or operator of each flexible operation unit that is not designated as a PMPU, but that has produced a polyether polyol at any time in the preceding 5-year period or since the date that the unit began production of any product, whichever is shorter, shall perform the evaluation described in paragraphs (e)(3)(i) through (iii) of this section.

(i) For each product produced in the flexible operation unit, the owner or operator shall calculate the percentage of total operating time over which the product was produced during the preceding 5-year period.

(ii) The owner or operator shall identify the primary product as the product with the highest percentage of total operating time for the preceding 5-year period.

(iii) If the primary product identified in paragraph (e)(3)(ii) is a polyether polyol, the flexible operation unit shall be designated as a PMPU. The owner or operator shall notify the Administrator no later than 45 days after determining that the flexible operation unit is a PMPU, and shall comply with the requirements of this subpart in accordance with paragraph (g)(1) of this section for the flexible operation unit.

(4) *Applicability determination for non-PMPUs that have not produced a polyether polyol.* The owner or operator that anticipates the production of a polyether polyol in a process unit that is not designated as a PMPU, and in which no polyether polyol products have been produced in the previous 5-year period or since the date that the process unit began production of any product, whichever is shorter, shall use the procedures in paragraph (e)(1) or (2) of this section to determine if the process unit is designated as a PMPU, with the exception that for existing process units, owners or operators shall project production for the 5 years following the date that the owner or operator anticipates initiating the production of a polyether polyol, instead of the 5 years following September 4, 1997. If the unit is designated as a PMPU, the owner or operator shall comply in accordance with paragraph (g)(1) of this section.

(5) *Applicability of requirements for PMPUs that are flexible operation units.* The owner or operator of PMPUs that are flexible operation units shall comply with the provisions of this subpart in accordance with paragraphs (e)(5)(i) through (iii) of this section.

(i) *Control requirements.* The owner or operator shall comply with the control requirements of this subpart in accordance with paragraphs (e)(5)(i)(A) and (B) of this section.

(A) During periods when the PMPU produces polyether polyols, the owner or operator shall comply with the provisions of this subpart.

(B) During periods when the PMPU produces products other than polyether polyols, the owner or operator is not required to install additional combustion, recovery, or recapture devices (to otherwise demonstrate compliance). However, the owner or operator shall continue to operate any existing combustion, recovery, or recapture devices that are required for compliance during the production of polyether polyols, with the exceptions provided in paragraph (e)(5)(iv) of this section. If extended cookout (ECO) is the control technique chosen for epoxide emission reduction, then ECO or a control technique providing an equivalent reduction in epoxide emissions should continue to be used for epoxide emission reduction, if the non-polyether polyol being produced uses epoxide monomers.

(ii) *Monitoring requirements.* The owner or operator shall comply with the monitoring requirements of this subpart in accordance with paragraphs (e)(5)(ii)(A) and (B) of this section, and paragraph (e)(5)(ii)(C) of this section if applicable.

(A) The owner or operator shall establish a single parameter monitoring level (for each parameter required to be monitored at each device subject to monitoring requirements) in accordance with § 63.1438(a) based on emission point and control technique characteristics when polyether polyol is being produced.

(B) The owner or operator shall monitor each parameter at each device subject to monitoring requirements at all times (during periods when the PMPU produces polyether polyols, and during periods when the PMPU produces products other than polyether polyols), with the exceptions provided in paragraph (e)(5)(iv) of this section.

(C) If ECO is used to reduce epoxide emissions, a parameter monitoring level shall be established for the production of non-polyether polyol products as the average of the established parameter levels for all product classes produced. During periods when products other than polyether polyols are produced, the ECO shall be performed so that the parameter monitoring level established for the production of non-polyether polyol products is maintained when the ECO is used as a control technique.

(iii) *Group determinations.* For emission points where the owner or operator is required to determine if the emission point is Group 1 according the definitions in § 63.1423 (storage vessels, process vents for nonepoxide organic HAP emissions used to make or modify the product, and wastewater), the owner or operator shall determine the group status based on emission point characteristics when polyether polyol is being manufactured. Group 1 emission points shall be controlled in accordance with paragraph (e)(5)(i) of this section.

(iv) *Exceptions.* During periods when products described in paragraphs (e)(5)(iv)(A) and (B) of this section are produced, the owner or operator is not required to comply with the provisions of this subpart.

(A) Products in which no organic HAP is used or manufactured, provided that the owner or operator comply with paragraph (b)(2) of this section.

(B) Products that make the PMPU subject to 40 CFR part 63, subpart GGG (Pharmaceuticals Production NESHAP).

(6) [Reserved]

(7) [Reserved]

(8) *Requirements for process units that are not PMPUs.* If it is determined that a process unit is not subject to this subpart, the owner or operator shall either retain all information, data, and analysis used to document the basis for the determination that the process unit is not a PMPU, or, when requested by the Administrator, demonstrate that the process unit is not a PMPU.

(9) *PMPUs terminating production of polyether polyols products.* If a PMPU terminates the production of polyether polyol and does not anticipate the production of a polyether polyol in the future, the process unit is no longer a PMPU and is not subject to this subpart after notification is made to the Administrator. This notification shall be accompanied by a rationale for why it is anticipated that no polyether polyol will be produced in the process unit in the future.

(10) *Redetermination of applicability to PMPUs that are flexible operation units.* Whenever changes in production occur that could reasonably be expected to change the primary product of a PMPU that is operating as a flexible operation unit from a polyether polyol to a product that would make the process unit subject to another subpart of this part, the owner or operator shall

reevaluate the primary product, in accordance with paragraphs (e)(3)(i) and (ii) of this section. If the conditions in paragraphs (e)(10)(i) through (iii) of this section are met, the flexible operation unit shall no longer be designated as a PMPU after the compliance date of the other subpart, and shall no longer be subject to the provisions of this subpart after the date that the process unit is required to be in compliance with the provisions of the other subpart. If the conditions in paragraphs (e)(10)(i) through (iii) of this section are not met, the flexible operation unit shall continue to be considered a PMPU and subject to the requirements of this subpart.

(i) The product identified as the primary product is not polyether polyol;

(ii) The production of the product identified as the primary product is subject to another subpart of this part; and

(iii) The owner or operator submits a notification to the Administrator of the pending change in applicability.

(f) *Storage vessel ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (f)(1) through (7) of this section to determine to which process unit a storage vessel shall be assigned.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 (National Emission Standards for Hazardous Air Pollutants for Source Categories) on June 1, 1999, that storage vessel shall be assigned to the process unit subject to the other subpart, and none of the other provisions in this subpart shall apply to that storage vessel.

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

(3) If a storage vessel is shared among process units, then the storage vessel shall be assigned 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., the process unit that 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 only one of those process units is a PMPU subject to this subpart, the storage vessel shall be assigned to that PMPU.

(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 PMPUs 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 PMPUs sharing the storage vessel.

(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 June 1, 1999 or based on the expected utilization for the 5 years following June 1, 1999 for existing affected sources, whichever is more representative of the expected operations for that storage vessel, and based on the expected utilization for the 5 years after initial start-up for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status, as required by § 63.1439(e)(5)(v).

(7) Where a storage vessel is located at a major source that includes one or more process units which place material into or receive material from the storage vessel, but the storage vessel is located in a tank farm (including a marine tank farm), the applicability of this subpart shall be determined according to the provisions in paragraphs (f)(7)(i) through (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 both the process unit and 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 (f)(7)(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 (f)(7)(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 (f)(7)(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 paragraphs (f)(3) through (6) of this section. The predominant use shall be determined among only those process units that meet the criteria of paragraph (f)(7)(i) of this section.

(8) If the storage vessel begins receiving material from (or sending material to) a process unit that was not included in the initial determination, or ceases to receive material from (or send material to) a process unit that was included in the initial determination, the owner or operator shall reevaluate the applicability of this subpart to that storage vessel.

(g) *Changes or additions to plant sites.* The provisions of this paragraph apply to the owner or operator that changes or adds to their plant site or affected source.

(1) *Adding a PMPU to a plant site.* The provisions of paragraphs (g)(1)(i) and (ii) of this section apply to the owner or operator that adds one or more PMPUs to a plant site. A PMPU may be added to a plant site by constructing or reconstructing a process unit to produce polyether polyols. A PMPU may also be added to a plant site due to changes in production (anticipated production or actual past production) such that a polyether polyol becomes the primary product of a process unit that was not previously a PMPU.

(i) If a group of one or more PMPUs is added to a plant site, the added group of one or more PMPUs and their associated equipment, as listed in paragraph (a)(4) of this section, shall be a new affected source and shall comply with the requirements for a new affected source in this subpart upon initial start-up or by June 1, 1999, whichever is later, if the criteria specified in paragraph (g)(1)(i)(A) is met and either the criteria in paragraph (g)(1)(i)(B) or (C) of this section are met.

(A) The process units are new process units, as defined in § 63.1423.

(B) The added group of one or more PMPUs and associated equipment, as listed in paragraph (a)(4) of this section, has the potential to emit 10 tons per year (9.1 megagrams per year) or more of any organic HAP or 25 tons per year (22.7 megagrams per year) or more of any combination of organic HAP, and polyether polyols are currently produced at the plant site as the primary product of an affected source.

(C) A polyether polyol 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 constructed will meet, the General Provisions' definition of a major source in § 63.2.

(ii) If a group of one or more PMPUs is added to a plant site, and the added group of one or more PMPUs does not meet the criteria specified in paragraph (g)(1)(i)(A) of this section and one of the criteria specified in either paragraph (g)(1)(i)(B) or (C) of this section, and the plant site meets, or after the addition will meet, the definition of a major source, the owner or operator of the added group of one or more PMPUs and associated equipment, as listed in

paragraph (a)(4) of this section, shall comply with the requirements for an existing affected source in this subpart upon initial start-up; by June 1, 2002; or by 6 months after notifying the Administrator that a process unit has been designated as a PMPU (in accordance with paragraph (g)(3) of this section), whichever is later.

(2) *Adding emission points or making process changes to existing affected sources.* The provisions of paragraphs (g)(2)(i) and (ii) of this section apply to the owner or operator that adds emission points or makes process changes to an existing affected source.

(i) If any process change or addition is made to an existing affected source that meets the criteria specified in paragraphs (g)(2)(i)(A) and (B) of this section, the entire affected source shall be a new affected source and shall comply with the requirements for a new affected source in this subpart upon initial start-up or by June 1, 1999.

(A) It is a process change or addition that meets the definition of reconstruction in § 63.1423(b). For purposes of determining whether the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct an entire affected source, the equivalent capital cost shall be the entire potentially affected source; and

(B) Such reconstruction commenced after September 4, 1997.

(ii) If any process change is made or emission point is added to an existing affected source, and the process change or addition does not meet the criteria specified in paragraph (g)(2)(i)(A) of this section, the resulting emission point(s) shall be subject to the requirements for an existing affected source in this subpart. The resulting emission point(s) shall be in compliance upon initial start-up or by the appropriate compliance date specified in § 63.1422 (i.e., December 1, 1999 for most equipment leak components, and June 1, 2002 for emission points other than equipment leaks).

(3) *Determining what are and are not process changes.* For purposes of paragraph (g) of this section, examples of process changes include, but are not limited to, additions in process equipment resulting in changes in production capacity; production of a product outside the scope of the compliance demonstration; or whenever there is a replacement, removal, or addition of recovery equipment. For purposes of paragraph (g) 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 § 63.1439(e)(5).

(4) *Reporting requirements for owners or operators that change or add to their plant site or affected source.* An owner or operator that changes or adds to their plant site or affected source, as discussed in paragraphs (g)(1) and (2) of this section, shall submit a report as specified in § 63.1439(e)(7)(ii).

(h) *Applicability of this subpart during periods of start-up, shutdown, malfunction, or non-operation.* Paragraphs (h)(1) through (4) of this section shall be followed during periods of start-up, shutdown, malfunction, and non-operation of the affected source or any part thereof.

(1) The emission limitations set forth in this subpart and the emission limitations referred to in this subpart shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. These emission limitations shall not apply during periods of start-up, shutdown, or malfunction, during which the owner or operator shall follow the applicable provisions of the start-up, shutdown, and malfunction plan required by § 63.6(e)(3). However, if a start-up, shutdown, malfunction, or period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the emission limitations to which it is subject, then that emission point shall still be required to comply with the applicable emission limitations of this subpart during the start-up, shutdown, malfunction, or period of non-operation. For example, if there is an overpressure in the reactor area, a storage vessel that is part of the affected source would still be required to be controlled in accordance with the storage tank provisions in § 63.1432. Similarly, the degassing of a storage vessel would not affect the ability of a process vent to meet the emission limitations for process vents in §§ 63.1425 through 63.1430.

(2) The emission limitations set forth in 40 CFR part 63, subpart H, as referred to in the equipment leak provisions in § 63.1434, shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which § 63.1434 applies, or during periods of start-up, shutdown, malfunction, or process unit shutdown (as defined in § 63.161).

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with this subpart during periods of start-up, shutdown, or malfunction during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment if the shutdown would contravene requirements applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning. This paragraph also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous start-up, shutdown, or malfunction of the affected source or portion thereof, the owner or operator shall provide documentation supporting such a claim in the Precompliance Report or in a supplement to the Precompliance Report, as provided for in § 63.1439(e)(4). Once approved by the Administrator in accordance with § 63.1439(e)(4)(vii), the provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required by the provisions of this subpart shall be incorporated into the start-up, shutdown, malfunction plan for that affected source, as stated in § 63.1439(b)(1).

(4) During start-ups, shutdowns, and malfunctions when the emission limitations of this subpart do not apply pursuant to paragraphs (h)(1) through (3) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. For purposes of this paragraph, the term ''excess emissions'' means emissions in excess of those that would have occurred if there were no start-up, shutdown, or malfunction and the owner or operator complied with the relevant provisions of this subpart. The measures to be taken shall be identified in the applicable start-up, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the affected source. Use of back-up control techniques is not required, but is allowed, if available.

§ 63.1421 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 112(l) of the Act, the authorities

contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to the States: the permission to use an alternative means of emission limitation, from § 63.6(g), and the authority of § 63.177.

§ 63.1422 Compliance dates and relationship of this rule to existing applicable rules.

(a) [Reserved]

(b) New affected sources that commence construction or reconstruction after September 4, 1997 shall be in compliance with this subpart upon initial start-up or by June 1, 1999, whichever is later, as provided in § 63.6(b).

(c) Existing affected sources shall be in compliance with this subpart (except for § 63.1434 for which compliance is covered by paragraph (d) of this section) no later than June 1, 2002, 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 (5) of this section, existing affected sources shall be in compliance with § 63.1434 no later than December 1, 1999 unless an extension has been granted as specified in paragraph (e) of this section.

(1) Compliance with the compressor provisions of § 63.164 shall occur no later than June 1, 2000 for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (iv) 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.

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

(iv) The compressor shall be modified to permit connecting the compressor to a closed vent system.

(2) Compliance with the compressor provisions of § 63.164 shall occur no later than December 1, 2000, for any compressor meeting all the criteria in paragraphs (d)(2)(i) through (iv) of this section.

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

(ii) The work can be accomplished without a process unit shutdown as defined in § 63.161.

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

(iv) The owner or operator submits the request for a compliance extension to the appropriate U.S. Environmental Protection Agency Regional Office at the addresses listed in § 63.13 no later than 45 days before December 1, 1999. 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 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 June 1, 2001. The owner or operator who elects to use this provision shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(4) Compliance with the compressor provisions of § 63.164 shall occur not later than June 1, 2002 for any compressor meeting one or more of the criteria in paragraphs (d)(4)(i) through (iii) of this section. The owner or operator who elects to use these provisions shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(i) Compliance cannot be achieved without replacing the compressor.

(ii) Compliance cannot be achieved without recasting the distance piece.

(iii) Design modifications are required to connect to a closed-vent system.

(5) Compliance with the surge control vessel and bottoms receiver provisions of § 63.170 shall occur no later than June 1, 2002.

(e) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing affected 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 permitting 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 120 days prior to the compliance dates specified in paragraphs (b) through (d) of this section, except as discussed in paragraph (e)(3) of this section. 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 (14) shall govern the review and approval of requests for extensions of compliance with this subpart.

(3) An owner or operator may submit a compliance extension request after the date specified in paragraph (e) of this section, provided that the need for the compliance extension arose after that date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include, in addition to the information specified in paragraph (e)(1) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problem.

(f) Table 1 of this subpart specifies the requirements in 40 CFR part 63, subpart A (the General Provisions) that apply and those that do not apply to owners and operators of affected sources subject to this subpart. For the purposes of this subpart, Table 3 of 40 CFR part 63, subpart F is not applicable.

(g) Table 2 of this subpart summarizes the provisions of 40 CFR part 63, subparts F, G, and H (collectively known as the ''HON'') that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(h)(1) 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 63, subpart I, is required to comply only with the provisions of this subpart.

(2) Sources subject to the provisions in 40 CFR part 63, subpart I, that have elected to comply 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.

(i) After the compliance dates specified in this section, a storage vessel that is assigned to an affected source subject to this subpart that is also subject to the 40 CFR part 60, subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984) is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, that storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(j) After the compliance dates specified in this subpart, if any combustion device, recovery device or recapture device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements for hazardous waste, disposal, and treatment facilities in 40 CFR part 264, subpart AA (Air Emission Standards for Process Vents) or subpart CC (Air Emission Standards for Tanks, Surface Impoundment, and Containers), the owner or operator may comply with either paragraph (j)(1) or (2) of this section. If, after the compliance dates specified in this subpart, any combustion device, recovery device, or recapture device subject to this subpart is subject to monitoring and recordkeeping requirements hazardous waste treatment, storage, and disposal facilities in 40 CFR part 265, subpart AA (Air Emission Standards for Process Vents) or subpart CC (Air Emission Standards for Tanks, Surface Impoundments, and Containers), the owner or operator may comply with either paragraph (j)(1) or (3) of this section. If the owner or operator elects to comply with either paragraph (j)(2) or (3) of this section, the owner or operator shall notify the Administrator of this choice in the Notification of Compliance Status required by § 63.1439(e)(5).

(1) The owner or operator shall comply with the monitoring, recordkeeping and reporting requirements of this subpart.

(2) The owner or operator shall comply with the monitoring, recordkeeping and reporting requirements in 40 CFR part 264, with the following exception. All excursions, as defined in § 63.1438(f), shall be reported in the periodic report. Compliance with this paragraph shall constitute compliance with the monitoring, recordkeeping and reporting requirements of this subpart.

(3) The owner or operator shall comply with the monitoring and recordkeeping requirements of 40 CFR part 265, subpart AA or subpart CC, and the periodic reporting requirements under 40 CFR part 264, subpart AA or subpart CC, that would apply to the device if the facility had final-permitted status, with the following exception. All excursions, as defined in § 63.1438(f), shall be reported in the periodic report. Compliance with this paragraph shall constitute compliance with the monitoring, recordkeeping and reporting requirements of this subpart.

(k) Paragraphs (k)(1) and (2) of this section address instances in which requirements from other regulations overlap for the same heat exchange system(s) or waste management unit(s) that are subject to this subpart.

(1) After the applicable compliance date specified in this subpart, if a heat exchange system subject to this subpart is also subject to a standard identified in paragraph (k)(1)(i) or (ii) of this section, compliance with the applicable provisions of the standard identified in paragraph (k)(1)(i) or (ii) shall constitute compliance with the applicable provisions of this subpart with respect to that heat exchange system.

(i) 40 CFR part 63, subpart F.

(ii) A subpart of this part which requires compliance with the HON heat exchange system requirements in § 63.104 (e.g., 40 CFR part 63, subpart JJJ or U).

(2) After the applicable compliance date specified in this subpart, if any waste management unit subject to this subpart is also subject to a standard identified in paragraph (k)(2)(i) or (ii) of this section, compliance with the applicable provisions of the standard identified in paragraph (k)(2)(i) or (ii) shall constitute compliance with the applicable provisions of this subpart with respect to that waste management unit.

(i) 40 CFR part 63, subpart G.

(ii) A subpart of this part which requires compliance with the HON process wastewater provisions in §§ 63.132 through 63.147 (e.g., subpart JJJ or U).

(l) All terms in this subpart that define a period of time for completion of required tasks (e.g., monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods, unless altered by mutual agreement between the owner or operator and the Administrator in accordance with paragraph (l)(1) of this section.

(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 the General Provisions in 40 CFR part 63, subpart A (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 (l)(2)(i) or (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 remains at least 2 weeks for tasks that shall be performed monthly, at least 1 month for tasks that shall be performed each quarter, or at least 3 months for tasks that shall 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 of multiple successive periods, 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.

§ 63.1423 Definitions.

(a) The following terms used in this subpart shall have the meaning given them in subparts A (§ 63.2), F (§ 63.101), G (§ 63.111), and H (§ 63.161) as specified after each term:

Act (subpart A)
Administrator (subpart A)
Automated monitoring and recording system (subpart G)
Boiler (subpart G)
Bottoms receiver (subpart H)
By-product (subpart F)
Car-seal (subpart G)
Closed-vent system (subpart G)
Combustion device (subpart G)
Commenced (subpart A)
Compliance date (subpart A)
Continuous monitoring system (subpart A)
Emission standard (subpart A)
EPA (subpart A)
Equipment (subpart H)
Flow indicator (subpart G)
Fuel gas (subpart F)
Fuel gas system (subpart F)
Hard-piping (subpart G)
Heat exchange system (subpart F)
Impurity (subpart F)
Incinerator (subpart G)
Major source (subpart A)
Malfunction (subpart A)
Open-ended valve or line (subpart H)
Operating permit (subpart F)
Organic monitoring device (subpart G)
Owner or operator (subpart A)
Performance evaluation (subpart A)
Performance test (subpart A)
Permitting authority (subpart A)
Plant site (subpart F)
Potential to emit (subpart A)
Primary fuel (subpart G)
Process heater (subpart G)
Process unit shutdown (subpart H)
Reactor (subpart G)
Recapture device (subpart G)
Relief valve (subpart G)

Research and development facility (subpart F)
Run (subpart A)
Secondary fuel (subpart G)
Sensor (subpart H)
Specific gravity monitoring device (subpart G)
Start-up, shutdown, and malfunction plan (subpart F)
State (subpart A)
Surge control vessel (subpart H)
Temperature monitoring device (subpart G)
Test method (subpart A)
Total resource effectiveness index value (subpart G)
Treatment process (subpart G)
Visible emission (subpart A)

(b) All other terms used in this subpart shall have the meaning given them in this section.

Annual average concentration, as used in conjunction with the wastewater provisions, means the flow-weighted annual average concentration and is determined by the procedures in § 63.144(b), except as provided in § 63.1433(a)(2).

Annual average flow rate, as used in conjunction with the wastewater provisions, is determined by the procedures in § 63.144(c).

Batch cycle means the step or steps, from start to finish, that occur in a batch unit operation.

Batch unit operation means a unit operation involving intermittent or discontinuous feed into equipment, and, in general, involves the emptying of equipment after the batch cycle ceases and prior to beginning a new batch cycle. Mass, temperature, concentration and other properties of the process may vary with time. Addition of raw material and withdrawal of product do not simultaneously occur in a batch unit operation.

Catalyst extraction means the removal of the catalyst using either solvent or physical extraction method.

Construction means the on-site fabrication, erection, or installation of an affected source. Construction also means the on-site fabrication, erection, or installation of a process unit or a combination of process units which subsequently becomes an affected source or part of an affected source due to a change in primary product.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once during approximately equal intervals of 15 minutes and recorded at the frequency specified in § 63.1439(d).

Continuous recorder is defined in § 63.111, except that when the definition in § 63.111 reads ''or records 15-minute or more frequent block average values,'' the phrase ''or records 1-hour or more frequent block average values'' shall apply for purposes of this subpart.

Continuous unit operation means a unit operation where the inputs and outputs flow continuously. Continuous unit operations typically approach steady-state conditions. Continuous unit operations typically involve the simultaneous addition of raw material and withdrawal of the product.

Control technique means any equipment or process control used for capturing, recovering, or oxidizing organic hazardous air pollutant vapors. Such equipment includes, but is not limited to, absorbers, adsorbers, boilers, condensers, flares, incinerators, process heaters, and scrubbers, or any combination thereof. Process control includes extended cookout (as defined in this section). Condensers operating as reflux condensers that are necessary for processing, such as liquid level control, temperature control, or distillation operation, shall be considered inherently part of the process and will not be considered control techniques.

Emission point means an individual process vent, storage vessel, wastewater stream, or equipment leak.

Epoxide means a chemical compound consisting of a three-membered cyclic ether. Only emissions of epoxides listed in Table 4 of this subpart (i.e., ethylene oxide and propylene oxide) are regulated by the provisions of this subpart.

Equipment leak means emissions of organic HAP from a pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, surge control vessel, bottoms receiver, or instrumentation system in organic HAP service.

Extended Cookout (ECO) means a control technique that reduces the amount of unreacted ethylene oxide (EO) and/or propylene oxide (PO) (epoxides) in the reactor. This is accomplished by allowing the product to react for a longer time period, thereby having less unreacted epoxides and reducing epoxides emissions that may have otherwise occurred.

Flexible operation unit means a process unit that manufactures different chemical products by periodically alternating raw materials fed to the process unit or operating conditions at the process unit. These units are also referred to as campaign plants or blocked operations.

Group 1 combination of batch process vents means a collection of process vents in a PMPU from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product that meet all of the following conditions:

(1) Has annual nonepoxide organic HAP emissions, determined in accordance with § 63.1428(b), of 11,800 kg/yr or greater, and

(2) Has a cutoff flow rate, determined in accordance with § 63.1428(e), that is greater than or equal to the annual average flow rate, determined in accordance with § 63.1428(d).

Group 2 combination of batch process vents means a collection of process vents in a PMPU from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product that is not classified as a Group 1 combination of batch process vents.

Group 1 continuous process vent means a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product that meets all of the following conditions:

(1) Has a flow rate greater than or equal to 0.005 standard cubic meters per minute,

(2) Has a total organic HAP concentration greater than or equal to 50 parts per million by volume, and

(3) Has a total resource effectiveness index value, calculated in accordance with § 63.1428(h)(1), less than or equal to 1.0.

Group 2 continuous process vent means a process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product that is not classified as a Group 1 continuous process vent.

Group 1 storage vessel means a storage vessel that meets the applicability criteria specified in Table 3 of this subpart.

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

Group 1 wastewater stream means a process wastewater stream at an existing or new affected source that meets the criteria for Group 1 status in § 63.132(c), with the exceptions listed in § 63.1433(a)(2) for the purposes of this subpart (i.e., for organic HAP listed on Table 4 of this subpart only).

Group 2 wastewater stream means any process wastewater stream as defined in § 63.101 at an existing affected source that does not meet the definition (in this section) of a Group 1 wastewater stream.

In organic hazardous air pollutant service or in organic HAP service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP (as defined in this

section), as determined according to the provisions of § 63.180(d). The provisions of § 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

Initial start-up means the first time a new or reconstructed affected source begins production, or, for equipment added or changed as described in § 63.1420(g), the first time the equipment is put into operation to produce a polyether polyol. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups of an affected source or portion thereof following malfunctions or shutdowns or following changes in product for flexible operation units. Further, for purposes of § 63.1422, initial start-up does not include subsequent start-ups of affected sources or portions thereof following malfunctions or process unit shutdowns.

Maintenance wastewater is defined in § 63.101, except that the term ''polyether polyol manufacturing process unit'' shall apply whenever the term ''chemical manufacturing process unit'' is used. Further, the generation of wastewater from the routine rinsing or washing of equipment in batch operation between batches is not maintenance wastewater, but is considered to be process wastewater, for the purposes of this subpart.

Make or modify the product means to produce the polyether polyol by polymerization of epoxides or other cyclic ethers with compounds having one or more reactive hydrogens, and to incorporate additives (e.g., preservatives, antioxidants, or diluents) in order to maintain the quality of the finished products before shipping. Making and modifying the product for this regulation does not include grafting, polymerizing the polyol, or reacting it with compounds other than EO or PO.

Maximum true vapor pressure is defined in § 63.111, except that the terms ''transfer'' and ''transferred'' shall not apply for the purposes of this subpart.

New process unit means a process unit for which the construction or reconstruction commenced after September 4, 1997.

On-site or on site means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, a location within the plant site where the affected source is located. On-site storage of records includes, but is not limited to, a location at the affected source or PMPU to which the records pertain or a location elsewhere at the plant site where the affected source is located.

Operating day refers to the 24-hour period defined by the owner or operator in the Notification of Compliance Status required by § 63.1439(e)(5). That 24-hour period may be from midnight to midnight or another 24-hour period. The operating day is the 24-hour period for which daily average monitoring values are determined.

Organic hazardous air pollutant(s) (organic HAP) means one or more of the chemicals listed in Table 4 of this subpart, or any other chemical which:

(1) Is knowingly produced or introduced into the manufacturing process other than as an impurity; and

(2) Is listed in Table 2 of 40 CFR part 63, subpart F in the HON.

Polyether polyol means a compound formed through the polymerization of EO or PO or other cyclic ethers with compounds having one or more reactive hydrogens (i.e., a hydrogen atom bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers (i.e., compounds with two or more ether bonds). This definition of ''polyether polyol'' excludes hydroxy ethyl cellulose and materials regulated under 40 CFR part 63, subparts F, G, and H (the HON), such as glycols and glycol ethers.

Polyether polyol manufacturing process unit (PMPU) means a process unit that manufactures a polyether polyol as its primary product, or a process unit designated as a polyether polyol manufacturing unit in accordance with § 63.1420(e)(2). A polyether polyol manufacturing process unit consists of more than one unit operation. This collection of equipment includes purification systems, reactors and their associated product separators and recovery devices, distillation units and their associated distillate receivers and recovery devices, other associated unit operations, storage vessels, surge control vessels, bottoms receivers, product transfer racks, connected ducts and piping, combustion, recovery, or recapture devices or systems, and the equipment (i.e., all pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are associated with the PMPU) that are subject to the equipment leak provisions as specified in § 63.1434.

Pressure decay curve is the graph of the reactor pressure versus time from the point when epoxide feed is stopped until the reactor pressure is constant, indicating that most of the epoxide has reacted out of the vapor and liquid phases. This curve shall be determined with no leaks or vents from the reactor.

Primary product is defined in and determined by the procedures specified in § 63.1420(e).

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 stream that is discharged to the atmosphere either directly or after passing through one or more combustion, recovery, or recapture devices. A process vent from a continuous unit operation is a gaseous emission stream containing more than 0.005 weight-percent total organic HAP. A process vent from a batch unit operation is a gaseous emission stream containing more than 225 kilograms per year (500 pounds per year) of organic HAP emissions. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the PMPU. Process vents exclude pressure relief valve discharges, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.1434. A gaseous emission stream is no longer considered to be a process vent after the stream has been controlled and monitored in accordance with the applicable provisions of this subpart.

Process wastewater means wastewater which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. Examples are product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; equipment washes between batches in a batch process; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

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.

Product class means a group of polyether polyols with a similar pressure decay curve (or faster pressure decay curves) that are manufactured within a given set of operating conditions representing the decline in pressure versus time. All products within a product class shall have an essentially similar pressure decay curve, and operate within a given set of

operating conditions. These operating conditions are: a minimum reaction temperature; the number of -OH groups in the polyol; a minimum catalyst concentration; the type of catalyst (e.g., self-catalyzed, base catalyst, or acid catalyst); the epoxide ratio, or a range for that ratio; and the reaction conditions of the system (e.g., the size of the reactor, or the size of the batch).

Reactor liquid means the compound or material made in the reactor, even though the substance may be transferred to another vessel. This material may require further modifications before becoming a final product, in which case the reactor liquid is classified as an ''intermediate.'' This material may be complete at this stage, in which case the reactor liquid is classified as a ''product.''

Reconstruction means the replacement of components of an affected source or of a previously unaffected stationary source that becomes an affected source as a result of the replacement, to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the provisions of this subpart.

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

Residual is defined in § 63.111, except that when the definition in § 63.111 uses the term ''Table 9 compounds,'' the term ''organic HAP listed in Table 9 of subpart G'' shall apply, for the purposes of this subpart.

Shutdown means the cessation of operation of an affected source, a PMPU within an affected source, a waste management unit or unit operation within an affected source, equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. The purposes for a shutdown may include, but are not limited to, periodic maintenance, replacement of equipment, or equipment repairs. Shutdown does not include the normal periods between batch cycles. For continuous unit operations, shutdown includes transitional conditions due to changes in product for flexible operation units. For batch unit operations, shutdown does not include transitional conditions due to changes in product for flexible operation units. For purposes of the wastewater provisions, shutdown does not include the routine rinsing or washing of equipment between batch cycles.

Start-up means the setting into operation of an affected source, a PMPU within the affected source, a waste management unit or unit operation within an affected source, equipment required or used to comply with this subpart, or a storage vessel after emptying and degassing. For all processes, start-up includes initial start-up and operation solely for testing equipment. Start-up does not include the recharging of batch unit operations. For continuous unit operations, start-up includes transitional conditions due to changes in product for flexible operation units. For batch unit operations, start-up does not include transitional conditions due to changes in product for flexible operation units.

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 may occur.

Storage vessel means a tank or other vessel that is used to store liquids that contain one or more organic HAP. 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 emissions 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, or organic HAP as impurities only;

(5) Surge control vessels and bottoms receiver tanks;

(6) Wastewater storage tanks; and

(7) Storage vessels assigned to another process unit regulated under another subpart of part 63.

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

Unit operation means one or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one or more process streams. Unit operations include, but are not limited to, reactors, distillation units, extraction columns, absorbers, decanters, condensers, and filtration equipment.

Vent stream, as used in reference to process vents, means the emissions from a process vent.

Waste management unit is defined in § 63.111, except that when the definition in § 63.111 uses the term ''chemical manufacturing process unit,'' the term ''PMPU'' shall apply for the purposes of this subpart.

Wastewater means water that:

(1) Contains either

(i) An annual average concentration of organic HAP listed in Table 4 of this subpart of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater, or

(ii) An annual average concentration of organic HAP listed on Table 4 of this subpart of at least 10,000 parts per million by weight at any flow rate; and that

(2) Is discarded from a PMPU that is part of an affected source. Wastewater is process wastewater or maintenance wastewater.

§ 63.1424 Emission standards.

(a) Except as provided under paragraph (b) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:

(1) Sections 63.1425 through 63.1430 for process vents;

(2) Section 63.1432 for storage vessels;

(3) Section 63.1433 for wastewater;

(4) Section 63.1434 for equipment leaks;

(5) Section 63.1435 for heat exchangers;

(6) Section 63.1437 for additional test methods and procedures;

(7) Section 63.1438 for monitoring levels and excursions; and

(8) Section 63.1439 for general reporting and recordkeeping requirements.

(b) When emissions of different kinds (i.e., emissions from process vents subject to §§ 63.1425 through 63.1430, storage vessels subject to § 63.1432, process wastewater, and/or in-process equipment subject to § 63.149) are combined, and at least one of the emission streams would require control according to the applicable provision in the absence of combination with other

emission streams, the owner or operator shall comply with the requirements of either paragraph (b)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emission in the stream as specified in paragraphs (a)(1) through (5) of this section; or

(2) Comply with the most stringent set of requirements that applies to any individual emission stream that is included in the combined stream, where either that emission stream would be classified as requiring control in the absence of combination with other emission streams, or the owner chooses to consider that emission stream to require control for the purposes of this paragraph.

§ 63.1425 Process vent control requirements.

(a) *Applicability of process vent control requirements.* For each process vent at an affected source, the owner or operator shall comply with the provisions of this section. Owners and operators of all affected sources using epoxides in the production of polyether polyols are subject to the requirements of paragraph (b) of this section. Owners or operators are subject to the requirements of paragraph (c) of this section only if epoxides are used in the production of polyether polyols and nonepoxide organic HAP are used to make or modify the product. Similarly, owners or operators are subject to the requirements of paragraph (d) of this section only if epoxides are used in the production of polyether polyols and organic HAP are used in catalyst extraction. The owner or operator of an affected source where polyether polyol products are produced using tetrahydrofuran shall comply with paragraph (f) of this section.

(b) *Requirements for epoxide emissions.* The owner or operator of an affected source where polyether polyol products are produced using epoxides shall reduce epoxide emissions from process vents from batch unit operations and continuous unit operations within each PMPU in accordance with either paragraph (b)(1) or (2) of this section.

(1) For new affected sources, the owner or operator shall comply with paragraph (b)(1)(i), (ii), or (iii) this section. The owner or operator also has the option of complying with a combination of paragraphs (b)(1)(i) and (ii) of this section. If the owner or operator chooses to comply with a combination of paragraphs (b)(1)(i) and (ii) of this section, each process vent not controlled in accordance with paragraph (b)(1)(ii) of this section shall be part of the group of applicable process vents that shall then comply with paragraph (b)(1)(i) of this section.

(i) Reduce the total epoxide emissions from the group of applicable process vents by an aggregated 99.9 percent;

(ii) Maintain an outlet concentration of total epoxides or TOC after each combustion, recapture, or recovery device of 20 ppmv or less; or

(iii) Maintain an emission factor of no greater than 4.43×10^{-3} kilogram epoxide emissions per megagram of product (4.43×10^{-3} pounds epoxide emissions per 1,000 pounds of product) for all process vents in the PMPU.

(2) For existing affected sources, the owner or operator shall comply with either paragraph (b)(2)(i), (ii), (iii), or (iv) of this section. The owner or operator also has the option of complying with a combination of paragraphs (b)(2)(ii) and (iii) of this section. If the owner or operator chooses to comply with a combination of paragraphs (b)(2)(ii) and (iii) of this section, each process vent that is not controlled in accordance with paragraph (b)(2)(iii) of this section shall be part of the group of applicable process vents that shall then comply with paragraph (b)(2)(ii) of this section. The owner or operator also has the option of complying with a combination of paragraphs (b)(2)(i) and (iii) of this section.

(i) Reduce the total epoxide emissions from each process vent using a flare;

(ii) Reduce the total epoxide emissions from the group of applicable process vents by an aggregated 98 percent;

(iii) Maintain an outlet concentration of total epoxides or TOC after each combustion, recapture or recovery devices of 20 ppmv or less; or

(iv) Maintain an emission factor of no greater than 1.69×10^{-2} kilogram epoxide emissions per megagram of product (1.69×10^{-2} pounds epoxide emissions per 1,000 pounds of product) for all process vents in the PMPU.

(c) *Requirements for nonepoxide organic HAP emissions from making or modifying the product.* The owner or operator of a new or existing source where polyether polyols are produced using epoxides, and where nonepoxide organic HAP are used to make or modify the product, shall comply with this paragraph. For each process vent from a continuous unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product, the owner or operator shall determine if the process vent is a Group 1 continuous process vent, as defined in § 63.1423. For the combination of process vents from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product, the owner or operator shall determine if the combination of process vents is a Group 1 combination of batch process vents, as defined in § 63.1423.

(1) *Requirements for Group 1 combinations of batch process vents.* For each Group 1 combination of batch process vents, as defined in § 63.1423, the owner or operator shall comply with either paragraph (c)(1)(i) or (ii) of this section.

(i) Reduce nonepoxide organic HAP emissions using a flare.

(ii) Reduce nonepoxide organic HAP emissions by 90 percent using a combustion, recovery, or recapture device.

(2) *Requirements for Group 2 combinations of batch process vents.* For each Group 2 combination of batch process vents, as defined in § 63.1423, the owner or operator reassess the group status when process changes occur, in accordance with the provisions of § 63.1428(g). No control requirements apply to these process vents.

(3) *Requirements for Group 1 continuous process vents.* For each Group 1 continuous process vent, as defined in § 63.1423, the owner or operator shall comply with either paragraph (c)(3)(i) or (ii) of this section.

(i) Reduce nonepoxide organic HAP emissions using a flare.

(ii) Reduce nonepoxide organic HAP emissions by 98 percent using a combustion, recovery, or recapture device.

(4) *Requirements for Group 2 continuous process vents.* For each Group 2 continuous process vent, as defined in § 63.1423, the owner or operator shall comply with either paragraph (c)(4)(i) or (ii) of this section.

(i) If the TRE for the process vent is greater than 1.0 but less than 4.0, the owner or operator shall comply with the monitoring provisions in § 63.1429, the recordkeeping provisions in § 63.1430(d), and recalculate the TRE index value when process changes occur, in accordance with the provisions in § 63.1428(h)(2).

(ii) If the TRE for the process vent is greater than 4.0, the owner or operator shall recalculate the TRE index value when process changes occur, in accordance with the provisions in § 63.1428(h)(2).

(d) *Requirements for nonepoxide organic HAP emissions from catalyst extraction.* The owner or operator of a new or existing affected source where polyether polyol products are produced using epoxide compounds shall comply with either paragraph (d)(1) or (2) of this

section. A PMPU that does not use any nonepoxide organic HAP in catalyst extraction is exempt from the requirements of this paragraph.

(1) Reduce emissions of nonepoxide organic HAP from all process vents associated with catalyst extraction using a flare; or

(2) Reduce emissions of nonepoxide organic HAP from the sum total of all process vents associated with catalyst extraction by an aggregated 90 percent for each PMPU.

(e) [Reserved]

(f) *Requirements for process vents at PMPUs that produce polyether polyol products using tetrahydrofuran.* For each process vent in a PMPU that uses tetrahydrofuran (THF) to produce one or more polyether polyol products that is, or is part of, an affected source, the owner or operator shall comply with the HON process vent requirements in §§ 63.113 through 63.118, except as provided for in paragraphs (f)(1) through (10) of this section.

(1) When December 31, 1992 is referred to in the HON process vent requirements in § 63.113, it shall be replaced with September 4, 1997, for the purposes of this subpart.

(2) When § 63.151(f), alternative monitoring parameters, and § 63.152(e), submission of an operating permit application, are referred to in §§ 63.114(c) and 63.117(e), § 63.1439(f), alternative monitoring parameters, and § 63.1439(e)(8), submission of an operating permit application, respectively, shall apply for the purposes of this subpart.

(3) 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 § 63.1439(e)(5) shall apply for the purposes of this subpart.

(4) 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 § 63.1439(e)(6) shall apply for the purposes of this subpart.

(5) 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 § 63.1438(f) shall apply for the purposes of this subpart.

(6) When § 63.114(e) specifies that an owner or operator shall submit the information required in § 63.152(b) in order to establish the parameter monitoring range, the owner or operator shall comply with the provisions of § 63.1438 for establishing the parameter monitoring level and shall comply with § 63.1439(e)(5)(ii) or § 63.1439(e)(8) for the purposes of reporting information related to the establishment of the parameter monitoring level, for the purposes of this subpart. Further, the term ''level'' shall apply whenever the term ''range'' is used in §§ 63.114, 63.117, and 63.118.

(7) When reports of process changes are required under § 63.118(g), (h), (i), or (j), paragraphs (f)(7)(i) through (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 process vent to become a Group 1 process vent, 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. A description of the process change shall be included in this report.

(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 days after the process change is made or the information regarding the process change is known to the owner or operator, unless the flow rate is less than 0.005 standard cubic meters per minute. This report may be included in the next Periodic Report. A description of the process change shall be included in this report.

(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 (scmm) to become a Group 2 process vent with a flow rate of 0.005 scmm or greater and a TRE index value less than or equal to 4.0, 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, unless the organic HAP concentration is less than 50 ppmv. This report may be included in the next Periodic Report. A description of the process change shall be submitted with the report.

(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 (ppmv) to become a Group 2 process vent with an organic HAP concentration of 50 ppmv or greater and a TRE index value less than or equal to 4.0, 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, unless the flow rate is less than 0.005 standard cubic meters per minute. This report may be included in the next Periodic Report. A description of the process change shall be submitted with this report.

(8) When § 63.118 refers to § 63.152(f), the recordkeeping requirements in § 63.1439(d) shall apply for the purposes of this subpart.

(9) When §§ 63.115 and 63.116 refer to Table 2 of 40 CFR part 63, subpart F, the owner or operator shall only consider organic HAP as defined in this subpart.

(10) When the provisions of § 63.116(c)(3) and (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 (f)(10)(i) and (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.

§ 63.1426 Process vent requirements for determining organic HAP concentration, control efficiency, and aggregated organic HAP emission reduction for a PMPU.

(a) *Use of a flare.* When a flare is used to comply with § 63.1425(b)(1)(i) (in combination with other control techniques), (b)(2)(i), (c)(1)(i), (c)(3)(i), or (d)(1), the owner or operator shall comply with § 63.1437(c), and is not required to demonstrate the control efficiency for the flare, if the owner or operator chooses to assume a 98 percent control efficiency for that flare, as allowed under paragraph (e)(2)(i) of this section. In order to use only a flare to comply with § 63.1425(b)(1)(i), or to use a flare and apply a control efficiency greater than 98 percent, an owner or operator shall submit a request in accordance with § 63.6(g) in either the Precompliance Report described in § 63.1439(e)(4), or in a supplement to the precompliance report, as described in § 63.1439(e)(4)(vii).

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a combustion, recovery, or recapture

device specified in paragraphs (b)(1) through (6) of this section is used to comply with § 63.1425(b), (c), or (d).

(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 process vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A combustion, recovery, or recapture device for which a performance test was conducted within the preceding 5-year period, using the same Methods specified in this section and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes. The operating parameters reported under the previous performance test shall be sufficient to meet the parameter monitoring requirements in this subpart.

(4) A boiler or process heater burning hazardous waste for which the owner or operator:

(i) Has been issued a final hazardous waste permit under 40 CFR part 270 and complies with the requirements for hazardous waste burned in boilers and industrial furnaces in 40 CFR part 266, subpart H; or

(ii) Has certified compliance with the interim status requirements for hazardous waste burned in boilers and industrial furnaces in of 40 CFR part 266, subpart H.

(5) A hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements for incinerators in 40 CFR part 264, subpart O, or has certified compliance with the interim status requirements for incinerators in 40 CFR part 265, subpart O.

(6) Combustion, recovery or recapture device (except for condensers) performance may be determined by using the design evaluation described in paragraph (f) of this section, provided that the combustion, recovery or recapture device receives less than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPUs, determined in accordance with paragraph (d) of this section. If a combustion, recovery or recapture device exempted from testing in accordance with this paragraph receives more than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPUs, the owner or operator shall comply with the performance test requirements in paragraph (c) of this section and shall submit the test report in the next Periodic Report.

(c) *Determination of organic HAP concentration and control efficiency.* Except as provided in paragraphs (a) and (b) of this section, an owner or operator using a combustion, recovery, or recapture device to comply with an epoxide or organic HAP percent reduction efficiency requirement in § 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2); an epoxide concentration limitation in § 63.1425(b)(1)(ii) or (b)(2)(ii); or an annual epoxide emission limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv), shall conduct a performance test using the applicable procedures in paragraphs (c)(1) through (4) of this section. The organic HAP or epoxide concentration and percent reduction may be measured as total epoxide, total organic HAP, or as TOC minus methane and ethane according to the procedures specified. When conducting testing in accordance with this section, the owner or operator is only required to measure HAP of concern for the specific requirement for which compliance is being determined. For instance, to determine compliance with the epoxide emission requirement of § 63.1425(b), the owner or operator is only required to measure epoxide control efficiency or outlet concentration.

(1) *Sampling site location.* The sampling site location shall be determined as specified in paragraphs (c)(1)(i) and (ii) of this section.

(i) For determination of compliance with a percent reduction of total epoxide requirement in § 63.1425(b)(1)(i), (b)(2)(ii), or a percent reduction of total organic HAP requirement in § 63.1425(c)(1)(ii), (c)(3)(ii), or (d)(2), sampling sites shall be located at the inlet of the combustion, recovery, or recapture device as specified in paragraphs (c)(1)(i)(A), (B), and (C) of this section, and at the outlet of the combustion, recovery, or recapture device.

(A) For process vents from continuous unit operations, the inlet sampling site shall be determined in accordance with either paragraph (c)(1)(i)(A)(*1*) or (*2*) of this section.

(*1*) To demonstrate compliance with either the provisions for epoxide emissions in § 63.1425(b) or the provisions for nonepoxide organic HAP emissions from catalyst extraction in § 63.1425(d), the inlet sampling site shall be located after the exit from the continuous unit operation but before any recovery devices, or

(*2*) To demonstrate compliance with the requirements for nonepoxide organic HAP emissions from the use of nonepoxide organic HAP in making or modifying the product in § 63.1425(c), the inlet sampling site shall be located after all control techniques to reduce epoxide emissions and after the final nonepoxide organic HAP recovery device.

(B) For process vents from batch unit operations, the inlet sampling site shall be determined in accordance with either paragraph (c)(1)(i)(B)(*1*) or (*2*) of this section.

(*1*) To demonstrate compliance with either the provisions for epoxide emissions in § 63.1425(b) or the provisions for nonepoxide organic HAP emissions from catalyst extraction in § 63.1425(d), the inlet sampling site shall be located after the exit from the batch unit operation but before any recovery device.

(*2*) To demonstrate compliance with the requirements for nonepoxide organic HAP emissions in making or modifying the product in § 63.1425(c), the inlet sampling site shall be located after all control techniques to reduce epoxide emissions but before any nonepoxide organic HAP recovery device.

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

(ii) To determine compliance with a parts per million by volume total epoxide or TOC limit in § 63.1425(b)(1)(ii) or (b)(2)(iii), the sampling site shall be located at the outlet of the combustion, recovery, or recapture device.

(2) [Reserved]

(3) *Testing conditions and calculation of TOC or total organic HAP concentration.* (i) Testing conditions shall be as specified in paragraphs (c)(3)(i)(A) through (E) of this section, as appropriate.

(A) Testing of process vents from continuous unit operations shall be conducted at maximum representative operating conditions, as described in § 63.1437(a)(1). Each test shall consist of three l-hour runs. Gas stream volumetric flow rates shall be measured at approximately equal intervals of about 15 minutes during each 1-hour run. The organic HAP concentration (of the HAP of concern) shall be determined from samples collected in an integrated sample over the duration of each l-hour

test run, or from grab samples collected simultaneously with the flow rate measurements (at approximately equal intervals of about 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. For gas streams from continuous unit operations, the organic HAP concentration or control efficiency used to determine compliance shall be the average organic HAP concentration or control efficiency of the three test runs.

(B) Testing of process vents from batch unit operations shall be conducted at absolute worst-case conditions or hypothetical worst-case conditions, as defined in paragraphs (c)(3)(i)(B)(*1*) through (*5*) of this section. Worst-case conditions are limited to the maximum production allowed in a State or Federal permit or regulation and the conditions specified in § 63.1437(a)(1). Gas stream volumetric flow rates shall be measured at 15-minute intervals, or at least once during the emission episode. The organic HAP or TOC concentration shall be determined from samples collected in an integrated sample over the duration of the test, or from grab samples collected simultaneously with the flow rate measurements (at approximately equal intervals of about 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate.

(*1*) Absolute worst-case conditions are defined by the criteria presented in paragraph (c)(3)(i)(B)(*1*)(*i*) or (*ii*) of this section if the maximum load is the most challenging condition for the control device. Otherwise, absolute worst-case conditions are defined by the conditions in paragraph (c)(3)(i)(B)(*1*)(*iii*) of this section.

(*i*) The period in which the inlet to the control device will contain at least 50 percent of the maximum HAP load (in lbs) capable of being vented to the control device over any 8-hour period. An emission profile as described in paragraph (c)(3)(i)(B)(*3*)(*i*) of this section shall be used to identify the 8-hour period that includes the maximum projected HAP load.

(*ii*) A period of time in which the inlet to the control device will contain the highest HAP mass loading rate capable of being vented to the control device. An emission profile as described in paragraph (c)(3)(i)(B)(*3*)(*i*) of this section shall be used to identify the period of maximum HAP loading.

(*iii*) The period of time when the HAP loading or stream composition (including non-HAP) is most challenging for the control device. These conditions include, but are not limited to the following: periods when the stream contains the highest combined VOC and HAP load described by the emission profiles in paragraph (c)(3)(i)(B)(*3*) of this section; periods when the streams contain HAP constituents that approach limits of solubility for scrubbing media; or periods when the streams contain HAP constituents that approach limits of adsorptivity for carbon adsorption systems.

(*2*) Hypothetical worst-case conditions are simulated test conditions that, at a minimum, contain the highest hourly HAP load of emissions that would be predicted to be vented to the control device from the emissions profile described in paragraph (c)(3)(i)(B)(*3*)(*ii*) or (*iii*) of this section.

(*3*) The owner or operator shall develop an emission profile for the vent to the control device that describes the characteristics of the vent stream at the inlet to the control device under worst case conditions. The emission profile shall be developed based on any one of the procedures described in paragraphs (c)(3)(i)(B)(*3*) (*i*) through (*iii*) of this section, as required by paragraph (c)(3)(i)(B) of this section.

(*i*) The emission profile shall consider all emission episodes that could contribute to the vent stack for a period of time that is sufficient to include all processes venting to the stack and shall consider production scheduling. The profile shall describe the HAP load to the device that equals the highest sum of emissions from the episodes that can vent to the control device in any given period, not to exceed 1 hour. Emissions per episode shall be divided by the duration of the episode only if the duration of the episode is longer than 1 hour, and emissions per episode shall be calculated using the procedures specified in Equation 1:

$$E = \sum_{\varnothing=\cap}^{\ll} P_i MW_i \times \frac{(V)(t)}{(R)(T)} \times \frac{P_T}{P_T - \sum_{\lceil=\cap}^{\rfloor} (P_j)} \qquad \text{[Equation 1]}$$

Where:

E = Mass of HAP emitted.
V = Purge flow rate at the temperature and pressure of the vessel vapor space.
R = Ideal gas law constant.
T = Temperature of the vessel vapor space (absolute).
P_i = Partial pressure of the individual HAP.
P_j = Partial pressure of individual condensable VOC compounds (including HAP).
P_T = Pressure of the vessel vapor space.
MW_i = Molecular weight of the individual HAP.
t = Time of purge.
n = Number of HAP compounds in the emission stream.
i = Identifier for a HAP compound.
j = Identifier for a condensable compound.
m = Number of condensable compounds (including HAP) in the emission stream.

(*ii*) The emission profile shall consist of emissions that meet or exceed the highest emissions that would be expected under actual processing conditions. The profile shall describe equipment configurations used to generate the emission events, volatility of materials processed in the equipment, and the rationale used to identify and characterize the emission events. The emissions may be based on using compounds more volatile than compounds actually used in the process(es), and the emissions may be generated from all equipment in the process(es) or only selected equipment.

(*iii*) The emission profile shall consider the capture and control system limitations and the highest emissions that can be routed to the control device, based on maximum flow rate and concentrations possible because of limitations on conveyance and control equipment (e.g., fans, LEL alarms and safety bypasses).

(*4*) Three runs, each at a minimum of the complete duration of the batch venting episode or 1 hour, whichever is shorter, and a maximum of 8 hours, are required for performance testing. Each run shall occur over the same worst-case conditions, as defined in paragraph (c)(3)(i)(B) of this section.

(*5*) If a condenser is used to control the process vent stream(s), the worst case emission episode(s) shall represent a period of time in which a process vent from the batch cycle or combination of cycles (if more than one cycle is vented through the same process vent) will require the maximum heat removal capacity, in Btu/hr, to cool the process vent stream to a temperature that, upon calculation of HAP concentration, will yield the required removal efficiency for the entire cycle. The calculation of maximum heat load shall be based on the emission profile described in paragraph (c)(3)(i)(B)(*3*) of this section that will allow calculation of sensible and latent heat loads.

(ii) The concentration of either TOC (minus methane or ethane) or total organic HAP (of the HAP of concern) shall be calculated according to paragraph (c)(3)(ii)(A) or (B) of this section.

(A) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 2:

$$C_{TOC} = \sum_{\varnothing=\cap}^{V} \frac{\left(\sum_{\lceil=\cap}^{\ll} C_{ji}\right)}{x} \qquad \text{[Equation 2]}$$

Where:

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

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

n = Number of components in the sample.

x = Number of samples in the sample run.

(B) The total organic HAP concentration (C_{HAP}) shall be computed according to Equation 2, except that only the organic HAP species shall be summed.

(iii) The concentration of TOC or total organic HAP shall be corrected to 3 percent oxygen if a combustion device is used.

(A) The emission rate correction factor or excess air, integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A shall be used to determine the oxygen concentration ($\%0_{2d}$). The samples shall be taken during the same time that the TOC (minus methane or ethane) or total organic HAP samples are taken.

(B) The concentration corrected to 3 percent oxygen shall be computed using Equation 3, as follows:

$$C_c = C_m\left(\frac{17.9}{20.9 - \%O_{2d}}\right) \qquad \text{[Equation 3]}$$

Where:

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

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

$\%0_{2d}$ = Concentration of oxygen, dry basis, percent by volume.

(4) *Test methods.* When testing is conducted to measure emissions from an affected source, the test methods specified in paragraphs (c)(4)(i) through (iv) of this section shall be used, as applicable.

(i) For sample and velocity traverses, Method 1 or 1A of appendix A of part 60 shall be used, as appropriate, except that references to particulate matter in Method 1A do not apply for the purposes of this subpart.

(ii) The velocity and gas volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(iii) The concentration measurements shall be determined using the methods described in paragraphs (c)(4)(iii) (A) through (C) of this section.

(A) Method 18 of appendix A of part 60 may be used to determine the HAP concentration in any control device efficiency determination.

(B) Method 25 of appendix A of part 60 may be used to determine total gaseous nonmethane organic concentration for control efficiency determinations in combustion devices.

(C) Method 25A of appendix A of part 60 may be used to determine the HAP or TOC concentration for control device efficiency determinations under the conditions specified in Method 25 of appendix A of part 60 for direct measurements of an effluent with a flame ionization detector, or in demonstrating compliance with the 20 ppmv standard, the instrument shall be calibrated on methane or the predominant HAP. If calibrating on the predominant HAP, the use of Method 25A of appendix A of part 60 shall comply with paragraphs (c)(4)(iii)(C) (*1*) through (*3*) of this section.

(*1*) The organic HAP used as the calibration gas for Method 25A of appendix A of part 60 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.

(*3*) The span value of the analyzer shall be less than 100 ppmv.

(iv) Alternatively, any other method or data that have been validated according to the applicable procedures in 40 CFR part 63, appendix A, Method 301 may be used.

(5) *Calculation of percent reduction efficiency.* The following procedures shall be used to calculate percent reduction efficiency:

(i) Test duration shall be as specified in paragraphs (c)(3)(i) (A) through (B) of this section, as appropriate.

(ii) The mass rate of either TOC (minus methane and ethane) or total organic HAP of the HAP of concern (E_i, E_o) shall be computed.

(A) The following equations shall be used:

$$E_i = K_2\left(\sum_{\lceil=\cap}^{\ll} C_{ij}M_{ij}\right)Q_i \qquad \text{[Equation 4]}$$

$$E_o = K_2\left(\sum_{\lceil=\cap}^{\ll} C_{oj}M_{oj}\right)Q_o \qquad \text{[Equation 5]}$$

Where:

C_{ij}, C_{oj} = Concentration of sample component j of the gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry basis, parts per million by volume.

E_i, E_o = Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry basis, kilogram per hour.

M_{ij}, M_{oj} = Molecular weight of sample component j of the gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, gram/gram-mole.

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the combustion, recovery, or recapture device, respectively, dry standard cubic meter per minute.

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

(B) Where the mass rate of TOC is being calculated, all organic compounds (minus methane and ethane) measured by Method 18 of 40 CFR part 60, appendix A are summed using Equations 4 and 5 in paragraph (c)(5)(ii)(A) of this section.

(C) Where the mass rate of total organic HAP is being calculated, only the organic HAP species shall be summed using Equations 4 and 5 in paragraph (c)(5)(ii)(A) of this section.

(iii) The percent reduction in TOC (minus methane and ethane) or total organic HAP shall be calculated using Equation 6 as follows:

$$R = \frac{E_i - E_o}{E_i}(100) \qquad \text{[Equation 6]}$$

Where:

R = Control efficiency of combustion, recovery, or recapture device, percent.

E_i = Mass rate of TOC (minus methane and ethane) or total organic HAP at the inlet to the combustion, recovery, or recapture device as calculated under paragraph (c)(5)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

E_o = Mass rate of TOC (minus methane and ethane) or total organic HAP at the outlet of the combustion, recovery, or recapture device, as calculated under paragraph (c)(5)(ii) of this section, kilograms TOC per hour or kilograms organic HAP per hour.

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

(d) *Determination of uncontrolled organic HAP emissions.* For each process vent at a PMPU that is complying with the process vent control requirements in § 63.1425(b)(1)(i), (b)(1)(iii), (b)(2)(ii), (b)(2)(iv), (c)(1)(ii), or (d)(2) using a combustion, recovery, or recapture device, the owner or operator shall determine the uncontrolled organic HAP emissions in accordance with the provisions of this paragraph, with the exceptions noted in paragraph (d)(1) of this section. The provisions of § 63.1427(c)(1) shall be used to calculate uncontrolled epoxide emissions prior to the onset of an extended cook out.

(1) *Exemptions.* The owner or operator is not required to determine uncontrolled organic HAP emissions for process vents in a PMPU if the conditions in paragraph (d)(1)(i), (ii), or (iii) of this section are met.

(i) For PMPUs where all process vents subject to the epoxide emission reduction requirements of § 63.1425(b) are controlled at all times using a combustion, recovery, or recapture device, or extended cookout, the owner or operator is not required to determine uncontrolled epoxide emissions.

(ii) For PMPUs where the combination of process vents from batch unit operations associated with the use of nonepoxide organic HAP to make or modify the product is subject to the Group 1 requirements of § 63.1425(c)(1), the owner or operator is not required to determine uncontrolled nonepoxide organic HAP emissions for those process vents if every process vent from a batch unit operation associated with the use of nonepoxide organic HAP to make or modify the product in the PMPU is controlled at all times using a combustion, recovery, or recapture device.

(iii) For PMPUs where all process vents associated with catalyst extraction that are subject to the organic emission reduction requirements of § 63.1425(d)(2) are controlled at all times using a combustion, recovery, or recapture device, the owner or operator is not required to determine uncontrolled organic HAP emissions for those process vents.

(2) *Process vents from batch unit operations.* The uncontrolled organic HAP emissions from an individual batch cycle for each process vent from a batch unit operation shall be determined using the procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U), § 63.488(b)(1) through (9). Uncontrolled emissions from process vents from batch unit operations shall be determined after the exit from the batch unit operation but before any recovery device.

(3) *Process vents from continuous unit operations.* The uncontrolled organic HAP emissions for each process vent from a continuous unit operation in a PMPU shall be determined at the location specified in paragraph (d)(3)(i) of this section, using the procedures in paragraph (d)(3)(ii) of this section.

(i) For process vents subject to either the provisions for epoxide emissions in § 63.1425(b) or the provisions for organic HAP emissions from catalyst extraction in § 63.1425(d), uncontrolled emissions shall be determined after the exit from the continuous unit operation but before any recovery device.

(ii) The owner or operator shall determine the hourly uncontrolled organic HAP emissions from each process vent from a continuous unit operation in accordance with paragraph (c)(4)(ii) of this section, except that the emission rate shall be determined at the location specified in paragraph (d)(2)(i) of this section.

(e) *Determination of organic HAP emission reduction for a PMPU.* (1) The owner or operator shall determine the organic HAP emission reduction for process vents in a PMPU that are complying with § 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), or (d)(2) using Equation 7. The organic HAP emission reduction shall be determined for each group of process vents subject to the same paragraph (i.e., paragraph (b), (c), or (d)) of § 63.1425. For instance, process vents that emit epoxides are subject to paragraph (b) of § 63.1425. Therefore, if the owner or operator of an existing affected source is complying with the 98 percent reduction requirement in § 63.1425(b)(2)(ii), the organic HAP (i.e., epoxide) emission reduction shall be determined for the group of vents in a PMPU that are subject to this paragraph.

$$RED_{PMPU} = \left(\frac{\sum_{i=1}^{n} \left(E_{unc,i}\right)\left(\frac{Ri}{100}\right)}{\sum_{i=1}^{n} \left(E_{unc,i}\right) + \sum_{j=1}^{m} \left(E_{unc,j}\right)} \right) * 100 \qquad \text{[Equation 7]}$$

Where:

RED_{PMPU} = Organic HAP emission reduction for the group of process vents subject to the same paragraph of § 63.1425, percent.

$E_{unc,i}$ = Uncontrolled organic HAP emissions from process vent i that is controlled using a combustion,

recovery, or recapture device, or extended cookout, kg/batch cycle for process vents from batch unit operations, kg/hr for process vents from continuous unit operations.

n = Number of process vents in the PMPU that are subject to the same paragraph of § 63.1425 and that are controlled using a combustion, recovery, or recapture device, or extended cookout.

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

$E_{unc,j}$ = Uncontrolled organic HAP emissions from process vent j that is not controlled using a combustion, recovery, or recapture device, kg/batch cycle for process vents from batch unit operations, kg/hr for process vents from continuous unit operations.

m = Number of process vents in the PMPU that are subject to the same paragraph of § 63.1425 and that are not controlled using a combustion, recovery, or recapture device.

(2) The control efficiency, R_i, shall be assigned as specified below in paragraph (e)(2)(i), (ii), (iii), or (iv) of this section.

(i) If the process vent is controlled using a flare (and the owner or operator has not previously obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.6(g)) or a combustion device specified in paragraph (b)(1), (2), (4), or (5) of this section, and a performance test has not been conducted, the control efficiency shall be assumed to be 98 percent.

(ii) If the process vent is controlled using a combustion, recovery, or recapture device for which a performance test has been conducted in accordance with the provisions of paragraph (c) of this section, or for which a performance test that meets the requirements of paragraph (b)(3) of this section has been previously performed, the control efficiency shall be the efficiency determined by the performance test.

(iii) If epoxide emissions from the process vent are controlled using extended cookout, the control efficiency shall be the efficiency determined in accordance with § 63.1427(e).

(iv) If the process vent is controlled using a flare, and the owner or operator has obtained approval to assume a control efficiency greater than 98 percent in accordance with § 63.6(g), the control efficiency shall be the efficiency approved in accordance with § 63.6(g).

(f) *Design evaluation.* A design evaluation is required for those control techniques that receive less than 10 tons per year (9.1 megagrams per year) of uncontrolled organic HAP emissions from one or more PMPU, if the owner or operator has chosen not to conduct a performance test for those control techniques in accordance with paragraph (b)(6) of this section. The design evaluation shall include documentation demonstrating that the control technique being used achieves the required control efficiency under worst-case conditions, as determined from the emission profile described in § 63.1426(c)(3)(i)(B)(*3*)(*i*).

(1) Except for ECO whose design evaluation is presented in paragraph (f)(2) of this section, to demonstrate that a control technique meets the required control efficiency, a design evaluation shall address the composition and organic HAP concentration of the vent stream, immediately preceding the use of the control technique. A design evaluation shall also address other vent stream characteristics and control technique operating parameters, as specified in any one of paragraphs (f)(1)(i) through (vi) of this section, depending on the type of control technique that is used. If the vent stream is not the only inlet to the control technique, the owner or operator shall also account for all other vapors, gases, and liquids, other than fuels, received into the control technique from one or more PMPUs, for purposes of the efficiency determination.

(i) For an enclosed combustion technique used to comply with the provisions of § 63.1425(b)(1), (c)(1), or (d), with a minimum residence time of 0.5 seconds and a minimum temperature of 760° C, the design evaluation shall document that these conditions exist.

(ii) For a combustion control technique that does not satisfy the criteria in paragraph (f)(1)(i) of this section, the design evaluation shall document the control efficiency and address the characteristics listed in paragraphs (f)(1)(ii)(A) through (C) of this section, depending on the type of control technique.

(A) For a thermal vapor incinerator, in the design evaluation the owner or operator shall consider the autoignition temperature of the organic HAP, shall consider the vent stream flow rate, and shall establish the design minimum and average temperatures in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, in the design evaluation the owner or operator shall consider the vent stream flow rate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, in the design evaluation the owner or operator shall consider the vent stream flow rate; shall establish the design minimum and average flame zone temperatures and combustion zone residence time; and shall describe the method and location where the vent stream is introduced into the flame zone.

(iii) For a condenser, in the design evaluation the owner or operator shall consider the vent stream flow rate, relative humidity, and temperature, and shall establish the design outlet organic HAP compound concentration level, design average temperature of the exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. The temperature of the gas stream exiting the condenser shall be measured and used to establish the outlet organic HAP concentration.

(iv) For a carbon adsorption system that regenerates the carbon bed directly onsite as part of the control technique (such as a fixed-bed adsorber), in the design evaluation the owner or operator shall consider the vent stream flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle time, number and capacity of carbon beds, type and working capacity of activated carbon used for the carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of the carbon. For vacuum desorption, the pressure drop shall also be included.

(v) For a carbon adsorption system that does not regenerate the carbon bed directly onsite as part of the control technique (such as a carbon canister), in the design evaluation the owner or operator shall consider the vent stream mass or volumetric flow rate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control technique and source operating schedule.

(vi) For a scrubber, in the design evaluation the owner or operator shall consider the vent stream composition, constituent concentrations, liquid-to-

vapor ratio, scrubbing liquid flow rate and concentration, temperature, and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation shall establish the design exhaust vent stream organic compound concentration level and shall include the additional information in paragraphs (f)(1)(vi) (A) and (B) of this section for trays and a packed column scrubber.

(A) Type and total number of theoretical and actual trays.

(B) Type and total surface area of packing for entire column and for individual packed sections, if the column contains more than one packed section.

(2) For ECO, the design evaluation shall establish the minimum duration (time) of the ECO, the maximum pressure at the end of the ECO, or the maximum epoxide concentration in the reactor liquid at the end of the ECO for each product class.

§ 63.1427 Process vent requirements for processes using extended cookout as an epoxide emission reduction technique.

(a) *Applicability of extended cookout requirements.* Owners or operators of affected sources that produce polyether polyols using epoxides, and that are using ECO as a control technique to reduce epoxide emissions in order to comply with percent emission reduction requirements in § 63.1425(b)(1)(i) or (b)(2)(ii) shall comply with the provisions of this section. The owner or operator that is using ECO in order to comply with the emission factor requirements in § 63.1425(b)(1)(iii) or § 63.1425(b)(2)(iv) shall demonstrate that the specified emission factor is achieved by following the requirements in § 63.1431. If additional control devices are used to further reduce the HAP emissions from a process vent already controlled by ECO, then the owner or operator shall also comply with the testing, monitoring, recordkeeping, and reporting requirements associated with the additional control device, as specified in §§ 63.1426, 63.1429, and 63.1430, respectively.

(1) For each product class, the owner or operator shall determine the batch cycle percent epoxide emission reduction for the most difficult to control product in the product class, where the most difficult to control product is the polyether polyol that is manufactured with the slowest pressure decay curve.

(2) The owner or operator may determine the batch cycle percent epoxide emission reduction by directly measuring the concentration of the unreacted epoxide, or by using process knowledge, reaction kinetics, and engineering knowledge, in accordance with paragraph (a)(2)(i) of this section.

(i) If the owner or operator elects to use any method other than direct measurement, the epoxide concentration shall be determined by direct measurement for one product from each product class and compared with the epoxide concentration determined using the selected estimation method, with the exception noted in paragraph (a)(2)(ii) of this section. If the difference between the directly determined epoxide concentration and the calculated epoxide concentration is less than 25 percent, then the selected estimation method will be considered to be an acceptable alternative to direct measurement for that class.

(ii) If uncontrolled epoxide emissions prior to the end of the ECO are less than 10 tons per year (9.1 megagrams per year), the owner or operator is not required to perform the direct measurement required in paragraph (a)(2)(i) of this section. Uncontrolled epoxide emissions prior to the end of the ECO shall be determined by the procedures in paragraph (d)(1) of this section.

(b) *Define the end of epoxide feed.* The owner or operator shall define the end of the epoxide feed in accordance with paragraph (b)(1) or (2) of this section.

(1) The owner or operator shall determine the concentration of epoxide in the reactor liquid at the point in time when all epoxide has been added to the reactor and prior to any venting. This concentration shall be determined in accordance with the procedures in paragraph (f)(1)(i) of this section.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the end of the epoxide feed may be defined by the reactor epoxide partial pressure at the point in time when all epoxide reactants have been added to the reactor. This reactor epoxide partial pressure shall be determined in accordance with the procedures in paragraph (g) of this section.

(i) No epoxide is emitted before the end of the ECO;

(ii) Extended cookout is the only control technique to reduce epoxide emissions; and

(iii) The owner or operator elects to determine the percent epoxide emission reduction for the ECO using reactor epoxide partial pressure in accordance with paragraph (e)(2) of this section.

(c) *Define the onset of the ECO.* The owner or operator shall calculate the uncontrolled emissions for the batch cycle by calculating the epoxide emissions, if any, prior to the onset of the ECO, plus the epoxide emissions at the onset of the ECO. The onset of the ECO is defined as the point in time when the combined unreacted epoxide concentration in the reactor liquid is equal to 25 percent of the concentration of epoxides at the end of the epoxide feed, which was determined in accordance with paragraph (b) of this section.

(1) The uncontrolled epoxide emissions for the batch cycle shall be determined using Equation 8.

$$E_{e,u} = \left(C_{liq,i}\right)\left(V_{liq,i}\right)\left(D_{liq,i}\right) + \left(C_{vap,i}\right)\left(V_{vap,i}\right)\left(D_{vap,i}\right) + \left(E_{epox,bef}\right) \qquad \text{[Equation 8]}$$

Where:

$E_{e,u}$ = Uncontrolled epoxide emissions at the onset of the ECO, kilograms per (kg/)batch.

$C_{liq,i}$ = Concentration of epoxide in the reactor liquid at the onset of the ECO, which is equal to 25 percent of the concentration of epoxide at the end of the epoxide feed, determined in accordance with paragraph (b)(1) of this section, weight percent.

$V_{liq,i}$ = Volume of reactor liquid at the onset of the ECO, liters.

$D_{liq,i}$ = Density of reactor liquid, kg/liter.

$C_{vap,i}$ = Concentration of epoxide in the reactor vapor space at the onset of the ECO, determined in accordance with paragraph (f)(2) of this section, weight percent.

$V_{vap,i}$ = Volume of the reactor vapor space at the onset of the ECO, liters.

$D_{vap,i}$ = Vapor density of reactor vapor space at the onset of the ECO, kg/liter.

$E_{epox,bef}$ = Epoxide emissions that occur prior to the onset of the ECO, determined in accordance with the provisions of § 63.1426(d), kilograms.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator may define the onset of the ECO as the point in time

when the reactor epoxide partial pressure equals 25 percent of the reactor epoxide partial pressure at the end of the epoxide feed, and is not required to determine the uncontrolled epoxide emissions in accordance with paragraph (c)(1) of this section.

(d) *Determine emissions at the end of the ECO.* The owner or operator shall calculate the epoxide emissions at the end of the ECO, where the end of the ECO is defined as the point immediately before the time when the reactor contents are emptied and/or the reactor vapor space purged to the atmosphere or to a combustion, recovery, or recapture device.

(1) The epoxide emissions at the end of the ECO shall be determined using Equation 9.

$$E_{e,E} = \left(C_{liq,f}\right)\left(V_{liq,f}\right)\left(D_{liq,f}\right) + \left(C_{vap,f}\right)\left(V_{vap,f}\right)\left(D_{vap,f}\right) \qquad \text{[Equation 9]}$$

Where:

$E_{e,E}$ = Epoxide emissions at the end of the ECO, kg.

$C_{liq,f}$ = Concentration of epoxide in the reactor liquid at the end of the ECO, determined in accordance with paragraph (f)(1) of this section, weight percent.

$V_{liq,f}$ = Volume of reactor liquid at the end of the ECO, liters.

$D_{liq,f}$ = Density of reactor liquid, kg/liter.

$C_{vap,f}$ = Concentration of epoxide in the reactor vapor space as it exits the reactor at the end of the ECO, determined in accordance with paragraph (f)(2) of this section, weight percent.

$V_{vap,f}$ = Volume of the reactor vapor space as it exits the reactor at the end of the ECO, liters.

$D_{vap,f}$ = Vapor density of reactor vapor space at the end of the ECO, kg/liter.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator may determine the reactor epoxide partial pressure at the end of the ECO instead of determining the uncontrolled epoxide emissions at the end of the ECO in accordance with paragraph (d)(1) of this section.

(e) *Determine percent epoxide emission reduction.* (1) The owner or operator shall determine the percent epoxide emission reduction for the batch cycle using Equation 10.

$$R_{batchcycle} = \left[\frac{E_{e,u} - \left(E_{e,E}\right)\left(1 - \frac{R_{addon,i}}{100}\right) + \left(E_{e,o}\right)\left(1 - \frac{R_{addon,j}}{100}\right)}{E_{e,u}}\right] * 100 \qquad \text{[Equation 10]}$$

Where:

$R_{batchcycle}$ = Epoxide emission reduction for the batch cycle, percent.

$E_{e,E}$ = Epoxide emissions at the end of the ECO determined in accordance with paragraph (d)(1) of this section, kilograms.

$R_{addon,i}$ = Control efficiency of combustion, recovery, or recapture device that is used to control epoxide emissions after the ECO, determined in accordance with the provisions of § 63.1426(c), percent .

$E_{e,o}$ = Epoxide emissions that occur before the end of the ECO, determined in accordance with the provisions of § 63.1426(d), kilograms.

$R_{addon,j}$ = Control efficiency of combustion, recovery, or recapture device that is used to control epoxide emissions that occur before the end of the ECO, determined in accordance with the provisions of § 63.1426(c), percent.

$E_{e,u}$ = Uncontrolled epoxide emissions determined in accordance with paragraph (c)(1) of this section, kilograms.

(2) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator may determine the percent epoxide emission reduction for the batch cycle using reactor epoxide partial pressure and Equation 11, instead of using the procedures in paragraph (e)(1) of this section.

Where:

$R_{batchcycle}$ = Epoxide emission reduction for the batch cycle, percent.

$P_{epox,i}$ = Reactor epoxide partial pressure at the onset of the ECO, determined in accordance with paragraph (c)(2) of this section, mm Hg.

$P_{epox,f}$ = Reactor epoxide partial pressure at the end of the ECO, determined in accordance with paragraph (c)(2) of this section, mm Hg.

(f) *Determination of epoxide concentrations.* The owner or operator shall determine the epoxide concentrations in accordance with the procedures in this paragraph.

(1) The owner or operator shall determine the concentration of epoxide in the reactor liquid using either direct measurement in accordance with paragraph (f)(1)(i) of this section, or reaction kinetics in accordance with paragraph (f)(1)(ii) of this section. An owner or operator may also request to use an alternative methodology in accordance with paragraph (f)(1)(iii) of this section.

(i) The owner or operator shall submit a standard operating procedure for obtaining the liquid sample, along with the test method used to determine the epoxide concentration. This information shall be submitted in the Precompliance Report.

(ii) Determine the epoxide concentration in the reactor liquid using Equation 12. [Equation 12]

$$C_{liq,f} = C_{liq,i}\, e^{-kt} \qquad \text{[Equation 12]}$$

$C_{liq,f}$ = Concentration of epoxide in the reactor liquid at the end of the time period, weight percent.

$C_{liq,i}$ = Concentration of epoxide in the reactor liquid at the beginning of the time period, weight percent.

k = Reaction rate constant, 1/hr.

t = Time, hours.

Note: This equation assumes a first order reaction with respect to epoxide concentration. where:

(iii) If the owner/operator deems that the methods listed in paragraphs (f)(1)(i) and (ii) of this section are not appropriate for the reaction system for a PMPU, then the owner/operator may submit a request for the use of an alternative method.

(2) The owner or operator shall determine the concentration of epoxide in the reactor vapor space using either direct measurement in accordance with paragraph (f)(2)(i) of this section, or by engineering estimation in accordance

with paragraph (f)(2)(ii) of this section. An owner or operator may also request to use an alternative methodology in accordance with paragraph (f)(2)(iii) of this section.

(i) The owner or operator shall take two representative samples from a bleed valve off the reactor's process vent. The owner or operator shall determine the total epoxide concentration using 40 CFR part 60, appendix A, Method 18.

(ii) Determine the epoxide concentration in the vapor space using Raoult's Law or another appropriate phase equilibrium equation and the liquid epoxide concentration, determined in accordance with paragraph (f)(1) of this section.

(iii) If the owner/operator deems that the methods listed in paragraphs (f)(1)(i) and (ii) of this section are not appropriate for the reaction system for a PMPU, then the owner/operator may submit a request for the use of an alternative method.

(g) *Determination of pressure.* The owner or operator shall determine the total pressure of the system using standard pressure measurement devices calibrated according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(h) *Determination if pressure decay curves are similar.* The owner or operator shall determine the pressure decay curve as defined in § 63.1423. Products with similar pressure decay curves constitute a product class. To determine if two pressure decay curves are similar when the pressure decay curves for products have different starting and finishing pressures, the owner or operator shall determine the time when the pressure has fallen to half its total pressure by using Equation 13:

$$\text{Time}\left(P_{half^1}\right) - \text{Time}\left(P_{half^2}\right) < 20\,\%\, T_{AVG\ P_{AVG}} \qquad \text{[Equation 13]}$$

Where:

$P_{half\,1}$ = Half the total pressure of the epoxide for product 1.

Time ($P_{half\,1}$) = Time when the pressure has fallen to half its total pressure for product 1.

$P_{half\,2}$ = Half the total pressure of the epoxide for product 2.

Time ($P_{half\,2}$) = Time when the pressure has fallen to half its total pressure for product 2.

T_{AVG} P_{AVG} = The average time to cookout to the point where the epoxide pressure is 25 percent of the epoxide pressure at the end of the feed step for products 1 and 2.

(i) *ECO monitoring requirements.* The owner or operator using ECO shall comply with the monitoring requirements of this paragraph to demonstrate continuous compliance with this subpart. Paragraphs (i)(1) through (3) of this section address monitoring of the extended cookout.

(1) To comply with the provisions of this section, the owner or operator shall monitor one of the parameters listed in paragraphs (i)(1)(i) through (iii) of this section, or may utilize the provision in paragraph (i)(1)(iv) of this section.

(i) Time from the end of the epoxide feed;

(ii) The epoxide partial pressure in the closed reactor;

(iii) Direct measurement of epoxide concentration in the reactor liquid at the end of the ECO, when the reactor liquid is still in the reactor, or after the reactor liquid has been transferred to another vessel; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (i)(1)(i) through (iii) of this section, as described in § 63.1439(f).

(2) During the determination of the percent epoxide emission reduction in paragraphs (b) through (e) of this section, the owner or operator shall establish, as a level that shall be maintained during periods of operation, one of the parameters in paragraphs (i)(2)(i) through (iii) of this section, or may utilize the procedure in paragraph (i)(2)(iv) of this section, for each product class.

(i) The time from the end of the epoxide feed to the end of the ECO;

(ii) The reactor epoxide partial pressure at the end of the ECO;

(iii) The epoxide concentration in the reactor liquid at the end of the ECO, when the reactor liquid is still in the reactor, or after the reactor liquid has been transferred to another vessel; or

(iv) An owner or operator may submit a request to the Administrator to monitor a parameter other than the parameters listed in paragraphs (i)(2)(i) through (iii) of this section, as described in § 63.1439(f).

(3) For each batch cycle where ECO is used to reduce epoxide emissions, the owner or operator shall record the value of the monitored parameter at the end of the ECO. This parameter is then compared with the level established in accordance with paragraph (i)(2) of this section to determine if an excursion has occurred. An ECO excursion is defined as one of the situations described in paragraphs (i)(3)(i) through (v) of this section.

(i) When the time from the end of the epoxide feed to the end of the ECO is less than the time established in paragraph (i)(2)(i) of this section;

(ii) When the reactor epoxide partial pressure at the end of the ECO is greater than the partial pressure established in paragraph (i)(2)(ii) of this section;

(iii) When the epoxide concentration in the reactor liquid at the end of the ECO is greater than the epoxide concentration established in paragraph (i)(2)(iii) of this section;

(iv) When the parameter is not measured and recorded at the end of the ECO; or

(v) When the alternative monitoring parameter is outside the range established under § 63.1439(f) for proper operation of the ECO as a control technique.

(j) *Recordkeeping requirements.* (1) The owner or operator shall maintain the records specified in paragraphs (j)(1)(i) and (ii) of this section, for each product class. The owner or operator shall also maintain the records related to the initial determination of the percent epoxide emission reduction specified in paragraphs (j)(1)(iii) through (x) of this section, as applicable, for each product class.

(i) Operating conditions of the product class, including:

(A) Pressure decay curve;

(B) Minimum reaction temperature;

(C) Number of reactive hydrogens in the raw material;

(D) Minimum catalyst concentration;

(E) Ratio of EO/PO at the end of the epoxide feed; and

(F) Reaction conditions, including the size of the reactor or batch.

(ii) A listing of all products in the product class, along with the information specified in paragraphs (j)(1)(i)(A) through (F) of this section, for each product.

(iii) The concentration of epoxide at the end of the epoxide feed, determined in accordance with paragraph (b)(1) of this section.

(iv) The concentration of epoxide at the onset of the ECO, determined in

accordance with paragraph (c) of this section.

(v) The uncontrolled epoxide emissions at the onset of the ECO, determined in accordance with paragraph (c)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the uncontrolled epoxide emissions.

(vi) The epoxide emissions at the end of the ECO, determined in accordance with paragraph (d)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the epoxide emissions.

(vii) The percent epoxide reduction for the batch cycle, determined in accordance with paragraph (e)(1) of this section. The records shall also include all the background data, measurements, and assumptions used to calculate the percent reduction.

(viii) The parameter level, established in accordance with paragraph (i)(3) of this section.

(ix) If epoxide emissions occur before the end of the ECO, the owner or operator shall maintain records of the time and duration of all such emission episodes that occur during the initial demonstration of batch cycle efficiency.

(x) If the conditions in paragraphs (b)(2)(i), (ii), and (iii) of this section are met, the owner or operator is not required to maintain the records specified in paragraphs (j)(1)(iii) through (iv) of this section, but shall maintain the records specified in paragraphs (j)(1)(x)(A), (B), and (C) of this section.

(A) The reactor epoxide partial pressure at the following times:

(1) At end of the epoxide feed, determined in accordance with paragraph (b)(2) of this section;

(2) At the onset of the ECO, established in accordance with paragraph (c)(2) of this section; or

(3) At the end of the ECO, determined in accordance with paragraph (d)(2) of this section.

(B) The percent epoxide reduction for the batch cycle, determined in accordance with paragraph (e)(2) of this section. The records shall also include all the measurements and assumptions used to calculate the percent reduction.

(C) The reactor epoxide partial pressure at the end of the ECO.

(2) The owner or operator shall maintain the records specified in paragraphs (j)(2)(i) through (iv) of this section.

(i) For each batch cycle, the product being produced and the product class to which it belongs.

(ii) For each batch cycle, the owner or operator shall record the value of the parameter monitored in accordance with paragraph (i)(3) of this section.

(iii) If a combustion, recovery, or recapture device is used in conjunction with ECO, the owner or operator shall record the information specified in § 63.1430(d) and comply with the monitoring provisions in § 63.1429.

(iv) If a combustion, recovery, or recapture device is used to reduce emissions, the owner or operator shall maintain the records specified in § 63.1430(d).

(v) If epoxide emissions occur before the end of the ECO, the owner or operator shall maintain records of the time and duration of all such emission episodes.

(k) *Reporting requirements.* The owner or operator shall comply with the reporting requirements in this paragraph.

(1) The information specified in paragraphs (k)(1)(i) through (ii) of this section shall be provided in the Precompliance Report, as specified in § 63.1439(e)(4).

(i) A standard operating procedure for obtaining the reactor liquid sample and a method that will be used to determine the epoxide concentration in the liquid, in accordance with paragraph (f)(1)(i) of this section.

(ii) A request to monitor a parameter other than those specified in paragraph (i)(1)(i), (ii), or (iii) of this section, as provided for in paragraph (i)(1)(iv) of this section.

(2) The information specified in paragraphs (k)(2)(i) through (iv) of this section shall be provided in the Notification of Compliance Status, as specified in § 63.1439(e)(5).

(i) For each product class, the information specified in paragraphs (k)(2)(i)(A) through (C) of this section.

(A) The operating conditions of this product class, as specified in paragraph (j)(1)(i) of this section.

(B) A list of all products in the product class.

(C) The percent epoxide emission reduction, determined in accordance with paragraph (e) of this section.

(ii) The parameter for each product class, as determined in accordance with paragraph (i)(2) of this section.

(iii) If a combustion, recovery, or recapture device is used in addition to ECO to reduce emissions, the information specified in § 63.1430(g)(1).

(iv) If epoxide emissions occur before the end of the ECO, a listing of the time and duration of all such emission episodes that occur during the initial demonstration of batch cycle efficiency.

(3) The information specified in paragraphs (k)(3)(i) through (iii) of this section shall be provided in the Periodic Report, as specified in § 63.1439(e)(6).

(i) Reports of each batch cycle for which an ECO excursion occurred, as defined in paragraph (i)(3) of this section.

(ii) Notification of each batch cycle when the time and duration of epoxide emissions before the end of the ECO, recorded in accordance with paragraph (j)(2)(iv) of this section, exceed the time and duration of the emission episodes during the initial epoxide emission percentage reduction determination, as recorded in paragraph (j)(1)(viii) of this section.

(iii) If a combustion, recovery, or recapture device is used to reduce emissions, the information specified in § 63.1430(h).

(l) *New polyether polyol products.* If an owner or operator wishes to utilize ECO as a control option for a polyether polyol not previously assigned to a product class and reported to the Agency in accordance with either paragraph (k)(2)(i)(B), (l)(1)(ii), or (l)(2)(iii) of this section, the owner or operator shall comply with the provisions of paragraph (l)(1) or (2) of this section.

(1) If the operating conditions of the new polyether polyol are consistent with the operating conditions for an existing product class, the owner or operator shall comply with the requirements in paragraphs (l)(1)(i) and (ii) of this section.

(i) The owner or operator shall update the list of products for the product class required by paragraph (j)(1)(ii) of this section, and shall record the information in paragraphs (j)(1)(i)(A) through (F) of this section for the new product.

(ii) Within 180 days after the production of the new polyether polyol, the owner or operator shall submit a report updating the product list previously submitted for the product class. This information may be submitted along with the next Periodic Report.

(2) If the operating conditions of the new polyether polyol do not conform with the operating characteristics of an existing product class, the owner or operator shall establish a new product class and shall comply with provisions of paragraphs (l)(2)(i) through (iii) of this section.

(i) The owner or operator shall establish the batch cycle percent epoxide emission reduction in accordance with paragraphs (b) through (g) of this section for the product class.

(ii) The owner or operator shall establish the records specified in

paragraph (j)(1) of this section for the product class.

(iii) Within 180 days of the production of the new polyether polyol, the owner or operator shall submit a report containing the information specified in paragraphs (k)(2)(i) and (ii) of this section.

(m) *Polyether polyol product changes.* If a change in operation, as defined in paragraph (m)(1) of this section, occurs for a polyether polyol that has been assigned to a product class and reported to the Agency in accordance with paragraph (k)(2)(i)(B), (l)(1)(ii), or (l)(2)(iii) of this section, the owner or operator shall comply with the provisions of paragraphs (m)(2) through (3) of this section.

(1) A change in operation for a polyether polyol is defined as a change in any one of the parameters listed in paragraphs (m)(1)(i) through (ix) of this section.

(i) A significant change in reaction kinetics;

(ii) Use of a different oxide reactant;

(iii) Use of a different EO/PO ratio;

(iv) A lower reaction temperature;

(v) A lower catalyst feed on a mole/mole fraction OH basis;

(vi) A shorter cookout;

(vii) A lower reactor pressure;

(viii) A different type of reaction, (e.g., a self-catalyzed vs. catalyzed reaction); or

(ix) A marked change in reaction conditions (e.g., a markedly different liquid level).

(2) If the operating conditions of the product after the change in operation remain within the operation conditions of the product class to which the product was assigned, the owner or operator shall update the records specified in paragraphs (j)(1)(i)(A) through (F) of this section for the product.

(3) If the operating conditions of the product after the change in operation are outside of the operating conditions of the product class to which the product was assigned, the owner or operator shall comply with the requirements in paragraph (m)(3)(i) or (ii) of this section, as appropriate.

(i) If the new operating conditions of the polyether polyol are consistent with the operating conditions for another existing product class, the owner or operator shall comply with the requirements in paragraphs (m)(3)(i)(A) and (B) of this section.

(A) The owner or operator shall update the list of products for the product class that the product is leaving, and for the product class that the product is entering, and shall record the new information in paragraphs (j)(1)(i)(A) through (F) of this section for the product.

(B) Within 180 days after the change in operating conditions for the polyether polyol product, the owner or operator shall submit a report updating the product lists previously submitted for the product class. This information may be submitted along with the next Periodic Report.

(ii) If the new operating conditions of the polyether polyol product do not conform with the operating characteristics of an existing product class, the owner or operator shall establish a new product class and shall comply with provisions of paragraphs (m)(3)(ii)(A) through (C) of this section.

(A) The owner or operator shall establish the batch cycle percent epoxide emission reduction in accordance with paragraphs (b) through (g) of this section for the product class.

(B) The owner or operator shall establish the records specified in paragraph (j)(1) of this section for the product class.

(C) Within 180 days of the change in operating conditions for the polyether polyol, the owner or operator shall submit a report containing the information specified in paragraphs (k)(2)(i) and (ii) of this section.

§ 63.1428 Process vent requirements for group determination of PMPUs using a nonepoxide organic HAP to make or modify the product.

(a) *Process vents from batch unit operations.* The owner or operator shall determine, for each PMPU located at an affected source, if the combination of all process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product is a Group 1 combination of batch process vents, as defined in § 63.1423. The annual uncontrolled nonepoxide organic HAP emissions, determined in accordance with paragraph (b) of this section, and annual average flow rate, determined in accordance with paragraph (c) of this section, shall be determined for all process vents from batch unit operations associated with the use of a nonepoxide organic HAP to make or modify the product, with the exception of those vents specified in paragraph (i) of this section, at the location after all applicable control techniques have been applied to reduce epoxide emissions in accordance with paragraph (a)(1) or (2) of this section.

(1) If the owner or operator is using a combustion, recovery, or recapture device to reduce epoxide emissions, this location shall be at the exit of the combustion, recovery, or recapture device.

(2) If the owner or operator is using ECO to reduce epoxide emissions, this location shall be at the exit from the batch unit operation. For the purpose of these determinations, the primary condenser operating as a reflux condenser on a reactor or distillation column shall be considered part of the unit operation.

(b) *Determination of annual nonepoxide organic HAP emissions.* The owner or operator shall determine, for each PMPU, the total annual nonepoxide organic HAP emissions from the combination of all process vents from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify the product in accordance with paragraphs (b)(1) and (2) of this section.

(1) The annual nonepoxide organic HAP emissions for each process vent from a batch unit operation associated with the use of a nonepoxide organic HAP to make or modify the product shall be determined using the batch process vent procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U), § 63.488(b).

(2) The owner or operator shall sum the annual nonepoxide organic HAP emissions from all individual process vents from batch unit operations in a PMPU, determined in accordance with paragraph (b)(1) of this section, to obtain the total nonepoxide organic HAP emissions from the combination of process vents associated with the use of a nonepoxide organic HAP to make or modify the product, for the PMPU.

(c) *Minimum emission level exemption.* If the annual emissions of TOC or nonepoxide organic HAP from the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify a polyether polyol for a PMPU are less than 11,800 kg/yr, the owner or operator of that PMPU is not required to comply with the provisions in paragraphs (d) and (e) of this section.

(d) *Determination of average flow rate and annual average flow rate.* The owner or operator shall determine, for each PMPU, the total annual average flow rate for the combination of all process vents from batch unit operations that are associated with the use of a nonepoxide organic HAP to make or modify a product in accordance with paragraphs (d)(1) and (2) of this section.

(1) The annual average flow rate for each process vent from batch unit operations that is associated with the use of nonepoxide organic HAP to make or modify the product shall be determined using the batch process vent

procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U), § 63.488(e).

(2) The owner or operator shall sum the annual average flow rates from the individual process vents from batch unit operations in a PMPU, determined in accordance with paragraph (d)(1) of this section, to obtain the total annual average flow rate for the combination of process vents associated with the use of a nonepoxide organic HAP to make or modify the product, for the PMPU.

(e) *Determination of cutoff flow rate.* For each PMPU at an affected source that uses nonepoxide organic HAP to make or modify the product, the owner or operator shall calculate the cutoff flow rate using Equation 14.

$$CFR = (0.00437)(AE) - 51.6 \quad \text{[Equation 14]}$$

Where:

CFR = Cutoff flow rate, standard cubic meters per minute (scmm).

AE = Annual TOC or nonepoxide organic HAP emissions from the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product, as determined in paragraph (b)(2) of this section, kg/yr.

(f) [Reserved]

(g) *Process changes affecting Group 2 combinations of process vents in a PMPU that are from batch unit operations.* Whenever process changes, as described in paragraph (g)(1) of this section, are made that affect a Group 2 combination of batch process vents and that could reasonably be expected to change the group status from Group 2 to Group 1, the owner or operator shall comply with paragraphs (g)(2) and (3) of this section.

(1) Examples of process changes include, but are not limited to, increases in production capacity or production rate, changes in feedstock type or catalyst type; or whenever there is replacement, removal, or modification of recovery equipment considered part of the batch unit operation. Any change that results in an increase in the annual nonepoxide organic HAP emissions from the estimate used in the previous group determination constitutes a process change for the purpose of these provisions. 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 process affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (e) of this section, as applicable, and determining if the combination of process vents is a Group 1 combination of batch process vents, as defined in § 63.1423. Alternatively, engineering assessment, as described in § 63.488(b)(6)(i), may be used to determine the effects of the process change.

(3) Based on the results of paragraph (g)(2) of this section, the owner or operator shall comply with either paragraph (g)(3)(i) or (ii) of this section.

(i) If the redetermination described in paragraph (g)(2) of this section indicates that the group status of the combination of process vents from batch unit operations in a PMPU that are associated with the use of nonepoxide organic HAP to make or modify the product changes from Group 2 to Group 1 as a result of the process change, the owner or operator shall submit a report as specified in § 63.1439(e)(6)(iii)(D)(*1*) and shall comply with Group 1 combination of batch process vents provisions in this subpart, as specified in § 63.1420(g)(3).

(ii) If the redetermination described in paragraph (g)(2) of this section indicates no change in group status, the owner or operator is not required to submit a report.

(h) *Process vents from continuous unit operations.* (1) The owner or operator shall determine the total resource effectiveness (TRE) index value for each process vent from a continuous unit operation that is associated with the use of nonepoxide organic HAP to make or modify the product. To determine the TRE index value, the owner or operator shall conduct a TRE determination and calculate the TRE index value according to the HON process vent group determination procedures in § 63.115(d)(1) or (2) and the TRE equation in § 63.115(d)(3). The TRE index value shall be determined at the location after all applicable control techniques have been applied to reduce epoxide emissions in accordance with paragraph (h)(1)(i), (ii), or (iii) of this section.

(i) If the owner or operator uses one or more nonepoxide recovery devices after all control techniques to reduce epoxide emissions, this location shall be after the last nonepoxide recovery device.

(ii) If the owner or operator does not use a nonepoxide recovery device after a combustion, recovery, or recapture device to reduce epoxide emissions, this location shall be at the exit of the combustion, recovery, or recapture device.

(iii) If the owner or operator does not use a nonepoxide recovery device after extended cookout to reduce epoxide emissions, this location shall be at the exit from the continuous unit operation. For the purpose of these determinations, the primary condenser operating as a reflux condenser on a reactor or distillation column shall be considered part of the unit operation.

(2) The owner or operator of a Group 2 continuous process vent shall recalculate the TRE index value as necessary to determine whether the process vent is Group 1 or Group 2, whenever process changes are made that could reasonably be expected to change the process vent to Group 1. Examples of process changes include, but are not limited to, increases in production capacity or production rate, changes in feedstock type or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the range on which the original TRE calculation was based.

(i) The TRE index value shall be recalculated based on measurements of process vent stream flow rate, TOC, and nonepoxide organic HAP concentrations, and heating values as specified in the HON process vent group determination procedures in § 63.115(a), (b), (c), and (d), as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in § 63.115(d)(1).

(ii) Where the recalculated TRE index value is less than or equal to 1.0, or, where the TRE index value before the process change was greater than 4.0 and the recalculated TRE index value is less than or equal to 4.0 but greater than 1.0, the owner or operator shall submit a report as specified in the process vent reporting and recordkeeping provisions in § 63.1430(j) or (k), and shall comply with the appropriate provisions in the process vent control requirements in § 63.1425 by the dates specified in

§ 63.1422 (the section describing compliance dates for sources subject to this subpart).

(iii) Where the recalculated TRE index value is greater than 4.0, the owner or operator is not required to submit a report.

(i) *Combination of process vents from batch unit operations and process vents from continuous unit operations.* If an owner or operator combines a process vent from a batch unit operation that is associated with the use of a nonepoxide organic HAP to make or modify the product with a process vent from a continuous unit operation that is associated with the use of a nonepoxide prior to the epoxide control technique, or prior to a nonepoxide recovery device that is after the epoxide control technique, then the provisions in paragraphs (i)(1) and (2) of this section shall apply.

(1) The process vent from the batch unit operation is not required to be included in the group determination required by paragraphs (a) through (e) of this section.

(2) The TRE index value of the combined stream shall be determined in accordance with paragraph (h) of this section, and the TRE index value shall be calculated during a period when nonepoxide organic HAP emissions are being generated by the batch unit operation.

§ 63.1429 Process vent monitoring requirements.

(a) *Monitoring equipment requirements.* The owner or operator of a process vent that uses a combustion, recovery, or recapture device to comply with the process vent control requirements in § 63.1425(b)(1), (b)(2), (c)(1), (c)(3), or (d) shall install monitoring equipment specified in paragraph (a)(1), (2), (3), (4), (5), (6), or (7) of this section, depending on the type of device used. Also, the owner or operator that uses a recovery or recapture device to comply with § 63.1425(c)(4) shall install monitoring equipment as specified in paragraph (a)(4), (5), (6), or (7) of this section. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers' specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(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, a 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, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, the following monitoring equipment is required: a temperature monitoring device in the firebox equipped with a continuous recorder. Any boiler or process heater in which all process vent streams are introduced with primary fuel or are used as the primary fuel is exempt from this requirement.

(4) Where an absorber is used, a scrubbing liquid flow rate meter or a pressure monitoring device is required and should be equipped with a continuous recorder. If an acid or base absorbent is used, a pH monitoring device to monitor scrubber effluent is also required. If two or more absorbers in series are used, a scrubbing liquid flow rate meter, or a pressure monitoring device, equipped with a continuous recorder, is required for each absorber in the series. An owner or operator may submit a request to instead install the scrubbing liquid flow rate meter, or a pressure monitoring device, equipped with a continuous recorder, on only the final absorber in a series, in accordance with the alternative parameter monitoring reporting requirements in § 63.1439(f).

(5) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is required.

(6) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of +10 percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle, and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(7) As an alternative to paragraphs (a)(4) through (6) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(b) *Alternative parameters.* An owner or operator of a process vent may request approval to monitor parameters other than those listed in paragraph (a) of this section. The request shall be submitted according to the procedures specified in the process vent reporting and recordkeeping requirements in § 63.1430(j) and the alternative parameter monitoring reporting requirements in § 63.1439(f). Approval shall be requested if the owner or operator:

(1) Uses a combustion device other than an incinerator, boiler, process heater, or flare; or

(2) For a Group 2 continuous process vent, maintains a TRE greater than 1.0 but less than or equal to 4.0 without a recovery device or with a recovery device other than the recovery devices listed in paragraph (a) of this section; or

(3) Uses one of the combustion, recovery, or recapture devices listed in paragraph (a) of this section, but seeks to monitor a parameter other than those specified in paragraph (a) of this section.

(c) *Monitoring of bypass lines.* The owner or operator of a process vent using a process vent system that contains bypass lines that could divert a process vent stream away from the combustion, recovery, or recapture device used to comply with the process vent control requirements in § 63.1425(b), (c), or (d) shall comply with paragraph (c)(1) or (2) 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 paragraphs (c)(1) or (2) of this section.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once at approximately equal intervals of about 15 minutes. Records shall be generated as specified in the process vent reporting and recordkeeping provisions in § 63.1430(d)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the combustion, recovery, or recapture 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 the process

vent reporting and recordkeeping provisions in § 63.1430(d)(4)(i).

(d) *Establishment of parameter monitoring levels.* Parameter monitoring levels for process vents from continuous or batch unit operations using a combustion, recovery, or recapture device to comply with the process vent control requirements in § 63.1425(b), (c), or (d) shall be established as specified in paragraphs (d)(1) through (3) of this section.

(1) For each parameter monitored under paragraph (a) or (b) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 5 of this subpart (the table listing the monitoring, recordkeeping, and reporting requirements for process vents from batch unit operations), that indicates that the combustion, recovery, or recapture device is operated in a manner to ensure compliance with the provisions of this subpart. The level shall be established in accordance with the procedures specified in the process vent control requirements in § 63.1430(d). The level may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under the process vent requirements for determining organic HAP concentration, control efficiency, and aggregated organic HAP emission reductions in § 63.1426, provided that the prior performance test meets the conditions of § 63.1426(b)(3).

(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 the Notification of Compliance Status requirements in § 63.1439(e)(5) or in the operating permit application requirements in § 63.1439(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 (d)(2) of this section. The definition of operating day shall specify the time(s) at which an operating day begins and ends.

§ 63.1430 Process vent reporting and recordkeeping requirements.

(a) [Reserved]

(b) *Records to demonstrate compliance.* The owner or operator complying with the process vent control requirements in § 63.1425(b), (c), or (d) shall keep the following records, as applicable, readily accessible:

(1) When using a flare to comply with the process vent control requirements in § 63.1425(b)(2)(i), (c)(1)(i), (c)(3)(i), or (d)(1):

(i) The flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate determinations, and exit velocity determinations made during the flare specification determination required by § 63.1437(c); and

(iii) All periods during the flare specification determination required by § 63.1437(c) when all pilot flames are absent.

(2) The following information when using a combustion, recovery, or recapture device (other than a flare) to achieve compliance with the process vent control requirements in § 63.1425(b), (c), or (d):

(i) For a combustion, recovery, or recapture device being used to comply with a percent reduction requirement of § 63.1425(b)(1)(i), (b)(2)(ii), (c)(1)(ii), (c)(3)(ii), or (d)(2), or the annual epoxide emission limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv), the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in the process vent requirements in § 63.1426;

(ii) For a combustion device being used to comply with an outlet concentration limitation of § 63.1425(b)(1)(ii) or (b)(2)(iii), the concentration of organic HAP or TOC outlet of the combustion device, as determined using the procedures specified in the process vent requirements in § 63.1426;

(iii) For a boiler or process heater, a description of the location at which the process vent stream is introduced into the boiler or process heater;

(iv) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or is 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 § 63.1426.

(c) *Records related to the establishment of parameter monitoring levels.* For each parameter monitored according to the process vent monitoring requirements in § 63.1429(a) and Table 5 of this subpart, or for alternate parameters and/or parameters for alternate control techniques monitored according to the alternative parameter monitoring reporting requirements in § 63.1439(f) as allowed under § 63.1429(b), maintain documentation showing the establishment of the level that indicates that the combustion, recovery, or recapture device is operated in a manner to ensure compliance with the provisions of this subpart, as required by the process vent monitoring requirements in § 63.1429(d).

(d) *Records to demonstrate continuous compliance.* The owner or operator that uses a combustion, recovery, or recapture device to comply with the process vent control requirements in § 63.1425(b), (c), or (d) shall keep the following records readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under the process vent monitoring requirements in § 63.1429(a) as applicable, and listed in Table 5 of this subpart, or specified by the Administrator in accordance with the alternative parameter monitoring reporting requirements in § 63.1439(f), as allowed under § 63.1429(b). These records shall be kept as specified under § 63.1439(d), except as specified in paragraphs (d)(1)(i) and (ii) of this section.

(i) For flares, the records specified in Table 5 of this subpart shall be maintained in place of continuous records.

(ii) For carbon adsorbers used for process vents from batch unit operations, the records specified in Table 5 of this subpart shall be maintained in place of daily averages.

(2) Records of the daily average value for process vents from continuous unit operations or batch unit operations of each continuously monitored parameter, except as provided in paragraphs (d)(2)(i) and (ii) of this section.

(i) 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 daily averages. In addition, monitoring data recorded during periods of non-operation of the process (or specific portion thereof) resulting in cessation of organic HAP emissions, (or periods of start-up, shutdown, or malfunction) shall not be included in computing the daily averages.

(ii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum parameter monitoring level established in accordance with the process vent monitoring requirements in § 63.1429(d), 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 daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified under § 63.1429(c)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the time(s) of all periods when the process vent was diverted from the combustion, recovery, or recapture device, or the flow indicator specified in § 63.1429(c)(1) was not operating.

(4) Where a seal or closure mechanism is used to comply with the process vent monitoring requirements for bypass lines in § 63.1429(c)(2), hourly records of flow are not required. For compliance with § 63.1429(c)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanism 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 been broken.

(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 combustion, recovery, or recapture device operation when monitors are not operating.

(e) *Records related to the group determination for process vents that are associated with the use of nonepoxide organic HAP to make or modify the product.* (1) *Process vents from batch unit operations.* Except as provided in paragraphs (e)(1)(vi) and (vii) of this section, the owner or operator of an affected source shall maintain the records specified in paragraphs (e)(1)(i) through (v) of this section for each PMPU that uses a nonepoxide organic HAP to make or modify the product in batch unit operations. The records required to be maintained by this paragraph are limited to the information developed and used to make the group determination under the process vent requirements for processes using a nonepoxide organic HAP to make or modify the product in § 63.1428(a) through (e), as appropriate. If an owner or operator did not need to develop certain information (e.g., annual average flow rate) to determine the group status, the owner or operator is not required to develop additional information. The owner or operator may elect Group 1 status for process vents without making a Group 1/Group 2 determination. In such event, none of the records specified in paragraphs (e)(1)(i) through (v) are required.

(i) 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 class made in the PMPU.

(ii) Total annual uncontrolled TOC or nonepoxide organic HAP emissions from the combination of process vents from batch unit operations associated with the use of nonepoxide organic HAP to make or modify the product, as determined in accordance with the process vent requirements for group determinations in § 63.1428(b).

(iii) The annual average flow rate for the combination of process vents from batch unit operations associated with the use of organic HAP to make or modify the product, as determined in accordance with the process vent requirements for group determinations in § 63.1428(d).

(iv) The cutoff flow rate, determined in accordance with the process vent requirements for group determinations in § 63.1428(e).

(v) The results of the PMPU group determination (i.e., whether the combination of process vents is Group 1 or Group 2).

(vi) If the combination of all process vents from batch unit operations associated with the use of an organic HAP to make or modify the product is subject to the Group 1 batch process vent control requirements for nonepoxide HAP emissions from making or modifying the product in § 63.1425(c)(1), none of the records in paragraphs (b)(1)(i) through (v) of this section are required.

(vii) If the total annual emissions from the combination of process vents from batch unit operations associated with the use of an organic HAP to make or modify the product are less than 11,800 kg per year, only the records in paragraphs (b)(1)(i) and (ii) of this section are required.

(2) *Process vents from continuous unit operations.* The owner or operator of an affected source that uses nonepoxide organic HAP to make or modify the product in continuous unit operations shall keep records regarding the measurements and calculations performed to determine the TRE index value of each process vent stream. The owner or operator of Group 1 continuous process vents that are subject to the control requirements of § 63.1425(c)(3) is not required to keep these records.

(f) *Records for Group 2 process vents that are associated with the use of nonepoxide organic HAP to make or modify the product.* The following records shall be maintained for PMPUs with a Group 2 combination of batch process vents and/or one or more Group 2 continuous process vents.

(1) *Process vents from batch unit operations—emission records.* The owner or operator shall maintain records of the combined total annual nonepoxide organic HAP emissions from process vents associated with the use of nonepoxide organic HAP to make or modify the product for each PMPU where the combination of these process vents is classified as Group 2.

(2) *Process vents from continuous unit operations—monitoring records for vents with TRE between 1.0 and 4.0.* The owner or operator using a recovery device or other means to achieve and maintain a TRE index value greater than 1.0 but less than 4.0 as specified in the HON process vent requirements in § 63.113(a)(3) or § 63.113(d) shall keep the following records readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under § 63.114(b) and listed in Table 5 of this subpart or specified by the Administrator in accordance with § 63.114(c) and § 63.117(e); and

(ii) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.152(f). If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in Table 5 of this subpart shall be kept instead of the daily averages.

(3) *Process vents from continuous unit operations—records related to process changes.* The owner or operator subject to the provisions of this subpart who has elected to demonstrate compliance with the TRE index value greater than 4.0 under § 63.113(e) or greater than 1.0 under § 63.113(a)(3) or § 63.113(d) shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e); and

(ii) Any recalculation of the TRE index value pursuant to § 63.115(e).

(4) *Process vents from continuous unit operations—records for vents with a flow rate less than 0.005 standard cubic meter per minute.* The owner or operator who elects to comply by maintaining a flow rate less than 0.005 standard cubic meter per minute under § 63.113(f), shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) that increase the process vent stream flow rate;

(ii) Any recalculation or measurement of the flow rate pursuant to § 63.115(e); and

(iii) If the flow rate increases to 0.005 standard cubic meter per minute or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d).

(5) *Process vents from continuous unit operations—records for vents with an organic HAP concentration less than 50 parts per million*. The owner or operator who elects to comply by maintaining an organic HAP concentration less than 50 parts per million by volume organic HAP concentration under § 63.113(g) shall keep readily accessible records of:

(i) Any process changes as defined in § 63.115(e) that increase the organic HAP concentration of the process vent stream;

(ii) Any recalculation or measurement of the concentration pursuant to § 63.115(e); and

(iii) If the organic HAP concentration increases to 50 parts per million by volume or greater as a result of the process change, the TRE determination performed according to the procedures of § 63.115(d).

(g) *Notification of Compliance Status*. The owner or operator of an affected source shall submit the information specified in paragraphs (g)(1) through (3) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.1439(e)(5).

(1) For the owner or operator complying with the process vent control requirements in § 63.1425(b), (c)(1), (c)(3), or (d), the information specified in paragraph (b) of this section related to the compliance demonstration, and the information specified in paragraph (c) of this section related to the establishment of parameter monitoring levels,

(2) For each PMPU where the combination of process vents from batch unit operations that are associated with the use of nonepoxide organic HAP to make or modify the product is Group 2, the information related to the group determination specified in paragraph (e)(1) of this section.

(3) For each process vent from a continuous unit operation that is associated with the use of nonepoxide organic HAP to make or modify the product that is Group 2, the information related to the group determination specified in paragraph (e)(2) of this section.

(h) *Periodic Reports*. The owner or operator of an affected source shall submit Periodic Reports of the recorded information specified in paragraphs (h)(1) through (6) of this section, as appropriate, according to the schedule for submitting Periodic Reports in § 63.1439(e)(6)(i).

(1) Reports of daily average values of monitored parameters for all operating days when the daily average values recorded under paragraph (d)(2) of this section were above the maximum, or below the minimum, level established in the Notification of Compliance Status or operating permit.

(2) Reports of the duration of periods when monitoring data are not collected for each excursion caused by insufficient monitoring data as defined in § 63.1438(f)(1)(iv), (f)(2)(i)(B), or (f)(3)(ii).

(3) Reports of the times and durations of all periods recorded under paragraph (d)(3) of this section when the process vent stream is diverted from the combustion, recovery, or recapture device through a bypass line.

(4) Reports of all periods recorded under paragraph (d)(4) of this section 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.

(5) Reports of the times and durations of all periods recorded under paragraph (d)(1)(i) of this section in which all pilot flames of a flare were absent.

(6) Reports of all carbon bed regeneration cycles during which the parameters recorded under paragraph (d)(1)(ii) of this section were above the maximum, or below the minimum, levels established in the Notification of Compliance Status or operating permit.

(i) *Reports of process changes*. Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 combination of batch process vents at a PMPU that are associated with the use of nonepoxide organic HAP to make or modify the product to become Group 1, 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 or in a separate submittal to the Administrator, as specified in § 63.1439(e)(6)(iii)(D)(1). A description of the process change shall be submitted with the report.

(j) *Reporting requirements for Group 2 continuous process vents*. (1) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with a TRE greater than 4.0 to become a Group 2 continuous process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the flow rate is less than 0.005 standard cubic meters per minute. The report may be submitted as part of the next periodic report. The report shall include:

(i) A description of the process change;

(ii) The results of the recalculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and

(iii) A statement that the owner or operator will comply with the process vent monitoring requirements specified in § 63.1429, as appropriate.

(2) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with a flow rate less than 0.005 standard cubic meters per minute to become a Group 2 continuous process vent with a flow rate of 0.005 standard cubic meters per minute or greater, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the organic HAP concentration is less than 50 ppmv. The report may be submitted as part of the next periodic report. The report shall include:

(i) A description of the process change;

(ii) The results of the calculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and

(iii) A statement that the owner or operator will comply with the process vent monitoring requirements specified in § 63.1429, as appropriate.

(3) Whenever a process change, as defined in § 63.1420(g)(3), is made that causes a Group 2 continuous process vent with an organic HAP concentration less than 50 ppmv to become a Group 2 continuous process vent with an organic HAP concentration of 50 ppmv or greater and a TRE index value less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change is made or the information regarding the process change is known, unless the flow rate is less than 0.005 standard cubic meters per minute. The report may be submitted as part of the next periodic report. The report shall include:

(i) A description of the process change;

(ii) The results of the calculation of the TRE index value required under § 63.1428(h)(2), and recorded under paragraph (f)(3) of this section; and

(iii) A statement that the owner or operator will comply with the process

vent monitoring requirements specified in § 63.1429, as appropriate.

(k) *Alternative requests.* If an owner or operator uses a combustion, recovery, or recapture device other than those specified in the process vent monitoring requirements in § 63.1429(a)(1) through (7) and listed in Table 5 of this subpart; requests approval to monitor a parameter other than those specified in § 63.1429(a)(1) through (7) and listed in Table 5 of this subpart; or uses ECO and requests to monitor a parameter other than those listed in § 63.1427(i)(1)(i) through (iii), as allowed under § 63.1427(i)(1)(iv), the owner or operator shall submit a description of planned reporting and recordkeeping procedures, as specified in § 63.1439(f)(3), as part of the Precompliance Report as required under § 63.1439(e)(4), or to the Administrator as a separate submittal. The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

§ 63.1431 Process vent annual epoxides emission factor plan requirements.

(a) *Applicability of emission factor plan requirements.* An owner or operator electing to comply with an annual epoxide emission factor limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv) shall develop and implement an epoxides emission factor plan in accordance with the provisions of this section.

(b) *Emission factor plan requirements.* The owner or operator shall develop an epoxides emission factor plan.

(1) If epoxide emissions are maintained below the epoxide emission factor limitation through the use of a combustion, recovery, or recapture device (without extended cookout), the owner or operator shall develop and implement the plan in accordance with paragraph (c) of this section.

(2) If epoxide emissions are maintained below the epoxide emission factor limitation through the use of extended cookout (without a combustion, recovery, or recapture device), the owner or operator shall develop and implement the plan in accordance with paragraph (d) of this section.

(3) If epoxide emissions are maintained below the epoxide emission factor limitation through the use of extended cookout in conjunction with a combustion, recovery, or recapture device, the owner or operator shall develop and implement the plan in accordance with paragraph (e) of this section.

(c) *Compliance with epoxide emission factor limitation using a combustion, recovery, or recapture device.* (1) The owner or operator shall notify the Agency of the intent to use a combustion, recovery, or recapture device to comply with the epoxide emission factor limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv). The owner or operator shall prepare an estimate of the annual epoxide emissions and the actual production rate in accordance with paragraphs (c)(1)(i) through (iv) of this section. This notification and emission estimate shall be submitted in the Precompliance Report as specified in § 63.1439(e)(4), or in the operating permit application, as allowed in § 63.1439(e)(8).

(i) Annual uncontrolled epoxide emissions. These emission estimates shall be determined in accordance with the batch process vent group determination procedures in the NESHAP for Group I Polymers and Resins (40 CFR part 63, subpart U, § 63.488(b)) and shall be based on anticipated production.

(ii) A description of the combustion, recovery, or recapture device, along with the expected percent efficiency.

(iii) Annual emissions after the combustion, recovery, or recapture device. The expected annual emissions after control shall be determined using Equation 15.

$$AE_{control} = \left(AE_{uncontrolled}\right)\left[\left(1 - \frac{R}{100}\right)\right] \qquad \text{[Equation 15]}$$

Where:

$AE_{control}$ = Annual epoxide emissions after control, kg/yr.

$AE_{uncontrolled}$ = Annual uncontrolled epoxide emissions, determined in accordance with paragraph (c)(1)(i) of this section, kg/yr.

R = Expected control efficiency of the combustion, recovery, or recapture device, percent, as determined in § 63.1426(c).

(iv) The actual annual production rate means the annual mass of polyether polyol product produced from the applicable PMPU. This production rate shall be for the same annual time period as the annual emission estimate as calculated in accordance with paragraph (c)(1)(iii) of this section.

(2) The owner or operator shall conduct a performance test in accordance with § 63.1426(c) to determine the epoxide control efficiency of the combustion, recovery, or recapture device. The owner or operator shall then recalculate the annual epoxide emissions after control using Equation 15, except that the control efficiency, R, shall be the measured control efficiency. This information shall be submitted as part of the Notification of Compliance Status, as provided in § 63.1439(e)(5).

(3) The owner or operator shall comply with the process vent monitoring provisions in § 63.1429.

(4) The owner or operator shall comply with the process vent recordkeeping requirements in paragraphs § 63.1430(b) through (d), and the process vent reporting requirements in § 63.1430(g)(1) and (h).

(d) *Compliance with epoxide emission factor limitation using extended cookout.* (1) The owner or operator shall notify the Agency of the intent to use extended cookout to comply with the epoxide emission factor limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv). The owner or operator shall prepare an estimate of the annual epoxide emissions after the extended cookout. This notification and emission estimate shall be submitted in the Precompliance Report as specified in § 63.1439(e)(4), or in the operating permit application, as allowed in § 63.1439(e)(8).

(2) The owner or operator shall determine the annual epoxide emissions in accordance with § 63.1427(d), based on anticipated production. This information shall be submitted as part of the Notification of Compliance Status, as provided in § 63.1439(e)(5).

(3) The owner or operator shall comply with the ECO monitoring provisions in § 63.1427(i).

(4) The owner or operator shall comply with the process vent recordkeeping and reporting requirements in § 63.1430.

(e) *Compliance with the epoxide emission factor limitation through the use of extended cookout in conjunction with one or more combustion, recovery, and/or recapture device.* (1) The owner or operator shall notify the Agency of the intent to use extended cookout in conjunction with one or more combustion, recovery, and/or recapture device to comply with the annual

epoxide emission factor limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv). The owner or operator shall prepare an estimate of the annual epoxide emissions after control. This notification and emission estimate shall be submitted in the Precompliance Report as specified in § 63.1439(e)(4), or in the operating permit application, as allowed under § 63.1439(e)(8).

(2) The owner or operator shall determine the annual epoxide emissions after control. This information shall be submitted as part of the Notification of Compliance Status, as provided in § 63.1439(e)(5).

(3) The owner or operator shall comply with the ECO monitoring provisions in § 63.1427(i).

(4) The owner or operator shall comply with the ECO recordkeeping and reporting requirements in § 63.1427(j) and (k).

(f) *Compliance with epoxide emission factor limitation without using extended cookout or a combustion, recovery, or recapture device.* (1) The owner or operator shall notify the Agency of the intent to comply with the epoxide emission factor limitation in § 63.1425(b)(1)(iii) or (b)(2)(iv) without the use of ECO or a combustion, recovery, or recapture device. The owner or operator shall prepare an estimate of the annual epoxide emissions. This notification and emission estimate shall be submitted in the Precompliance Report as specified in § 63.1439(e)(4), or in the operating permit application, as allowed in § 63.1439(e)(8).

(2) Each year after the compliance date, the owner or operator shall calculate the epoxides emission factor for the previous year. This information shall be submitted in the second Periodic Report submitted each year, as specified in § 63.1439(e)(6).

§ 63.1432 Storage vessel provisions.

(a) For each storage vessel located at an affected source, the owner or operator shall comply with the HON storage vessel requirements of §§ 63.119 through 63.123 and the HON leak inspection provisions in § 63.148, with the differences noted in paragraphs (b) through (p) of this section, for the purposes of this subpart.

(b) When the term ''storage vessel'' is used in the HON storage vessel requirements in §§ 63.119 through 63.123, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(c) When the term ''Group 1 storage vessel'' is used in the HON storage vessel requirements in §§ 63.119 through 63.123, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(d) When the term ''Group 2 storage vessel'' is used in the HON storage vessel requirements in §§ 63.119 through 63.123, the definition of this term in § 63.1423 shall apply for the purposes of this subpart.

(e) When the HON storage vessel requirements in § 63.119 refer to ''December 31, 1992,'' the phrase ''September 4, 1997'' shall apply instead, for the purposes of this subpart.

(f) When the HON storage vessel requirements in § 63.119 refer to ''April 22, 1994,'' the phrase ''June 1, 1999,'' shall apply instead, for the purposes of this subpart.

(g) The owner or operator of an affected source shall comply with this paragraph instead of § 63.120(d)(1)(ii) for the purposes of this subpart. If the combustion, recovery, or recapture device used to comply with § 63.119(e) is also used to comply with any of the requirements found in §§ 63.1425 through 63.1431 and/or § 63.1433, the performance test required in or accepted by §§ 63.1425 through 63.1431 and/or § 63.1433 is acceptable for demonstrating compliance with the HON storage vessel requirements in § 63.119(e), for the purposes of this subpart. The owner or operator will not be required to prepare a design evaluation for the combustion, recovery, or recapture device as described in § 63.120(d)(1)(i), if the performance test meets the criteria specified in paragraphs (g)(1) and (2) of this section.

(1) The performance test demonstrates that the combustion, recovery, or recapture device achieves greater than or equal to the required control efficiency specified in the HON storage vessel requirements in § 63.119(e)(1) or (2), as applicable; and

(2) The performance test is submitted as part of the Notification of Compliance Status required by § 63.1439(e)(5).

(h) When the HON storage vessel requirements in § 63.120(d)(3)(i) uses the term ''operating range,'' the term ''level,'' shall apply instead, for the purposes of this subpart.

(i) For purposes of this subpart, the monitoring plan required by the HON storage vessel requirements in § 63.120(d)(2) shall specify for which combustion, recovery, or recapture device the owner or operator has selected to follow the procedures for continuous monitoring specified in § 63.1438. For the combustion, recovery, or recapture device(s) for which the owner or operator has selected not to follow the procedures for continuous monitoring specified in § 63.1438, the monitoring plan shall include a description of the parameter(s) to be monitored to ensure that the combustion, recovery, or recapture device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter(s), and the frequency with which monitoring will be performed (e.g., when the liquid level in the storage vessel is being raised), as specified in § 63.120(d)(2)(i).

(j) For purposes of this subpart, the monitoring plan required by § 63.122(b) shall be included in the Notification of Compliance Status required by § 63.1439(e)(5).

(k) When the HON 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 § 63.1439(e)(5) shall apply for the purposes of this subpart.

(l) When the HON 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 § 63.1439(e)(6) shall apply for the purposes of this subpart.

(m) When other reports as required in § 63.152(d) are referred to in § 63.122, the reporting requirements contained in § 63.1439(e)(7) shall apply for the purposes of this subpart.

(n) When the HON Initial Notification requirements contained in § 63.151(b) are referred to in § 63.119 through § 63.123, the owner or operator shall comply with the Initial Notification requirements contained in § 63.1439(e)(3), for the purposes of this subpart.

(o) When the determination of equivalence criteria in § 63.102(b) are referred to in the HON storage vessel requirements in § 63.121(a), the General Provisions' alternative nonopacity emission provisions in § 63.6(g) shall apply for the purposes of this subpart.

(p) The compliance date for storage vessels at affected sources subject to the provisions of this section is specified in § 63.1422.

(q) In addition to the records required by § 63.123, the owner or operator shall maintain records of all times when the storage tank is being filled (i.e., when the liquid level in the storage vessel is being raised). These records shall consist of documentation of the time when each filling period begins and ends.

§ 63.1433 Wastewater provisions.

(a) *Process wastewater.* Except as specified in paragraph (c) of this section, the owner or operator of each

affected source shall comply with the HON wastewater requirements in §§ 63.132 through 63.147 for each process wastewater stream originating at an affected source, with the HON leak inspection requirements in § 63.148, and with the HON requirements in § 63.149 for equipment that is subject to § 63.149, with the differences noted in paragraphs (a)(1) through (20) of this section. Further, the owner or operator of each affected source shall comply with the requirements of § 63.105(a) for maintenance wastewater, as specified in paragraph (b) of this section.

(1) Owners and operators of affected sources are not required to comply with the HON new source wastewater requirements in § 63.132(b)(1) and § 63.132(d), for the purposes of this subpart. Owners or operators of all new affected sources, as defined in this subpart, shall comply with the HON requirements for existing sources in §§ 63.132 through 63.149.

(2) When the HON requirements in §§ 63.132 through 63.149 refer to Table 9 or Table 36 of 40 CFR part 63, subpart G, the owner or operator is only required to consider organic HAP listed in Table 9 or Table 36 of 40 CFR part 63, subpart G, that are also listed on Table 4 of this subpart, for the purposes of this subpart. Owners and operators are exempt from all requirements in §§ 63.132 through 63.149 that pertain solely and exclusively to organic HAP listed on Table 8 of 40 CFR part 63, subpart G. In addition, when §§ 63.132 through 63.149 refer to List 1 or List 2, as listed in Table 36 of 40 CFR part 63, subpart G, the owner or operator is only required to consider organic HAP contained in those lists that are also listed on Table 4 of this subpart, for the purposes of this subpart.

(3) When the determination of equivalence criteria in § 63.102(b) is referred to in §§ 63.132, 63.133, and 63.137, the General Provisions' alternative nonopacity emission standard provisions in § 63.6(g) shall apply for the purposes of this subpart.

(4) When the HON storage vessel requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.148, the HON storage vessel requirements in §§ 63.119 through 63.123 are applicable, with the exception of the differences referred to in the storage vessel requirements in § 63.1432, for the purposes of this subpart.

(5) When the HON process wastewater reporting requirements in § 63.146(a) require the submission of a request for approval to monitor alternative parameters according to the procedures specified in § 63.151(g) or § 63.152(e), the owner or operator requesting to monitor alternative parameters shall follow the procedures specified in § 63.1439(f), for the purposes of this subpart.

(6) When the HON process wastewater recordkeeping requirements in § 63.147(d) require the owner or operator to keep records of the daily average value of each continuously monitored parameter for each operating day as specified in the HON recordkeeping provisions in § 63.152(f), the owner or operator shall instead keep records of the daily average value of each continuously monitored parameter as specified in § 63.1439(d), for the purposes of this subpart.

(7) When the HON requirements in §§ 63.132 through 63.149 refer to an ''existing source,'' the term ''existing affected source,'' as defined in § 63.1420(a)(3) shall apply, for the purposes of this subpart.

(8) When the HON requirements in §§ 63.132 through 63.149 refer to a ''new source,'' the term ''new affected source,'' as defined in § 63.1420(a)(4) shall apply, for the purposes of this subpart.

(9) When the HON process wastewater provisions in § 63.132 (a) and (b) refer to the ''applicable dates specified in § 63.100 of subpart F of this part,'' the applicable compliance dates specified in § 63.1422 shall apply, for the purposes of this subpart.

(10) Whenever the HON process wastewater provisions in §§ 63.132 through 63.147 refer to a Group 1 wastewater stream or a Group 2 wastewater stream, the definitions of these terms contained in § 63.1423 shall apply, for the purposes of this subpart.

(11) When the HON control requirements for certain liquid streams in open systems, in § 63.149(d), refer to ''§ 63.100(f) of subpart F,'' the phrase ''§ 63.1420(c),'' shall apply for the purposes of this subpart. In addition, where § 63.149(d) states ''and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, or H of this part,'' the phrase ''and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, H, or PPP of this part,'' shall apply for the purposes of this subpart.

(12) When the HON control requirements for certain liquid streams in open systems, in § 63.149(e) (1) and (2), refer to ''a chemical manufacturing process unit subject to the new source requirements of 40 CFR 63.100(l) (1) or (2),'' the phrase ''a new affected source as described in § 63.1420(a)(4),'' shall apply for the purposes of this subpart.

(13) When the HON Notification of Compliance Status requirements contained in § 63.152(b) are referred to in the HON process wastewater provisions in § 63.138 or § 63.146, the Notification of Compliance Status requirements contained in § 63.1439(e)(5) shall apply for the purposes of this subpart. In addition, when the HON process wastewater provisions in § 63.138 or § 63.146 require that information be reported according to § 63.152(b) in the HON Notification of Compliance Status, owners or operators of affected sources shall report the specified information in the Notification of Compliance Status required by § 63.1439(e)(5), for the purposes of this subpart.

(14) When the HON Periodic Report requirements contained in § 63.152(c) are referred to in the HON process wastewater provisions in § 63.146, the Periodic Report requirements contained in § 63.1439(e)(6) shall apply for the purposes of this subpart. In addition, when § 63.146 requires that information be reported in the HON Periodic Reports required in § 63.152(c), owners or operators of affected sources shall report the specified information in the Periodic Reports required in § 63.1439(e)(6), for the purposes of this subpart.

(15) When the term ''range'' is used in the HON requirements in §§ 63.132 through 63.149, the term ''level'' shall be used instead, for the purposes of this subpart. This level shall be determined using the procedures specified in parameter monitoring procedures in § 63.1438.

(16) When the HON process wastewater monitoring and inspection provisions in § 63.143(f) specify that the owner or operator shall establish the range that indicates proper operation of the treatment process or control technique, the owner or operator shall instead comply with the requirements § 63.1438 (c) or (d) for establishing parameter level maximums/minimums, for the purposes of this subpart.

(17) When the HON process wastewater provisions in § 63.146(b) (7) and (8) require that ''the information on parameter ranges specified in § 63.152(b)(2)'' be reported in the HON Notification of Compliance Status, owners and operators of affected sources are instead required to report the information on parameter levels in the Notification of Compliance Status as specified in § 63.1439(e)(5)(ii), for the purposes of this subpart.

(18) For the purposes of this subpart, the owner or operator is not required to comply with the HON process wastewater emission reduction provisions in § 63.138(g).

(19) When the provisions of HON process wastewater provisions in § 63.139(c)(1)(ii), § 63.145(d)(4), or § 63.145(i)(2) 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)(19)(i) and (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.

(20) The owner or operator of a facility which receives a Group 1 wastewater stream, or a residual removed from a Group 1 wastewater stream, for treatment pursuant to the HON provisions in § 63.132(g) is subject to the requirements of § 63.132(g), with the differences identified in this section, and is not subject to the NESHAP from off-site waste and recovery operations in 40 CFR part 63, subpart DD, with respect to the received material.

(b) *Maintenance wastewater.* The owner or operator of each affected source shall comply with the HON maintenance wastewater requirements in § 63.105, with the exceptions noted in paragraphs (b) (1), (2), and (3) of this section.

(1) When the HON maintenance wastewater provisions in § 63.105(a) refer to ''organic HAPs,'' the definition of ''organic HAP'' in § 63.1423 shall apply, for the purposes of this subpart.

(2) When the term ''maintenance wastewater'' is used in the HON maintenance wastewater provisions in § 63.105, the definition of ''maintenance wastewater'' in § 63.1423 shall apply, for the purposes of this subpart.

(3) When the term ''wastewater'' is used in the HON maintenance wastewater provisions in § 63.105, the definition of ''wastewater'' in § 63.1423 shall apply, for the purposes of this subpart.

(c) *Compliance date.* The compliance date for the affected source subject to the provisions of this section is specified in § 63.1422.

§ 63.1434 Equipment leak provisions.

(a) The owner or operator of each affected source shall comply with the HON equipment leak requirements in 40 CFR part 63, subpart H for all equipment in organic HAP service, except as specified in paragraphs (b) through (g) of this section.

(b) The compliance date for the equipment leak provisions in this section is provided in § 63.1422(d).

(c) Affected sources subject to the HON equipment leak provisions in 40 CFR part 63, subpart I shall continue to comply with 40 CFR part 63, subpart I until the compliance date specified in § 63.1422. After the compliance date in § 63.1422, the source shall be subject to this subpart (40 CFR part 63, subpart PPP), and shall no longer be subject to 40 CFR part 63, subpart I. However, sources subject to 40 CFR part 63, subpart I that have elected to comply through a quality improvement program, as specified in the HON quality improvement plans for valves or pumps 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.

(d) When the HON equipment leak Initial Notification requirements contained in § 63.182(a)(1) and § 63.182(b) are referred to in 40 CFR part 63, subpart H, the owner or operator shall comply with the Initial Notification requirements contained in § 63.1439(e)(3), for the purposes of this subpart. The Initial Notification shall be submitted no later than June 1, 2000 for existing sources, as stated in § 63.1439(e)(3)(ii)(A).

(e) The HON equipment leak Notification of Compliance Status required by § 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 § 63.1422 for the equipment leak provisions. The notification may be submitted as part of the Notification of Compliance Status required by § 63.1439(e)(5).

(f) The Periodic Reports required by § 63.182(a)(3) and § 63.182(d) may be submitted as part of the Periodic Reports required by § 63.1439(e)(6).

(g) If specific items of equipment, comprising part of a process unit subject to this subpart, are managed by different administrative organizations (e.g., different companies, affiliates, departments, divisions, etc.), those items of equipment may be aggregated with any PMPU within the affected source for all purposes under subpart H, providing there is no delay in achieving the applicable compliance date.

(h) The phrase ''the provisions of subparts F, I, or PPP of this part'' shall apply instead of the phrase ''the provisions of subparts F or I of this part,'' and instead of the phrase ''the provisions of subpart F or I of this part'' throughout §§ 63.163 and 63.168, for the purposes of this subpart. In addition, the phrase ''subparts F, I, and PPP'' shall apply instead of the phrase ''subparts F and I'' in § 63.174(c)(2)(iii), for the purposes of this subpart.

§ 63.1435 Heat exchanger provisions.

(a) The owner or operator of each affected source shall comply with the requirements of § 63.104 for heat exchange systems, with the exceptions noted in paragraphs (b) through (e) of this section.

(b) When the term ''chemical manufacturing process unit'' is used in § 63.104, the term ''polyether polyols manufacturing process unit'' shall apply for the purposes of this subpart. Further, when the phrase ''a chemical manufacturing process unit meeting the conditions of § 63.100(b)(1) through (3) of this subpart, except for chemical manufacturing process units meeting the condition specified in § 63.100(c) of this subpart'' is used in § 63.104(a), the term ''PMPU, except for PMPU meeting the conditions specified in § 63.1420(b)'' shall apply for the purposes of this subpart.

(c) When the HON heat exchange system requirements in § 63.104(c)(3) and § 63.104(f)(1) specify that the monitoring plan and records required by § 63.104(f)(1)(i) through (iv) shall be kept as specified in the HON general compliance, reporting, and recordkeeping provisions in § 63.103(c), the provisions of the general recordkeeping and reporting requirements in § 63.1439(a) and the applicable provisions of the General Provisions in 40 CFR part 63, subpart A, as specified in Table 1 of this subpart, shall apply for the purposes of this subpart.

(d) When the HON heat exchange system requirements in § 63.104(f)(2) require information to be reported in the Periodic Reports required by the HON general reporting provisions in § 63.152(c), the owner or operator shall instead report the information specified in § 63.104(f)(2) in the Periodic Reports required by the general reporting requirements in § 63.1439(e)(6), for the purposes of this subpart.

(e) When the HON heat exchange system requirements in § 63.104 refer to Table 4 of 40 CFR part 63, subpart F or Table 9 of 40 CFR part 63, subpart G, the owner or operator is only required to consider organic HAP listed in Table 4

of 40 CFR part 63, subpart F or 40 CFR part 63, Table 9 of subpart G that are also listed on Table 4 of this subpart, for the purposes of this subpart.

§ 63.1436 [Reserved]

§ 63.1437 Additional requirements for performance testing.

(a) Performance testing shall be conducted in accordance with § 63.7(a)(1), (a)(3), (d), (e)(1), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (4) of this section and the additions specified in paragraph (b) of this section.

(1) Performance tests shall be conducted according to the General Provisions' performance testing requirements in § 63.7(e)(1) and (2), except that for all emission sources except process vents from batch unit operations, performance tests shall be conducted during maximum representative operating conditions for the process achievable during one of the time periods described in paragraph (a)(1)(i) of this section, without causing any of the situations described in paragraph (a)(1)(ii) or (iii) of this section to occur. For process vents from batch unit operations, performance tests shall be conducted at absolute worst-case conditions, as defined in § 63.1426(c)(3)(i)(B), that are achievable during one of the time periods described in paragraph (a)(1)(i) of this section, without causing any of the situations described in paragraph (a)(1)(ii) or (iii) of this section to occur.

(i) The 6-month period that ends 2 months before the Notification of Compliance Status is due, according to § 63.1439(e)(5); or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test.

(ii) Causing damage to equipment; necessitating that the owner or operator make a product that does not meet an existing specification for sale to a customer; or necessitating that the owner or operator make a product in excess of demand.

(iii) Causing plant or testing personnel to be subject to unsafe conditions. Owners or operators that limit testing based on this paragraph shall maintain documentation that demonstrates the nature of the unsafe conditions and explains measures considered by the owner or operator to overcome these conditions. If requested, this documentation shall be provided to the Administrator.

(2) When the General Provisions' data analysis, recordkeeping, and reporting requirements in § 63.7(g) refer to the Notification of Compliance Status requirements in § 63.9(h), the Notification of Compliance Status requirements in § 63.1439(e)(5) shall instead apply, for the purposes of this subpart.

(3) Because the General Provisions' site-specific test plan in § 63.7(c)(3) is not required, the General Provisions' requirement for the Administrator to approve or deny site-specific test plans, in § 63.7(h)(4)(ii), is not applicable for the purposes of this subpart.

(4) The owner or operator of an affected source shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected source shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled test date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(b) 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, 40 CFR part 63, appendix A.

(c) Notwithstanding any other provision of this subpart, if an owner or operator of an affected source uses a flare to comply with any of the requirements of this subpart, the owner or operator shall comply with paragraphs (c)(1) through (3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration. If a compliance demonstration has been conducted previously for a flare, using the techniques specified in paragraphs (c)(1) through (3) of this section, that compliance demonstration may be used to satisfy the requirements of this paragraph if either no deliberate process changes have been made since the compliance demonstration, or the results of the compliance demonstration reliably demonstrate compliance despite process changes.

(1) Conduct a visible emission test using the techniques specified in § 63.11(b)(4) of the General Provisions;

(2) Determine the net heating value of the gas being combusted, using the techniques specified in § 63.11(b)(6) of the General Provisions; and

(3) Determine the exit velocity using the techniques specified in either § 63.11(b)(7)(i) (and § 63.11(b)(7)(iii), where applicable) or § 63.11(b)(8) of the General Provisions, as appropriate.

§ 63.1438 Parameter monitoring levels and excursions.

(a) *Establishment of parameter monitoring levels.* The owner or operator of a combustion, recovery, or recapture 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. If a performance test is required by this subpart for a combustion, recovery, or recapture device, the owner or operator shall use the procedures in either paragraph (b) or (c) of this section to establish the parameter monitoring level(s). If a performance test is not required by this subpart for a combustion, recovery, or recapture device, the owner or operator may use the procedures in paragraph (b), (c), or (d) of this section to establish the parameter monitoring levels. When using the procedures specified in paragraph (c) or (d) of this section, the owner or operator shall submit the information specified in § 63.1439(e)(4)(viii) for review and approval, as part of the Precompliance Report.

(1) The owner or operator shall operate combustion, recovery, and recapture devices such that the daily average value of monitored parameters remains at or above the minimum established level, or remains at or below the maximum established level, except as otherwise provided in this subpart.

(2) As specified in § 63.1439(e)(5)(ii), all established levels, along with their supporting documentation and the definition of an operating day, shall be submitted as part of the Notification of Compliance Status.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of 40 CFR part 63, subparts A, F, G, or H.

(b) *Establishment of parameter monitoring levels based exclusively on performance tests.* In cases where a performance test is required by this subpart, or the owner or operator of the affected source elects to do a performance test in accordance with the provisions of this subpart, and an owner or operator elects to establish a

parameter monitoring level for a combustion, recovery, or recapture device based exclusively on parameter values measured during the performance test, the owner or operator of the affected source shall comply with the procedures in paragraph (b)(1) or (2) of this section, as applicable.

(1) *Process vents from continuous unit operations.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs for process vents from continuous unit operations. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three 1-hour 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.

(2) *Process vents from batch unit operations.* For process vents from batch unit operations, during initial compliance testing, the appropriate parameter shall be monitored continuously during the entire test period. The monitoring level(s) shall be those established during from the compliance test.

(c) *Establishment of parameter monitoring levels based on performance tests, supplemented by engineering assessments and/or manufacturer's recommendations.* Parameter monitoring levels established under this paragraph shall be based on the parameter values measured during the performance test supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values. The information specified in paragraphs (c)(1) and (2) of this section shall be provided in the Notification of Compliance Status.

(1) The specific level of the monitored parameter(s) for each emission point.

(2) 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 combustion, recovery, or recapture 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 combustion, recovery, or recapture device, the maximum or minimum level may be based solely on engineering assessments and/or manufacturers' recommendations. As required in paragraph (a)(2) of this section, the determined level and all supporting documentation shall be provided in the Notification of Compliance Status.

(e) *Monitoring violations.* (1) With the exception of excursions excused in accordance with paragraph (g) of this section, each excursion, as defined in paragraphs (f)(1)(i), (f)(2)(i)(A), (f)(2)(ii), (f)(3)(i), and (f)(4) of this section, constitutes a violation of the provisions of this subpart in accordance with paragraph (e)(1)(i), (ii), or (iii) of this section.

(i) For each condenser, each excursion constitutes a violation of the emission limit.

(ii) For each recovery or recapture device other than a condenser, where an organic monitoring device is used to monitor concentration, each excursion constitutes a violation of the emission limit.

(iii) For each combustion, recovery, or recapture device other than a condenser, each excursion constitutes a violation of the operating limit.

(2) With the exception of excursions excused in accordance with paragraph (g) of this section, each excursion, as defined in paragraphs (f)(1)(ii), (f)(1)(iii), (f)(2)(i)(B), and (f)(3)(ii) of this section constitutes a violation of the operating limit.

(f) *Parameter monitoring excursion definitions.* Parameter monitoring excursions are defined in paragraphs (f)(1) through (3) of this section.

(1) With respect to storage vessels (where the applicable monitoring plan specifies continuous monitoring), process vents from continuous unit operations using combustion, recovery, or recapture devices for purposes of compliance, and for process wastewater streams, an excursion means any of the three cases listed in paragraphs (f)(1)(i) through (iii) of this section.

(i) 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) The period of combustion, recovery, or recapture device operation, with the exception noted in paragraph (f)(1)(v) of this section, 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) The period of combustion, recovery, or recapture device operation, with the exception noted in paragraph (f)(1)(v) of this section, is less than 4 hours in an operating day and more than 2 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 (iii) of this section, if measured values are unavailable due to monitoring system breakdowns, repairs, calibrated checks, or zero (low-level) and high level adjustments, for any of the 15-minute periods within the hour. For data compression systems approved under § 63.1439(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.

(v) The periods listed in paragraphs (f)(1)(v)(A) through (D) of this section are not considered to be part of the period of combustion, recovery, or recapture device operation, for the purposes of paragraphs (f)(1)(ii) and (iii) of this section.

(A) Start-ups;

(B) Shutdowns;

(C) Malfunctions; or

(D) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(2) For storage vessels where the applicable monitoring plan does not specify continuous monitoring, an excursion is defined in paragraph (f)(2)(i) or (ii) of this section, as applicable.

(i) If the monitoring plan specifies monitoring a parameter and recording its value at specific intervals (such as every 15 minutes or every hour), either of the cases listed in paragraph (f)(2)(i)(A) or (B) of this section is considered a single excursion for the combustion device.

(A) When the average value of one or more parameters, averaged over the time during which the storage vessel is being filled (i.e., when the liquid level in the storage vessel is being raised), is above the maximum level or below the minimum level established for the given parameters.

(B) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available, due to monitoring system breakdowns, repairs, calibration checks, or zero (low-level) and high-level adjustments, for at least 75 percent of the specific intervals at which parameters are to be monitored and recorded, according to the storage vessel's monitoring plan, during which the storage vessel is being filled.

(ii) If the monitoring plan does not specify monitoring a parameter and

recording its value at specific intervals (for example, if the relevant operating requirement is to exchange a disposable carbon canister before expiration of its rated service life), the monitoring plan shall define an excursion in terms of the relevant operating requirement.

(3) With respect to process vents from batch unit operations, an excursion means one of the two cases listed in paragraphs (f)(3)(i) and (ii) of this section.

(i) When the 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 for an operating day. Monitoring data shall be considered insufficient when measured values are not available, due to monitoring system breakdowns, repairs, calibration checks, or zero (low-level) and high-level adjustments, for at least 75 percent of the 15-minute periods when batch emission episodes selected to be controlled are being vented to the control device during the operating day, using the procedures specified in paragraphs (f)(3)(ii)(A) through (D) of this section.

(A) Determine the total amount of time during the operating day when batch emission episodes selected to be controlled are being vented to the control device.

(B) Subtract the time during the periods listed in paragraphs (f)(3)(ii)(B)(*1*) through (*4*) of this section from the total amount of time determined above in paragraph (f)(3)(ii)(A) of this section, to obtain the operating time used to determine if monitoring data are insufficient.

(*1*) Start-ups;

(*2*) Shutdowns;

(*3*) Malfunctions; or

(*4*) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(C) Determine the total number of 15-minute periods in the operating time used to determine if monitoring data are insufficient, as was determined in accordance with paragraph (f)(3)(ii)(B) of this section.

(D) If measured values are not available for at least 75 percent of the total number of 15-minute periods determined in paragraph (f)(3)(ii)(C) of this section, the monitoring data are insufficient for the operating day.

(4) With respect to process vents using ECO to reduce epoxide emissions, an excursion means any of the situations described in § 63.1427(i)(3)(i) through (v). For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, in accordance with paragraph (e) of this section, except as provided in paragraph (g) of this section.

(g) *Excused excursions.* A number of excused excursions shall be allowed for each combustion, recovery, or recapture device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (g)(1) through (6) of this section. This paragraph 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.

§ 63.1439 General recordkeeping and reporting provisions.

(a) *Data retention.* Unless otherwise specified in this subpart, the 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. All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provide access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on microfilm, computer, floppy disk, magnetic tape, or microfiche. If an owner or operator submits copies of reports to the applicable EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(ii) for submittal of copies of reports, the owner or operator is not required to maintain copies of reports.

(b) *Subpart A requirements.* The owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in 40 CFR part 63, subpart A (the General Provisions) as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (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 the General Provisions' requirements for a Startup, Shutdown, and Malfunction Plan 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. A provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required by the provisions of this subpart may be included in the start-up, shutdown, and malfunction plan only if the owner or operator has demonstrated to the Administrator, through the Precompliance Report or a supplement to the Precompliance Report, that the monitoring system would be damaged or destroyed if it were not shut down during the start-up, shutdown, or malfunction. The owner or operator of the affected source shall keep the start-up, shutdown, and malfunction plan on site. In addition, if the start-up, shutdown, and malfunction plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the start-up, shutdown, and malfunction plan for a period of 5 years after each revision to the plan. If the new version of the start-up, shutdown, and malfunction plan includes a provision for ceasing to collect, during a start-up, shutdown, or malfunction, monitoring data that would otherwise be required, the owner or operator shall submit a supplement to the Precompliance Report to the Administrator for the Administrator's approval, documenting that the monitoring system would be damaged or destroyed if it were not shut down during the start-up, shutdown, or malfunction. Records associated with the plan shall be kept as specified in paragraphs (b)(1)(i)(A) and (B) of this section. Reports related to the plan shall be submitted as specified in paragraph (b)(1)(ii) of this section.

(i) The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) and (B) of this section.

(A) Records of the occurrence and duration of each start-up, shutdown,

and malfunction of operation of process equipment or combustion, recovery, or recapture devices or continuous monitoring systems used to comply with this subpart during which excess emissions (as defined in § 63.1420(h)(4)) occur.

(B) For each start-up, shutdown, or malfunction during which excess emissions (as defined in § 63.1420(h)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a combustion, recovery, or recapture device to a backup combustion, recovery, or recapture device, records shall be kept of whether the plan was followed. These records may take the form of a ''checklist,'' or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(ii) 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 according to the General Provisions' Periodic Reporting schedule specified in § 63.10(d)(5)(i). The reports shall include the information specified in paragraphs (b)(1)(i)(A) and (B) 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, the owner or operator shall comply with the General Provisions' requirements for the application for approval of construction or reconstruction, as specified in § 63.5, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(ii).

(c) *Subpart H requirements*. The owner or operator of an affected source shall comply with the HON equipment leak reporting and recordkeeping requirements in 40 CFR part 63, subpart H, except as specified in § 63.1434(b) through (g).

(d) *Recordkeeping and documentation*. The owner or operator required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (7) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) of this section, and except as provided in paragraph (h) of this section. If a monitoring plan for storage vessels pursuant to § 63.1432(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (d)(1) through (7) of this section apply. As described in § 63.1432(i), certain storage vessels are not required to keep continuous records as specified in this paragraph. The owner or operator of such storage vessels shall keep records as specified in the monitoring plan required by § 63.1432(i).

(1) The monitoring system shall measure data values at least once during approximately equal 15-minute intervals.

(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. The owner or operator of process vents from batch unit operations shall record each measured data value.

(3) Daily average values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (ii) of this section, except as specified in paragraphs (d)(6) and (7) of this section.

(i) The daily average value shall be calculated as the average of all parameter values recorded during the operating day, except as specified in paragraph (d)(7) of this section. The calculated average shall cover a 24-hour period if operation is continuous. If intermittent emissions episodes occur resulting in emissions being vented to a combustion, recapture, or recovery device for a period of less than 24 hours in the operating day, the daily average shall be calculated based only on the period when emissions are being vented to the combustion, recapture, or recovery device. For example, if a batch unit operation operates such that emissions are vented to a combustion device for 6 hours, then the daily average is the average of the temperature measurements taken during those 6 hours.

(ii) The operating day shall be the 24-hour period that the owner or operator specifies in the operating permit or the Notification of Compliance Status, for purposes of determining daily average values.

(4) [Reserved]

(5) [Reserved]

(6) 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 for that operating day.

(7) Monitoring data recorded during periods identified in paragraphs (d)(7)(i) through (v) of this section shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or combustion, recovery, or recapture device operation when monitors are not operating.

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

(ii) Start-ups;

(iii) Shutdowns;

(iv) Malfunctions; or

(v) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(8) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks, and records documenting the maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or that are specified in other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(9) The owner or operator of an affected source granted a waiver of recordkeeping or reporting requirements under the General Provisions' recordkeeping and reporting requirements in § 63.10(f) shall maintain the information, if any, specified by the Administrator as a condition of the waiver of recordkeeping or reporting requirements.

(e) *Reporting and notification*. In addition to the reports and notifications required by 40 CFR part 63, subpart A, 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 (8) of this section, as applicable. All reports required by this subpart, and the schedule for their submittal, are listed in Table 8 of this subpart.

(1) *Violation of reporting requirements*. Owners and operators shall not be in violation of the reporting requirements of this paragraph (e) for failing to submit information required to

be included in a specified report if the owner or operator meets the requirements in paragraphs (e)(1)(i) through (iii) of this section. Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping, or reporting.

(i) The information was not known in time for inclusion in the report specified by this subpart.

(ii) The owner or operator has been diligent in obtaining the information.

(iii) The owner or operator submits a report according to the provisions of paragraphs (e)(1)(iii)(A) through (C) of this section.

(A) If this subpart expressly provides for supplements to the report in which the information is required, the owner or operator shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained, unless otherwise specified in this subpart.

(B) If this subpart does not expressly provide for supplements, but the owner or operator must submit a request for revision of an operating permit pursuant to the State operating permit programs in part 70 or the Federal operating permit programs in part 71, due to circumstances to which the information pertains, the owner or operator shall submit the information with the request for revision to the operating permit.

(C) In any case not addressed by paragraph (e)(1)(iii)(A) or (B) of this section, the owner or operator shall submit the information with the first Periodic Report, as required by this subpart, which has a submission deadline at least 60 days after the information is obtained.

(2) *Submittal of reports.* All reports required under this subpart shall be sent to the Administrator at the applicable address listed in the General Provisions' list of addresses of State air pollution control agencies and EPA Regional Offices, in § 63.13. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(3) *Initial Notification.* The owner or operator of an existing or new affected source shall submit a written Initial Notification to the Administrator, containing the information described in paragraph (e)(3)(i) of this section, according to the schedule in paragraph (e)(3)(ii) of this section. The General Provisions' Initial Notification requirements in § 63.9(b)(2), (3), and (6) shall not apply, for the purposes of this subpart.

(i) The Initial Notification shall include the following information:

(A) The name and address of the owner or operator;

(B) The address (physical location) of the affected source;

(C) An identification of the kinds of emission points within the affected source;

(D) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date; and

(E) A statement of whether or not the affected source is a major source.

(ii) The Initial Notification shall be submitted according to the schedule in paragraph (e)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) For an existing source, the Initial Notification shall be submitted no later than June 1, 2000.

(B) For a new source that has an initial start-up on or after August 30, 1999, the application for approval of construction or reconstruction required by the General Provisions in § 63.5(d) shall be submitted in lieu of the Initial Notification. The application shall be submitted as soon as practical before construction or reconstruction is planned to commence (but it need not be sooner than August 30, 1999).

(C) For a new source that has an initial start-up prior to August 30, 1999, the Initial Notification shall be submitted no later than August 30, 1999. The application for approval of construction or reconstruction described in the General Provisions' requirements in § 63.5(d) is not required for these sources.

(4) *Precompliance Report.* The owner or operator of an affected source requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as permitted under § 63.1420(h)(3); or requesting approval to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d) shall submit a Precompliance Report according to the schedule described in paragraph (e)(4)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(4)(ii) through (viii) of this section, as appropriate.

(i) The Precompliance Report shall be submitted to the Administrator no later than 12 months prior to the compliance date. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. 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. Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(4)(vii) of this section.

(ii) A request for an extension for compliance, as specified in § 63.1422(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in the General Provisions' compliance requirements in § 63.6(i)(6)(i)(A), (B), and (D), as required in § 63.1422(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted in the Precompliance Report 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 40 CFR part 63, subpart G, or seeks to comply by monitoring a different parameter than those specified in this subpart or in 40 CFR part 63, subpart G.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the owner or operator shall submit a request for approval in the Precompliance Report.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart in the Precompliance Report. The Administrator may deem alternative controls to be equivalent to the controls required by the standard, under the procedures outlined in the General Provisions' requirements for use of an alternative nonopacity emission standard, in § 63.6(g).

(vi) If the owner or operator is requesting approval to incorporate a provision for ceasing to collect monitoring data, during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, the information specified in paragraphs (e)(4)(vi)(A) and

(B) of this section shall be supplied in the Precompliance Report or in a supplement to the Precompliance Report. The Administrator shall evaluate the supporting documentation and shall approve the request only if, in the Administrator's judgment, the specific monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction.

(A) Documentation supporting a claim that the monitoring equipment would be damaged by the contemporaneous start-up, shutdown, or malfunction; and

(B) A request to incorporate such a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction, into the start-up, shutdown, and malfunction plan.

(vii) Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(4)(vii)(A) of this section, or as specified in paragraph (e)(4)(vii)(B) of this section. Unless the Administrator objects to a request submitted in a supplement to the Precompliance Report within 45 days after its receipt, the request shall be deemed approved.

(A) Supplements to the Precompliance Report may be submitted to clarify or modify information previously submitted.

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(4)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(4)(iv) of this section; to use alternative controls, as specified in paragraph (e)(4)(v) of this section; or to include a provision for ceasing to collect monitoring data during a start-up, shutdown, or malfunction, in the start-up, shutdown, and malfunction plan, when that monitoring equipment would be damaged if it did not cease to collect monitoring data, as specified in paragraph (e)(4)(vi) of this section.

(viii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in the parameter monitoring provisions in § 63.1438(c) or (d), the following information shall be submitted in the Precompliance Report:

(A) Identification of which procedures (i.e., § 63.1438(c) or (d)) are to be used; and

(B) A description of how the parameter monitoring level is to be established. If the procedures in § 63.1438(c) are to be used, a description of how performance test data will be used shall be included.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted within 150 days after the compliance dates specified in § 63.1422. For equipment leaks subject to § 63.1434, the owner or operator shall submit the information specified in the HON equipment leak Notification of Compliance Status requirements in § 63.182(c), in the Notification of Compliance Status required by this paragraph. For all other emission points, including heat exchange systems, the Notification of Compliance Status shall contain the information listed in paragraphs (e)(5)(i) through (vii) 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 required by the test method to be in the test report used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in a Notification of Compliance Status under the requirements for overlapping regulations in § 63.1422(j), the HON storage vessel reporting provisions in § 63.122 and the storage vessel provisions in § 63.1432, and the HON process wastewater reporting provisions in § 63.146. In addition, the owner or operator shall comply with paragraphs (e)(5)(i)(A) and (B) of this section.

(A) For performance tests, group determinations, or determination that controls are needed, 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 information required by the test method to be in the test report 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 (if the owner or operator prepares the 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 to be in the test report.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under the HON process vent monitoring requirements in § 63.114(e) and the process vent monitoring requirements in § 63.1429(d), the HON process wastewater parameter monitoring requirements in § 63.143(f), paragraph (e)(8) of this section, or paragraph (f) of this section, the information specified in paragraphs (e)(5)(ii)(A) through (C) of this section shall be submitted. Further, as described in the storage vessel provisions in § 63.1432(k), for those storage vessels for which the parameter monitoring plan (required to be submitted under the HON Notification of Compliance Status requirements for storage vessels in § 63.120(d)(3)) specifies compliance with the parameter monitoring provisions of § 63.1438, the owner or operator shall provide the information specified in paragraphs (e)(5)(ii)(A) through (C) of this section for each monitoring parameter. For those storage vessels for which the parameter monitoring plan required to be submitted under the HON Notification of Compliance Status requirements for storage vessels in § 63.120(d)(2) does not require compliance with the provisions of § 63.1438, the owner or operator shall provide the information specified in § 63.120(d)(3) as part of the Notification of Compliance Status.

(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 that the combustion, recovery, or recapture device is operated in a manner to ensure compliance with the provisions of this subpart.

(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 of monitored parameters.

(iii) The determination of applicability for flexible operation units as specified in § 63.1420(e)(1)(iii).

(iv) 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 § 63.1420(e)(7).

(v) The results for each predominant use determination made under § 63.1420(f)(1) through (7), for storage vessels assigned to an affected source subject to this subpart.

(vi) If any emission point is subject to this subpart and to other standards as specified in § 63.1422(j), and if the provisions of § 63.1422(j) allow the owner or operator to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(vii) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to § 63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility.

(6) *Periodic Reports.* For existing and new affected sources, the owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (viii) of this section. In addition, for equipment leaks subject to § 63.1434, the owner or operator shall submit the information specified in the HON periodic reporting requirements in § 63.182(d), and for heat exchange systems subject to § 63.1434, the owner or operator shall submit the information specified in the HON heat exchange system reporting requirements in § 63.104(f)(2), as part of the Periodic Report required by this paragraph (e)(6).

(i) Except as specified in paragraphs (e)(6)(viii) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or paragraphs (e)(6)(iii) through (vii) of this section, as appropriate, shall be submitted semiannually no later than 60 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 in paragraphs (e)(6)(iii) through (vii) 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 there were no compliance exceptions, as described in this paragraph, for the 6-month period covered by that report and that none of the activities specified in paragraphs (e)(6)(iii) through (vii) of this section occurred during the period covered by that report.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.1432 through 63.1433 for any emission point, Periodic Reports shall include:

(A) All information specified in the HON periodic reporting requirements in § 63.122(a)(4) for storage vessels and in § 63.146(c) through § 63.146(f) for process wastewater.

(B) The daily average values of monitored parameters for all excursions, as defined in § 63.1438(f).

(C) The periods when monitoring data were not collected shall be specified; and

(D) The information in paragraphs (e)(6)(iii)(D)(*1*) through (*3*) of this section, as applicable:

(*1*) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. This notification may be submitted at any time.

(*2*) Notification if one or more emission points (other than equipment leak components subject to § 63.1434), or one or more PMPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(*2*)(i) and (*ii*) of this section.

(*i*) A description of the addition to the affected source.

(*ii*) Notification of the group status or control requirement for the additional emission point or all emission points in the PMPU.

(*3*) For process wastewater streams sent for treatment pursuant to § 63.132(g), reports of changes in the identity of the treatment facility or transferee.

(E) The information in paragraph (b)(1)(ii) of this section for reports of start-up, shutdown, and malfunction.

(iv) 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 by the test method to be in the test report shall be submitted, but a complete test report is not required.

(v) The results for each change made to a primary product determination for a PMPU made under § 63.1420(e)(3) or (10).

(vi) The results for each reevaluation of the applicability of this subpart to a storage vessel that begins receiving material from (or sending material to) a process unit that was not included in the initial determination, or a storage vessel that ceases to receive material from (or send material to) a process unit that was included in the initial determination, in accordance with § 63.1420(f)(8).

(vii) The Periodic Report required by the equipment leak provisions in § 63.1434(f) shall be submitted as part of the Periodic Report required by paragraph (e)(6) of this section.

(viii) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections as specified in paragraphs (e)(6)(viii)(A) through (D) of this section.

(A) 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 if the emission point or process section meets the conditions in paragraph (e)(6)(viii)(A)(*1*) or (*2*) of this section.

(*1*) A combustion, recovery, or recapture device for a particular emission point or process section has more excursions, as defined in § 63.1438(f), than the number of excused excursions allowed under § 63.1438(g) for a semiannual reporting period; or

(*2*) The Administrator requests the owner or operator to submit quarterly reports for that emission point or process section.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (vii) of this section, as applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(viii)(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 days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year without more excursions occurring

(during that year) than the number of excused excursions allowed under § 63.1438(g), the owner or operator may return to semiannual reporting for the emission point or process section.

(7) *Other reports.* The notifications of inspections required by the storage vessel provisions in § 63.1432 shall be submitted, as specified in the HON storage vessel provisions in § 63.122(h)(1) and (2), and in paragraphs (e)(7)(i) and (ii) of this section.

(i) When the conditions in the HON storage vessel provisions in §§ 63.1420(e)(3)(i) or 63.1420(e)(4)(i) are met, reports of changes to the primary product for a PMPU or process unit, as required by § 63.1420(e)(3)(ii) or § 63.1420(g)(3), respectively, shall be submitted.

(ii) Owners or operators of PMPU or emission points (other than equipment leak components subject to § 63.1434) that are subject to provisions for changes or additions to plant sites in § 63.1420(g)(1) or (2) shall submit a report as specified in paragraphs (e)(7)(ii)(A) and (B) of this section.

(A) Reports shall include:

(*1*) A description of the process change or addition, as appropriate;

(*2*) The planned start-up date and the appropriate compliance date, according to § 63.1420(g)(1) or (2); and

(*3*) Identification of the group status of emission points (except equipment leak components subject to the requirements in § 63.1434) specified in paragraphs (e)(7)(ii)(A)(3)(*i*) through (*iii*) of this section, as applicable.

(*i*) All the emission points in the added PMPU, as described in § 63.1420(g)(1).

(*ii*) All the emission points in an affected source designated as a new affected source under § 63.1420(g)(2)(i).

(*iii*) All the added or created emission points as described in § 63.1420(g)(2)(ii).

(*4*) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or recordkeeping, alternative controls, or wishes to establish parameter monitoring levels according to the procedures contained in § 63.1438(c) or (d), a Precompliance Report shall be submitted in accordance with paragraph (e)(7)(ii)(B) of this section.

(B) Reports shall be submitted as specified in paragraphs (e)(7)(ii)(B)(*1*) through (*3*) of this section, as appropriate.

(*1*) Owners or operators of an added PMPU subject to § 63.1420(g)(1) shall submit a report no later than 180 days prior to the compliance date for the PMPU.

(*2*) Owners or operators of an affected source designated as a new affected source under § 63.1420(g)(2)(i) shall submit a report no later than 180 days prior to the compliance date for the affected source.

(*3*) Owners and operators of any emission point (other than equipment leak components subject to § 63.1434) subject to § 63.1420(g)(2)(ii) shall submit a report no later than 180 days prior to the compliance date for those emission points.

(8) *Operating permit application.* An owner or operator who submits an operating permit application instead of a Precompliance Report shall submit the information specified in paragraph (e)(4) of this section, as applicable, with the operating permit application.

(f) *Alternative monitoring parameters.* The owner or operator who has been directed by any section of this subpart, or any section of another subpart referenced by this subpart, that specifically references this paragraph to set unique monitoring parameters, or who requests approval to monitor a different parameter than those listed in § 63.1432 for storage vessels, § 63.1427 for ECO, § 63.1429 for process vents, or § 63.143 for process wastewater shall submit the information specified in paragraphs (f)(1) through (3) of this section in the Precompliance Report, as required by paragraph (e)(4) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the combustion, recovery, or recapture device; control technique; 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 (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 continuous parameter operating and recordkeeping provisions listed in § 63.1429 for process vents, and § 63.1433 for wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(4)(iv) of this section, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in the General Provisions requirements for the use of an alternative monitoring method 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 during approximately equal 15-minute intervals 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 (ii) of this section.

(i) The requested system shall include visual reading and recording of the value of the relevant operating parameter no less frequently than once per hour. Daily averages 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 that the proposed monitoring frequency is sufficient to represent combustion, recovery, or

recapture device operating conditions, considering typical variability of the specific process and combustion, recovery, or recapture 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 at approximately equal intervals of about 15 minutes), but that records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (g)(3)(i) and (ii) of this section.

(i) The requested system shall be designed to:

(A) Measure the operating parameter value at least once during approximately equal 15-minute intervals;

(B) Record at least four 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 values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in § 63.1438(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

(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 the General Provisions' requirements for using an alternative monitoring method in § 63.8(f)(4).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (h)(1) or (2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions that would otherwise apply under this subpart. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (2) of this section.

(1) The owner or operator may retain only the 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 (iv) 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 (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 average values; 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 are 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 or other means, 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 (C) of this section. 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 (D) 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 how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (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, as specified in paragraph (h)(1)(vi)(D) of this section.

(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.

(D) The owner or operator subject to paragraph (h)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for

at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

(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 value, for any operating day when the daily average 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 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 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 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 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 paragraph (h)(1) 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 (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 the purposes of paragraph (h) of this section, an excursion means that the daily average 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 (B) of this section.

(A) The 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 the General Provisions in § 63.6(e)(3).

(B) An excused excursion, as described in § 63.1438(g), shall not be considered an excursion for the purposes of paragraph (h)(2) of this section.

TABLE 1 TO SUBPART PPP OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to subpart PPP	Explanation
63.1(a)(1)	Yes	§ 63.1423 specifies definitions in addition to or that apply instead of definitions in § 63.2.
63.1(a)(2)	Yes.	
63.1(a)(3)	Yes	§ 63.1422(f) through (k) of this subpart and § 63.160(b) identify those standards which overlap with the requirements of subparts PPP and H and specify how compliance shall be achieved.
63.1(a)(4)	Yes	Subpart PPP (this table) specifies the applicability of each paragraph in subpart A to subpart PPP.
63.1(a)(5)	No	Reserved.
63.1(a)(6)–(8)	Yes.	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	Yes.	
63.1(a)(11)	Yes.	
63.1(a)(12)–(14)	Yes.	
63.1(b)(1)	No	§ 63.1420(a) contains specific applicability criteria.
63.1(b)(2)	Yes.	
63.1(b)(3)	Yes.	
63.1(c)(1)	Yes	Subpart PPP (this table) specifies the applicability of each paragraph in subpart A to subpart PPP.
63.1(c)(2)	No	Area sources are not subject to subpart PPP.
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	§ 63.1423 specifies those subpart A definitions that apply to subpart PPP.
63.3	Yes.	
63.4(a)(1)–(3)	Yes.	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes.	
63.4(b)	Yes.	
63.4(c)	Yes.	
63.5(a)(1)	Yes	Except the terms ''source'' and ''stationary source'' should be interpreted as having the same meaning as ''affected source''.
63.5(a)(2)	Yes.	
63.5(b)(1)	Yes	Except § 63.1420(g) defines when construction or reconstruction is subject to new source standards.

TABLE 1 TO SUBPART PPP OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes.	
63.5(b)(4)	Yes	Except that the Initial Notification requirements in § 63.1439(e)(3) shall apply instead of the requirements in § 63.9(b).
63.5(b)(5)	Yes.	
63.5(b)(6)	Yes	Except that § 63.1420(g) defines when construction or reconstruction is subject to the new source standards.
63.5(c)	No	Reserved.
63.5(d)(1)(i)	Yes.	
63.5(d)(1)(ii)	Yes	Except that § 63.5(d)(1)(ii)(H) does not apply.
63.5(d)(1)(iii)	No	§ 63.1439(e)(5) and § 63.1434(e) specify Notification of Compliance Status requirements.
63.5(d)(2)	No.	
63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply, and equipment leaks subject to § 63.1434 are exempt.
63.5(d)(4)	Yes.	
63.5(e)	Yes.	
63.5(f)(1)	Yes.	
63.5(f)(2)	Yes	Except that where § 63.9(b)(2) is referred to, the owner or operator need not comply.
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)	No.	
63.6(c)(1)	Yes	§ 63.1422 specifies the compliance date.
63.6(c)(2)	No.	
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 as otherwise specified for individual paragraphs (below), and § 63.6(e) does not apply to Group 2 emission points.[a]
63.6(e)(1)(i)	No	This is addressed by § 63.1420(h)(4).
63.6(e)(1)(ii)	Yes.	
63.6(e)(1)(iii)	Yes.	
63.6(e)(2)	Yes.	
63.6(e)(3)(i)	Yes	For equipment leaks (subject to § 63.1434), the start-up, shutdown, and malfunction plan requirement of § 63.6(e)(3)(i) is limited to combustion, recovery, or recapture devices and is optional for other equipment. The start-up, shutdown, and malfunction plan may include written procedures that identify conditions that justify a delay of repair.
63.6(e)(3)(i)(A)	Yes	This is also addressed by § 63.1420(h)(4).
63.6(e)(3)(i)(B)	Yes.	
63.6(e)(3)(i)(C)	Yes.	
63.6(e)(3)(ii)	Yes.	
63.6(e)(3)(iii)	No	Recordkeeping and reporting are specified in § 63.1439(b)(1).
63.6(e)(3)(iv)	No	Recordkeeping and reporting are specified in § 63.1439(b)(1).
63.6(e)(3)(v)	No	Requirement is specified in § 63.1439(b)(1).
63.6(e)(3)(vi)	Yes.	
63.6(e)(3)(vii)	Yes.	
63.6(e)(3)(vii)(A)	Yes.	
63.6(e)(3)(vii)(B)	Yes	Except the plan shall provide for operation in compliance with § 63.1420(i)(4).
63.6(e)(3)(vii)(C)	Yes.	
63.6(e)(3)(viii)	Yes.	
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, and except that § 63.6(f)(2)(ii) does not apply to equipment leaks subject to § 63.1434.
63.6(f)(3)	Yes.	
63.6(g)	Yes.	
63.6(h)	No	Subpart PPP does not require opacity and visible emission standards.
63.6(i)(1)	Yes.	
63.6(i)(2)	Yes.	
63.6(i)(3)	Yes.	
63.6(i)(4)(i)(A)	Yes.	
63.6(i)(4)(i)(B)	No	Dates are specified in § 63.1422(e) and § 63.1439(e)(4)(i) for all emission points except equipment leaks, which are covered under § 63.182(a)(6)(i).

TABLE 1 TO SUBPART PPP OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
63.6(i)(4)(ii)	No.	
63.6(i)(5)(14)	Yes.	
63.6(i)(15)	No	Reserved.
63.6(i)(16)	Yes.	
63.6(j)	Yes.	
63.7(a)(1)	Yes.	
63.7(a)(2)	No	§ 63.1439(e)(5) and § 63.1439(e)(6) specify the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration results are reported in the Periodic Reports.
63.7(a)(3)	Yes.	
63.7(b)	No	§ 63.1437(a)(4) specifies notification requirements.
63.7(c)	No	Except if the owner or operator chooses to submit an alternative nonopacity emission standard for approval under § 63.6(g).
63.7(d)	Yes.	
63.7(e)(1)	Yes	Except that all performance tests shall be conducted during worst case operating conditions.
63.7(e)(2)	Yes.	
63.7(e)(3)	No	Subpart PPP specifies requirements.
63.7(e)(4)	Yes.	
63.7(f)	Yes	Since a site specific test plan is not required, the notification deadline in § 63.7(f)(2)(i) shall be 60 days prior to the performance test, and in § 63.7(f)(3) approval or disapproval of the alternative test method shall not be tide to the site specific test plan.
63.7(g)	Yes	Except that references to the Notification of Compliance Status report in § 63.9(h) are replaced with the requirements in § 63.1439(e)(5). In addition, equipment leaks subject to § 63.1434 are not required to conduct performance tests.
63.7(h)	Yes	Except § 63.7(h)(4)(ii) is not applicable, since the site-specific test plans in § 63.7(c)(2) 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	Support PPP specifies locations to conduct monitoring.
63.8(b)(3)	Yes.	
63.8(c)(1)	Yes.	
63.8(c)(1)(i)	Yes.	
63.8(c)(1)(ii)	No	For all emission points except equipment leaks, comply with § 63.1439(b)(1)(i)(B); for equipment leaks, comply with § 63.181(g)(2)(ii).
63.8(c)(1)(iii)	Yes.	
63.8(c)(2)	Yes.	
63.8(c)(3)	Yes.	
63.8(c)(4)	No	§ 63.1438 specifies monitoring requirements; not applicable to equipment leaks, because § 63.1434 does not require continuous monitoring systems.
63.8(c)(5)–(8)	No.	
63.8(d)	No.	
63.8(e)	No.	
63.8(f)(1)–(3)	Yes.	
63.8(f)(4)(i)	Yes	Except the timeframe for submitting request is specified in § 63.1439(f) or (g); not applicable to equipment leaks, because § 63.1434 (through subpart H) specifies acceptable alternative methods.
63.8(f)(4)(ii)	Yes.	
63.8(f)(4)(iii)	Yes.	
63.8(f)(5)(i)	Yes.	
63.8(f)(5)(ii)	No.	
63.8(f)(5)(iii)	Yes.	
63.8(f)(6)	No	Subpart PPP does not require CEM's.
63.8(g)	No	Data reduction procedures specified in § 63.1439(d) and (h); not applicable to equipment leaks.
63.9(a)	Yes.	
63.9(b)	No	The Initial Notification requirements are specified in § 63.1439(e)(3).
63.9(c)	Yes.	
63.9(d)	Yes.	
63.9(e)	No	§ 63.1437(a)(4) specifies notification deadline.
63.9(f)	No	Subpart PPP does not require opacity and visible emission standards.
63.9(g)	No.	
63.9(h)	No	§ 63.1439(e)(5) specifies Notification of Compliance Status requirements.
63.9(i)	Yes.	
63.9(j)	No.	
63.10(a)	Yes.	

TABLE 1 TO SUBPART PPP OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART PPP AFFECTED SOURCES—Continued

Reference	Applies to subpart PPP	Explanation
63.10(b)(1)	No	§63.1439(a) specifies record retention requirements.
63.10(b)(2)	No	Subpart PPP specifies recordkeeping requirements.
63.10(b)(3)	Yes.	
63.10(c)	No	§63.1439 specifies recordkeeping requirements.
63.10(d)(1)	Yes.	
63.10(d)(2)	No	§63.1439(e)(5) and §63.1439(e)(6) specify performance test reporting requirements; not applicable to equipment leaks.
63.10(d)(3)	No	Subpart PPP 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) shall be submitted at the same time as Periodic Reports specified in §63.1439(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.
63.10(e)	No	§63.1439 specifies reporting requirements.
63.10(f)	Yes.	
63.11	Yes.	
63.12	Yes	Except that the authority of §63.177 (for equipment leaks) will not be delegated to States.
63.13–63.15	Yes.	

[a] The plan, and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points.

TABLE 2 TO SUBPART PPP OF PART 63.—APPLICABILITY OF SUBPARTS F, G, H, AND U TO SUBPART PPP AFFECTED SOURCES

Reference	Applies to subpart PPP	Explanation	Applicable section of subpart PPP
Subpart F:			
63.100	No.		
63.101	Yes	Several definitions from 63.101 are referenced at 63.1423	63.1423.
63.102–63.103	No.		
63.104	Yes	With the differences noted in 63.1435(b) through (d)	63.1435.
63.105	Yes	With the differences noted in 63.1433(b)	63.1433.
63.106	No.		
Subpart G:			
63.110	No.		
63.111	Yes	Several definitions from 63.111 are incorporated by reference into 63.1423.	63.1423.
63.112	No.		
63.113–63.118	Yes	For THF facilities, with the differences noted in 63.1425(f)(1) through (f)(10).	63.1425.
	No	For epoxide facilities, except that 63.115(d) is used for TRE determinations.	63.1428.
63.119–63.123	Yes	With the differences noted in 63.1432(b) through 63.1432(p)	63.1432.
63.124–63.125	No	Reserved.	
63.126–63.130	No.		
63.131	No	Reserved.	
63.132–63.147	Yes	With the differences noted in 63.1433(a)(1) through 63.1433(a)(19).	63.1433.
63.148–63.149	Yes	With the differences noted in 63.1432(b) through 63.1432(p) and 63.1433(a)(1) through 63.1433(a)(19).	63.1432 and 63.1433.
63.150	No.		
63.151–63.152	No.		
Subpart H:			
63.160–63.182	Yes	Subpart PPP affected sources shall comply with all requirements of subpart H, with the differences noted in 63.1422(d), 63.1422(h), and 63.1434(b) through (g).	63.1434.
Subpart U:			
63.480–63.487	No.		
63.488	Yes	Portions of 63.488(b) and (e) are cross-referenced in subpart PPP..	
63.489–63.506	No.		

TABLE 3 TO SUBPART PPP OF PART 63.—GROUP 1 STORAGE VESSELS AT EXISTING AND NEW AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor Pressure [a] (kilopascals)
75 ≤ capacity < 151	≥ 13.1
capacity ≥ 151	≥ 5.2

[a] Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 4 TO SUBPART PPP OF PART 63—KNOWN ORGANIC HAP FROM POLYETHER POLYOL PRODUCTS

Organic HAP/Chemical Name (CAS No.)
1,3 Butadiene (106990)
Ethylene Oxide (75218)
n-Hexane (110543)
Methanol (67561)
Propylene Oxide (75569)
Toluene (108883)

CAS No. = Chemical Abstracts Service Registry Number

TABLE 5 TO SUBPART PPP OF PART 63.—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature [a]	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the daily average firebox temperature as specified in § 63.1429. 4. Report all 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 § 63.1429.[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 daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.1429. 4. Report all daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR.[d e] 5. Report all 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 process vents are *not* introduced with or used as the primary fuel.	Firebox temperature [a]	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the average firebox temperature measured during the performance test—NCS [c] 3. Record the daily average firebox temperature as specified in § 63.1429.[d] 4. Report all 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 selected for control and whether a flame was continuously present at the pilot light during each hour. 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 when all flames at the pilot light of a flare are absent or the monitor is not operating. 4. Report the times and durations of all periods during batch emission episodes selected for control when all flames at the pilot light of a flare are absent—Pr.[d]
Absorber [f]	Liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber.	1. Records every 15 minutes, as specified in § 63.1429.[b] 2. Record and report the average liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber, measured during the performance test—NCS.

TABLE 5 TO SUBPART PPP OF PART 63.—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
		3. Record the liquid flow rate into or out of the scrubber, or the pressure drop across the scrubber, every 15 minutes, as specified in §63.1429. 4. Report all scrubber flow rates or pressure drop values that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d e]
	pH of the scrubber	1. Once daily records as specified in §63.1429.[b] 2. Record and report the average pH of the scrubber effluent measured during the performance test—NCS.[c] 3. Record at least once daily the pH of the scrubber effluent. 4. Report all pH scrubber effluent readings out of the range established in the NCS or operating permit and all instances when monitoring data are not collected—PR.[d,e] If a base absorbent is used, report all pH values that are below the minimum operating values. If an acid absorbent is used, report all pH values that are above the maximum operating values.
Condenser[f]	Exit (product side) temperature	1. Continuous records as specified in §63.1429.[b] 2. Record and report the average exit temperature measured during the performance test—NCS. 3. Record the daily average exit temperature as specified in §63.1429. 4. Report all 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 or volumetric flow during carbon bed regeneration cycle(s), and.	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the performance test—NCS.[c] 3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is above the maximum flow rate established in the NCS or operating permit—PR.[d e]
	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 cycle(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]
Absorber, Condenser, and Carbon Adsorber (as an alternative to the above).	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	1. Continuous records as specified in §63.1429.[b] 2. Record and report the average concentration level or reading measured during the performance test—NCS. 3. Record the daily average concentration level or reading as specified in §63.1429. 4. Report all 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]
All Combustion, recovery, or recapture devices.	Diversion to the atmosphere from the combustion, recovery, or recapture device or.	1. Hourly records of whether the flow indicator was operating during batch emission episodes selected for control and whether a diversion was detected at any time during the hour, as specified in §63.1429. 2. Record and report the times of all periods during batch emission episodes selected for control when emissions are diverted through a bypass line, or the flow indicator is not operating—PR.[d]
	Monthly inspections of sealed valves.	1. Records that monthly inspections were performed as specified in §63.1429. 2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR.[d]

TABLE 5 TO SUBPART PPP OF PART 63.—PROCESS VENTS FROM BATCH UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
ECO	Time from the end of the epoxide feed, or the epoxide partial pressure in the reactor or direct measurement of epoxide concentration in the reactor liquid at the end of the ECO.	1. Records at the end of each batch, as specified in § 63.1427(i). 2. Record and report the average parameter value of the parameters chosen, measured during the performance test. 3. Record the batch cycle ECO duration, epoxide partial pressure, or epoxide concentration in the liquid at the end of the ECO 4. Report all batch cycle parameter values outside of the ranges established in accordance with § 63.1427(i)(3) and all instances when monitoring data were 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 § 63.1429.
[d] PR = Periodic Reports described in § 63.1429.
[e] The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1439.
[f] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 6 TO SUBPART PPP OF PART 63.—PROCESS VENTS FROM CONTINUOUS UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal Incinerator	Firebox temperature[a]	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the average firebox temperature measured during the performance test—NCS.[c] 3. Record the daily average firebox temperature for each operating day. 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when sufficient monitoring data are not collected—PR.[d e]
Catalytic Incinerator	Temperature upstream and downstream of the catalyst bed.	1. Continuous records as specified in § 63.1429.[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 daily average upstream temperature and temperature difference across catalyst bed for each operating day. 4. Report all daily average upstream temperatures that are below the minimum upstream temperature established in the NCS or operating permit—PR.[d e] 5. Report all 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 operating days when insufficient monitoring data are collected.[e]
Boiler or Process Heater with a design heat input capacity less than 44 megawatts and where the process vents are *not* introduced with or used as the primary fuel.	Firebox temperature [a]	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the average firebox temperature measured during the performance test—NCS [c] 3. Record the daily average firebox temperature for each operating day.[d] 4. Report all daily average temperatures that are below the minimum operating temperature established in the NCS or operating permit and all instances when insufficient monitoring data are collected—PR.[d e]
Flare	Presence of a flame at the pilot light.	1. Hourly records of whether the monitor was continuously operating and whether a flame was continuously present at the pilot light during each hour. 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 when all flames at the pilot light of a flare are absent or the monitor is not operating. 4. Report the times and durations of all periods when all flames at the pilot light of a flare are absent—Pr.[d]
Absorber [f]	Exit temperature of the absorbing liquid, and.	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the exit temperature of the absorbing liquid averaged over the full period of the TRE determination—NCS.[c] 3. Record the daily average exit temperature of the absorbing liquid for each operating day. 4. Report all the daily average exit temperatures of the absorbing liquid that are below the minimum operating value established in the NCS or operating—PR.[d e]

TABLE 6 TO SUBPART PPP OF PART 63.—PROCESS VENTS FROM CONTINUOUS UNIT OPERATIONS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS—Continued

Control technique	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
	Exit specific gravity for the absorbing liquid.	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the exit specific gravity averaged over the full period of the TRE determination—NCS. 3. Record the daily average exit specific gravity for each operating day. 4. Report all daily average exit specific gravity values that are below the minimum operating value established in the NCS or operating—PR.[d e]
Condenser[f]	Exit (product side) temperature	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the exit temperature averaged over the full period of the TRE determination—NCS. 3. Record the daily average exit temperature for each operating day. 4. Report all daily average exit temperatures that are above the maximum operating temperature established in the NCS or operating—PR.[d e]
Carbon Adsorber[f]	Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s), and.	1. Record of total regeneration stream mass or volumetric flow for each carbon bed regeneration cycle. 2. Record and report the total regeneration stream mass or volumetric flow during each carbon bed regeneration cycle during the period of the TRE determination—NCS.[c] 3. Report all carbon bed regeneration cycles when the total regeneration stream mass or volumetric flow is above the maximum flow rate established in the NCS or operating permit—PR.[d e]
	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 during the period of the TRE determination—NCS[c] 3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration is above the maximum temperature established in the NCS or operating permit—PR.[d,e]
Absorber, Condenser, and Carbon Adsorber (as an alternative to the above).	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	1. Continuous records as specified in § 63.1429.[b] 2. Record and report the concentration level or reading averaged over the full period of the TRE determination—NCS. 3. Record the daily average concentration level or reading for each operating day. 4. Report all daily average concentration levels or readings that are above the maximum concentration or reading established in the NCS or operating—PR.[d e]
All Combustion, recovery, or recapture devices.	Diversion to the atmosphere from the combustion, recovery, or recapture device *or*.	1. Hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during each hour. 2. Record and report the times of all periods when the vent stream is diverted through a bypass line, or the flow indicator is not operating—PR.[d]
	Monthly inspections of sealed valves.	1. Records that monthly inspections were performed as specified in § 63.1429. 2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR.[d]

[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 § 63.1429.
[d] PR = Periodic Reports described in § 63.1429.
[e] The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.1439.
[f] Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 7 TO SUBPART PPP OF PART 63.—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR PROCESS VENTS STREAMS

Control technique	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.
Absorber	Liquid flow rate or pressure drop; and pH of scrubber effluent, if an acid or base absorbent is used.	Minimum flow rate or pressure drop; and maximum pH if an acid absorbent is used, or minimum pH if a base absorbent is used.
Condenser	Exit temperature	Maximum temperature.

TABLE 7 TO SUBPART PPP OF PART 63.—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR PROCESS VENTS STREAMS—Continued

Control technique	Parameters to be monitored	Established operating parameter(s)
Carbon adsorber	Total regeneration stream mass or volumetric 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 or volumetric flow; and maximum temperature.
Extended Cookout (ECO)	Time from the end of the epoxide feed to the end of the ECO, or the reactor epoxide partial pressure at the end of the ECO, or the epoxide concentration in the reactor liquid at the end of the ECO.	Minimum duration, or maximum partial pressure at the end of ECO, or maximum epoxide concentration in the reactor liquid at the end of ECO.
Other devices (or as an alternate to the above). [a]	HAP concentration level or reading at outlet of device.	Maximum HAP concentration or reading.

[a] Concentration is measured instead of an operating parameter.

TABLE 8 TO SUBPART PPP OF PART 63.—ROUTINE REPORTS REQUIRED BY THIS SUBPART

Reference	Description of Report	Due Date
§ 63.1439(b) and Subpart A	Refer to § 63.1439(b), Table 1 of this subpart, and to subpart A.	Refer to subpart A.
§ 63.1439(e)(3)	Initial notification	Existing affected sources: by 120 days after June 1, 1999. New affected sources w/initial start-up at least 90 days after June 1, 1999: submit the application for approval of construction or reconstruction in lieu of the Initial Notification. New affected sources w/initial start-up prior to 90 days after June 1, 1999: by 90 days after June 1, 1999.
§ 63.1439(e)(4)	Precompliance Report [a]	Existing affected sources: 12 months prior to compliance date. New affected sources: with the application for approval of construction or reconstruction.
§ 63.1439(e)(5)	Notification of Compliance Status [b]	Within 150 days after the compliance date.
§ 63.1439(e)(6)	Periodic Reports	Semiannually, no later than 60 days after the end of each 6-month period. See § 63.1439(e)(6)(i) for the due date for this report.
§ 63.1439(e)(6)(v)(iii)	Quarterly reports for sources with excursions (upon request of the Administrator).	No later than 60 days after the end of each quarter.
§ 63.506(e)(7)(i)	Storage Vessels Notification of Inspection.	At least 30 days prior to the refilling of each storage vessel or the inspection of each storage vessel.

[a] There may be two versions of this report due at different times; one for equipment subject to § 63.1434 and one for other emission points subject to this subpart.

[b] There will be two versions of this report due at different times; one for equipment subject to § 63.1434 and one for other emission points subject to this subpart.

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